Chapter in Handbook of Cliometrics
The Contributions of Robert Fogel to Cliometrics

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Abstract

Robert Fogel was one of the earliest and most forceful advocates for the use of quantitative methods and economic theory in the study of economic history and long-term economic change. He demonstrated through his work on the economic impact of the railroads and the economic history of U.S. slavery that the cliometric approach had the potential to challenge and overturn long-standing views based on narrative approaches to economic history. The volume he edited with Stanley Engerman, *The Reinterpretation of American Economic History*, published in 1971 provided an early manifestation to economists and historians alike of the wide range of applications the cliometric approach could offer to various fields of economic history. Throughout his career, Fogel advocated for the cliometric approach to history more generally, not just to economic history. His contributions were recognized when he was jointly awarded the Nobel prize in Economics with Douglass North in 1993. In the subsequent twenty years until his death in 2013, Fogel pursued an inter-disciplinary research project focused on long-run changes in the interaction between technological advance, nutrition, human health and mortality culminating in *The Changing Body* (co-authored with Roderick Floud, Bernard Harris, and Sok Chul Hong).

I. Introduction—Robert Fogel as a pioneer of Cliometrics

Robert Fogel was one of the earliest and most forceful advocates for the use of quantitative methods and economic theory in the study of economic history and long-term economic change. He demonstrated through his work on the economic impact of the railroads and the economic history of U.S. slavery that the cliometric approach had the potential to challenge and overturn long-standing views based on narrative approaches to economic history. The volume he edited with Stanley Engerman, *The Reinterpretation of American Economic History* (1971), provided an early manifestation to economists and historians alike of the wide range of applications the cliometric approach could offer to various fields of economic history. He had a penchant for framing his conclusions in a provocative way which generated controversy but also sustained interest in his research areas. And throughout his career, Fogel advocated for the cliometric approach to history more generally, not just to economic history. Moreover, he had a major organizational impact on the practice of economic history through his establishment of a prominent university-based workshop in economic history, his training of a

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1 The author acknowledges valuable comments on an earlier draft by Michael Haupert and Richard Sutch.
number of students who have gone on to prominent careers in economic history in their own
right, and his establishment of the Development of the American Economy project through the
National Bureau of Economic Research. His contributions were recognized when he was jointly
awarded the Nobel prize in Economics with Douglass North in 1993.

Fogel’s own intellectual evolution presents a striking contrast with North. Both started
out [as Marxists] Both wrote dissertations focusing on business enterprise, in the case of Fogel,
his M.A. thesis on the Union Pacific Railroad, in the case of North, large life insurance
companies. However, throughout his scholarly career, Fogel’s scholarship was strongly
grounded in empirical data and evidence. He was the consummate miner of data and continued to
seek new empirical sources throughout. His work maintained clear grounding in economic
theory and he served as President of the American Economic Association. In contrast, North was
much more conceptually oriented. Increasingly, he reached out to other social science
disciplines and had major influences in political science and historical sociology.
He never served as president of the AEA, and while some of his early work had empirical
grounding, he was not reliant on archival resources and large data bases as a major component of
his scholarship.

Fogel shared with North the view that economic processes were fundamentally historical,
but his views as to why this was the case put less emphasis on the role of institutions and
political processes and more on the role of technology and biological processes. North, to a
greater degree than Fogel, saw economic history as a requisite for improving the discipline of
economics, while Fogel put more emphasis on how the tools of economics could remake the
field of history. Fogel interestingly identified North as an economic theorist perhaps as much, if
not more than, as an economic historian.

Throughout his scholarly career, Fogel saw economic history, and more specifically
cliometrics, as inextricably tied to the study of economic growth. His first major impact on the
study of economic growth was a response to the claims of W.W. Rostow about the role of
leading sectors, such as the railroad, in processes of economic growth. It is sometimes
overlooked that his work on slavery began with an attempt to explain the sources of relatively
laggard economic growth in the U.S. South. It was this pursuit that led Fogel to investigate the
importance of the retarding effects of slavery on growth. His work on anthropometrics was part
of longer-run views of the relationship between growth and human physiological development.

Fogel’s work often responded to issues of the day. The Civil Rights movement and urban
racial unrest in the 1960s, for example, seems to have been a major motivating factor behind his
decision to pursue the cliometric study of antebellum Southern slavery.

Fogel’s own intellectual interests changed considerably over his scholarly career. While
he maintained an interest in what could be labeled the Kuznets tradition of examining long-term
economic change, the focus of his research by the time he returned to the University of Chicago
in 1981 increasingly focused on what he termed bio-demography and health economics.

II. Robert Fogel’s Biography and his Students

Robert William Fogel was born on July 1, 1926 in New York City to parents who were
refugees from the Russian Revolution. He attended public school in New York city and then
began undergraduate studies in electrical engineering at Cornell University. He changed his
major to history with a minor in economics due to his growing awareness of the problems of
unemployment in capitalist economies, graduating from Cornell in 1948. During the early 1950s Fogel was a Communist Party organizer.

Fogel commenced graduate work in economic history at Columbia University in 1956 in order to pursue his interests in the great [Marxian questions] regarding the nature of long-term economic change. At Columbia he completed a master’s degree under the supervision of Carter Goodrich with a thesis on the Union Pacific as a case of premature enterprise. He also did course work in economics with George Stigler. At Goodrich’s encouragement, Fogel enrolled in the doctoral program in economics at Johns Hopkins University to study quantitative approaches to economic growth under the supervision of Simon Kuznets. He served as an instructor at Johns Hopkins in 1958 and then obtained an appointment as assistant professor of economics at the University of Rochester in 1960. In 1963 he obtained an appointment at the University of Chicago, first as Ford Foundation visiting research professor, completing his dissertation on the railroads and economic growth at Johns Hopkins in 1963.

The Chicago school of Economics associated with the Department of Economics at the University of Chicago is often depicted as ahistorical in its emphasis on rational choice and market processes. In fact by the time Fogel joined that department in 1963, it had a tradition of economic history going back to its founding in 1892. Chester Wright joined the faculty in 1907, John Nef in 1929, and then, to replace Wright, Chicago hired Earl Hamilton in 1947. Fogel was ultimately hired as the replacement for Hamilton, who had receded into the intellectual background of the department by 1963, and was no longer actively teaching economic history. Fogel was recruited both to teach economic history, a requirement for graduate students, and for his work on economic growth and development, an area of increasing interest at Chicago. But more importantly, a number of prominent members of the Department shared the view that economic history was a fundamental part of economics, and were eager to recruit someone who would provide it with a more active presence. Fogel was invited to visit the department for the 1963-64 academic year as the Ford Foundation visiting research professor. In the Fall of 1963 he was offered a tenured appointment as associate professor, and he joined the department on a permanent basis in 1964. According to Milton Friedman, the department was aware of the cliometric approach Fogel took to economic history and this was considered as a plus, less because of a definite commitment to hiring a cliometrician than because it demonstrated Fogel’s originality and his promise for being a leader in the field of economic history.

The 1960s was a period of buoyant demand for new faculty with the marked expansion of higher education in the United States. In addition, there was particularly active demand in leading economics departments at this time for practitioners of the new economic history given its recent emergence. Thus, it is no surprise that Fogel was the frequent recipient of offers from other institutions. Coupled with Chicago’s recognition that Fogel was one of the leading practitioners of an innovative approach to a field in economics that the department was particularly eager to promote at this time, he was promoted to full professor in 1965, just a year after joining the department as an associate professor. And he was able to to command not only an attractive salary, but also extensive research support. This included funding to establish the economic history workshop that began to meet in the fall of 1964. Further indication of the department’s commitment to economic history at this time was its pursuit of Albert Fishlow,
who twice spurned their offers to remain at Berkeley. Fogel’s choice of Fishlow as a colleague, despite the potential rivalry given their common dissertation topics and specialties in U.S. economic history, suggests both his high regard for Fishlow and his emphasis on intellectual merit over other considerations in choosing colleagues.

From 1975-76 he was Pitt Professor of American Institutions at Cambridge University, and then spent 1976-81 on the faculty at Harvard. During this time, he played a central role in establishing the Development of the American Economy program affiliated with the National Bureau of Economic Research.

In 1981 he returned to the University of Chicago to succeed George Stigler as Walgreen Professor of American Institutions in the Graduate School of Business, where he established the Center for Population Economics. He also had an affiliation with the Committee on Social Thought at Chicago. In 1993, he was awarded the Nobel Memorial Prize in Economics (shared with Douglass North) for the development of quantitative and theoretical tools for the study of economic history. He never retired from his faculty position, and continued to publish until his death in 2013.

At both Chicago and Harvard, Fogel had numerous students who went on to prominent careers in economic history in their own right. Examples include Alice Hanson Jones, Larry Wimmer, Peter Hill, Jacob Metzer, Clayne Pope, Claudia Goldin, Hugh Rockoff, Michael Bordo, Joseph Reid, Frank Lewis, Richard Steckel, David Galenson, Robert Margo, Kenneth Sokoloff, Jonathan Pritchett, Jenny Bourne Wahl, John Moen, John Komlos, Jonathan Pritchett, Dora Costa, and Joseph Ferrie.

IV. The New Economic History: the Role of Theory and Quantification

Robert Fogel is commonly regarded as one of the pioneers of cliometrics (alternatively labeled the new economic history and sometimes referred to as econometric history or historical economics). Indeed, this is mentioned in the Royal Swedish Academy of Sciences press release (1993). In fact, the establishment of cliometrics is commonly dated to a conference in Williamstown, Massachusetts in September of 1957 jointly sponsored by the Economic History Association and the National Bureau of Economic Research. At the time, Fogel was just starting his doctoral studies at Johns Hopkins. Fogel, himself traces the origins of cliometrics even earlier, to advances in history, the social sciences, and mathematics underway before the second world war (Fogel 1995). One general definition of cliometrics is the study of history using quantitative methods and social science perspectives. Definitions that have been offered of
Cliometrics have varied since the term was first coined in the early 1960s. While Cliometrics is commonly distinguished from traditional approaches to economic history by the emphasis of the former on quantification and theoretical analysis, other basic distinctions seem to have been at stake in clashes between old and new economic historians. Indeed as has been noted above, pre-cliometric history frequently made extensive use of quantification. At least three other basic contrasts, including one by Fogel, have been noted. The first is an emphasis on narration and description in traditional history versus an emphasis on causal explanation and application of formal models in the new economic history (Cochrane 1969; Hacker 1996). The second is a focus on institutions in traditional economic history versus one on processes in the new economic history (Redlich 1965). And the third, suggested by Fogel (1983, 29) is a focus on “specific individuals, on particular institutions, on particular ideas, and on non-repetitive occurrences” in traditional history versus a focus on “collections of individuals, on categories of institutions, and on repetitive occurrences” by cliometricians practicing scientific history.

Initially, in the late 1950’s and early 1960s, the history to be studied by cliometrics was perhaps most obviously economic history and the social science perspective most clearly associated with the term was that of economics. However, during this same period, the use of quantitative methods and social science models was becoming more widespread in other fields of history as well. Thus, in 1962, the American Historical Association created an “Ad Hoc Committee to Collect the Basic Quantitative Data of American Political History” (Swierenga 1970) And in 1964, the Mathematical Social Science Board (MSSB) was formed with the joint sponsorship of the Social Science Research Council and the Center for Advanced Study in the Behavioral Sciences. Its stated purpose was “to foster advanced research and training in the application of mathematical methods in the social sciences” (Aydelotte et al., 1972, p.vii). The MSSB took an early interest in applications to history, and in 1965 established a Committee on Mathematical and Statistical Methods in History. This Committee was chaired by Robert Fogel and also included Lionel McKenzie (a mathematical economist), Frederick Mosteller (a statistician), William O. Aydelotte (a political historian), Oscar Handlin (an American Historian), and Allan G. Bogue (a political and agricultural historian) (Bogue 1968). One of Fogel’s aims in chairing this committee was to show the applicability of mathematical and statistical methods to a variety of historical issues, not just economic history. In a letter to Frederick Mosteller regarding the agenda of an early meeting of the Committee, Fogel stated:

“I view General History Project I as the most important of our potential undertakings

…For I hope that out of this project will emerge a set of papers that could

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demonstrate to historians the full range of mathematical and statistical methods—from very simple statistical concepts to highly complex multi-equation systems—that are available for the analysis of historical issues as well as the variety of situations and ways in which such models are applied.”

The view that mathematical, statistical, and social science analysis could be applied to a broad range of historical issues was manifested in the establishment in 1975 of the Social Science History Association. That Fogel subscribed to such a broad, social science conception of cliometrics is suggested by his efforts in the early 1970s to establish a major graduate program in quantitative and social science history at the University of Chicago, to be called “Committee on Mathematical Methods in History.” It is also evident in his statements on cliometrics, which he more broadly termed scientific history (Fogel 1983, Fogel 1995).

Fogel conceived of the application of quantitative methods to history as entailing not only statistical analysis of empirical data, but also the use of formal mathematics. Fogel (1995, p.54) cites a 1982 American Heritage Dictionary definition of cliometrics as “The study of history using advanced mathematical methods of data processing and analysis.” The committee on history that Fogel chaired for the Mathematical Social Science Board, as its title given above suggests, considered the application of mathematical as well as statistical methods to the study of history. In his 1973 letter to Frederick Mosteller regarding an early conference of the committee on history that Fogel organized, summarizes:

“The central objective of the conference then, as I see it, is the presentation of a set of papers which will dispel the notion that mathematical models are a straight-jacket; which will demonstrate that, when properly employed, mathematical models not only provide great flexibility, but greatly extend the range of opportunity for historical analysis.”

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3 Letter from Robert W. Fogel to Frederick Mosteller dated April 9, 1965 located in Robert W. Fogel papers, Box 161, in Frederick Mosteller file.
And his proposed program at Chicago in applying social science and quantitative methods to
history was entitled “Committee on Mathematical Methods in History,” suggesting that he was
prepared to take on board the use of mathematics generally as one of the hallmarks of
cliometrics.

In considering what is distinctive about the use of quantification and perspectives from
economic theory in the cliometric approach, Fogel emphasized the interrelationship between
theory and measurement. He viewed theory as an aid to more effective measurement. Fogel
(1966, pp. 7-8) observed:

“The methodological hallmarks of the new economic history are its emphasis on
measurement and its recognition of the intimate relationship between measurement and theory.
Economic history has always had a quantitative orientation. But much of the past numerical
work was limited to the location and simple classification of data contained in business and
government records…. The pioneers of the massive statistical reconstructions embodied in national
income accounts were not economic historians but empirical economists, such as Simon Kuznets in the
United States,… While economic historians made considerable use of national income measures, they
did not immediately attempt to extend the process of statistical reconstruction to the vast array of
issues in their domain…”

If in earlier statements Fogel (1964b) put more emphasis on theory rather than
measurement as the distinctive trademark of cliometrics, he also conveyed in those statements
that the contribution of theory was in enhancing the effectiveness of measurement.

While Fogel has been one of the most forceful and persistent advocates for the use of
quantification and social science perspectives in the study of history, as has already been noted,
he was certainly not the first to do so. Indeed, he was awarded the Nobel Prize jointly with
Douglass North, although the two of them were never direct collaborators. This suggests that
cliometrics emerged from the efforts of various scholars. However, one tool of the cliometric
approach that has been distinctively associated with Fogel is the employment of counter-factual
analysis. The basic principle of counter-factual analysis is that in order to determine the impact
of some factor, one must consider what would have occurred in the absence of that factor.
Applying this principle to historical economic development, Fogel (1967, p. 285) states:

“one cannot determine the economic effects—negative or positive—of the tariff, slavery, the
corporation, railroads, the Bessemer converter, the reaper, the telegraph, the Homestead Act, or
interregional trade without considering how the economy would have developed in the absence
of such institutions, processes, and artifacts. Obviously these counterfactual patterns of American
development were not observed and are not recorded in historical documents. In order to
determine what would have happened in the absence of a given institution, the economic
Fogel did not originate the application of counterfactual analysis to economic history. This was proposed in Conrad and Meyer’s methodological essay (1957). And Fogel (1967) himself acknowledged not only the influence of the Conrad and Meyer essay but also noted Fritz Machlup’s (1952) discussion of counterfactual reasoning. Following Machlup, one can view counterfactual analysis as no more than systematic analytical reasoning. Or as John Meyer put it in a 40th anniversary retrospective on the 1957 Williamstown conference, “All policy proposals and advocacies are almost by their nature counterfactuals; what would have happened if a proposed policy had been adopted rather than rejected or overlooked.” (Meyer 1997 p.410). Fogel also points to the importance of Hempel’s (1942) discussion of the role of general laws in history.

The employment of counterfactual analysis by Fogel in his study of the impact of the railroad on American economic growth provoked accusations by the traditional economic historian, Fritz Redlich, that Fogel’s work was “fictitious” and “quasi history” (Redlich 1965, p.486). And in a later version of his essay, Redlich states his “refusal to consider research based on counterfactual assumptions as genuinely historical research” (Redlich 1968 reprinted in Andreano 1970, p.92). However, Redlich, in the same passage in this essay, also acknowledges the value of counterfactual analysis. However, he thinks that it should classified as part of social science research rather than historical analysis: “I do not want to be misunderstood. I do not take a stand against this kind of research per se, nor do I consider it worthless; I only want to have it recognized as part and parcel of the social sciences and to stress its tool character as far as history is concerned.” (Redlich 1968 [1970], p.92).

Fogel has argued in response that not only is counterfactual analysis a useful tool in historical analysis, it is unavoidable if one wants to do any sort of causal analysis or appeal to general principles. And he states that historians have actually quite frequently employed counterfactuals, they just have not acknowledged it or very fully examined the assumptions entailed in their use (Fogel and Engerman, 1971, p.10; also see Davis 1968;1970).

Other new economic historians have frequently employed counterfactual analysis. Yet part of the reason why Fogel’s work was singled out for attention and criticism was not just his explicit methodological employment of counterfactuals, but the degree to which he pursued it in his work on the impact of the railroads. This is suggested by comparing his approach with that of Albert Fishlow’s on the same topic. Fishlow also undertook the counterfactual comparison of what transportation costs would have been by water transport in the absence of railways; but in contrast to Fogel, Fishlow based his analysis on the existing canal system in 1859. Fogel instead argued in his analysis of the 1890 situation, that in the absence of the railroad there would have been a considerable expansion of the nation’s canal system. He then proceeded to propose a
hypothetical canal system that might have been constructed by 1890 in the absence of the railway. He found that the presence of such an extended canal system substantially lowered his estimate of the social saving attributable to the railway. Fogel (1979) argues that Fishlow’s employment of existing canal systems for his counterfactual analysis was just as hypothetical as Fogel’s consideration of a hypothetical extended canal system. It is likely that developing such an elaborate counterfactual canal system earned Fogel’s work the title of “figments” from his critic, Fritz Redlich (1965; 1968).

It has sometimes been suggested that the conflict between traditional and new economic history was at least partly generational, reflecting the brashness of “young turk” new economic historians (McCloskey 1985). Simon Kuznets, as Robert Fogel’s dissertation supervisor, at times admonished his student for not showing sufficient respect for more traditional economic historians. This is of interest not only for exhibiting generational tensions, and the related ones between student and mentor, but also for highlighting Kuznets’s distinctive role as a bridge between traditional and cliometric approaches. Thus, Kuznets wrote to Fogel in a letter dated August 17, 1962 of one passage in a dissertation draft:

“it conveys the unfortunate impression that so many of the traditional economic historians are men of limited understanding and imagination. In revising the text for the final version, I would urge you to go over the text with a fine tooth comb to try to eliminate this impression as much as possible.” 5

And in a letter to Fogel dated May 15, 1963, Kuznets says he wants to:

“repeat my urging to you to…edit out some of the statements which impress me as likely to irritate people and only make it more difficult for them to appreciate the value of your analysis. I am referring to statements that contain a generally high claim for the value of econometric analysis and by implication set a low value on more traditional economic history…In general, it is best to let the analysis speak for itself, and err on the side of understating the possible general validity of the approach that you follow.”

In a reply to Kuznets dated June 5, 1963, Fogel writes:

“I do agree with you on the need to further edit my manuscript for statements which appear to implicitly repudiate the more traditional economic history. This was not my intention. I think that in history quantitative and qualitative methods of analysis supplement and reinforce each other. I do not view the increasing emphasis being put on the more rigorous use of theory and statistics by younger economic historians as a break with the past; I consider it a further development of a long existing trend in the discipline. At the same time I do not want to weaken

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5 Located in Robert W. Fogel papers, Box 157, Simon Kuznets folder.
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my criticism of what I believe has been a serious underestimation of the opportunity that exists for extending quantitative methods worked out in other fields of economics to the domain of history. I also want to emphasize the same point with respect to theory. I realize that my methodological discussions lean heavily on standard principles of economics and statistics. I’m particularly conscious of the fact that many of my arguments are elaboration of points that you have made in various essays and lectures. However, I feel that when linked with specific applications to history, the methodological arguments become more meaningful to those who have previously misunderstood their import.”

“I have tried to make these points without unduly offending those inclined to loose intuitive methods; but I realize that I have not been entirely successful in this effort.”

That Fogel saw continuity between traditional economic history and the new economic history becomes evident when considering his formulation of the contribution of economic history to the discipline of Economics.

A. The Reinterpretation of American Economic History

An important landmark in the development of cliometrics was the volume edited by Fogel and Engerman and published in 1971, *The Reinterpretation of American Economic History*. The volume consists of 36 essays, including a number by scholars who would not be regarded as economic historians. Among them are Zvi Griliches’ article on the diffusion of hybrid corn, of T.W. Schultz on education as capital formation, and Simon Kuznets on the contribution of immigration to labor force growth. It also includes essays by scholars who might be regarded primarily as historians, including James Henretta and Allan and Margaret Bogue. The preface outlines three functions of the volume. Interestingly, the first is “to help teachers of undergraduate courses in American history introduce students to the quantitative revolution in historiography and the far-reaching substantive revisions produced by the new methodology.” (Fogel and Engerman 1971, p.xv). The second is to give teachers of undergraduate economics courses materials to demonstrate the real world relevance of economic principles, while providing material for teachers of economic history is only third on the list. The volume opens with a piece by historian Daniel Boorstin on “Expanding the historian’s vocabulary.” The volume perhaps had most impact on teachers of economic history. A projected second edition in 1976 was never realized.

V. Economic History as the Study of Economic Growth

As previously noted, one likely reason for the Chicago Department’s keen interest in economic history during the late 1950s and early 1960s was a serious interest in the determinants of economic growth. Indeed, although Earl Hamilton’s own research focused primarily on monetary issues, the research group he headed had the stated topic of the history of growth and development. While the workshop established by Robert Fogel had the more generally stated topic of economic history, Fogel’s own research agenda in the mid-1960s saw economic history as primarily focusing on the determinants of economic growth. His work on the economic impact of the railroads was

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7 Located in Robert W. Fogel papers, Box 157, Simon Kuznets folder.
motivated by an interest in the contribution of a generally perceived key innovation to economic growth.

In the early 1960s, the study of economic growth was a common focus of cliometric activity (Drukker 2006). Both Douglass North's 1961 monograph, *The Economic Growth of the U.S.* and his 1966 textbook survey, *Growth and Welfare in the American Past, A New Economic History* featured growth in their titles. And North’s students, Lance Davis and Jonathan Hughes, along with Duncan McDougall, focused on economic growth in their textbook first published in 1961. Indeed, Davis, Hughes, and McDougall (1961) discuss at some length in their introduction how, in contrast to the chronological focus typical of most textbooks in American Economic History, theirs is organized thematically, with sections and chapters focusing on key determinants of economic growth. A similar organizational format was featured in the textbook edited by Davis et al in 1972, *American Economic Growth. An Economist’s History of the United States*, which consisted of survey essays on key sectors and dimensions of the American economy.

Fogel began graduate work in economic history with an interest in the determinants of economic growth. (Fogel 1993). While in the midst of work on his dissertation on the railroads in the early 1960s, he had projected both a textbook on American economic history “within the framework of growth economics” and a research monograph entitled *Strategic Factors in American Economic Growth*. 8 Fogel appears to have had a definite conception behind the phrase “strategic factors” and for many years he offered courses alternatively entitled “Strategic Factors in American Economic Development” and “Strategic factors in American Economic Growth.” In a memo to Lionel McKenzie, then chair of the Economics department at Rochester, dated Feb. 1, 1961, Fogel described his view of the nature of strategic factors in economic growth:

“I would like to have the title of Economics 227 changed from Major Factors in American Economic Development to Strategic Factors in American Economic Development. The latter title is the one I originally submitted. “

“My course attempts to single out and analyse those factors upon which the course of American economic growth depended; i.e., those factors whose absence would have fundamentally altered the record of development. The word “major” means “superior in quality or position”; it connotes only an ordering of importance. A major event need not be one which is capable of altering the design of a given pattern.; it can have limited consequences. The development of cheap inland water transportation and the decision not to renew the charter of the bank of the Second Bank of the United States are both generally considered major events in American Economic history. The first was a necessary condition for economic growth during

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8 See Letter from Fogel to Kuznets dated August 28, 1961, pp.3-4 located in Robert W. Fogel papers, Box 157, Simon Kuznets folder and Letter to Harold Barger dated July 15, 1963 located in Robert W. Fogel papers, Box 146, Harold Barger folder.
the first half of the nineteenth century; the second was not. The first had strategic consequences on the location of economic activity and the rate of growth; the second did not.”

Fogel saw economic history as contributing to an understanding of economic growth and he saw this as the traditional aim of economic history. He did emphasize the importance of using cliometric tools to come up with new answers to traditional questions; he thought that the fruitfulness of the new methods would depend ultimately on whether they led to and supported new interpretations (Fogel and Engerman 1971, p.2).

Economic history as the study of continuity and change in economic activity can well be seen as entailing far more than just the study of economic growth. Fogel (1965, p.94) explicitly conflates economic change with economic growth. In citing the historical school economic historian William Ashley, he suggests that Ashley thought that conflict between economics and economic history was avoidable because in Ashley’s view “economics proper and economic history focused on different problems: the former on the static properties of modern economies; the latter on the evolution of economic societies—or as we now call it—economic growth.”

However, Fogel’s teacher at Columbia, Carter Goodrich (1960b, p.536 ) noted that “there remain certain points to be considered before economic historians can agree to abdicate in favor of the new discipline of Economic Growth.” He argued that “economic historians cannot accept its limitations as to time or to subject matter.” He goes on to state that economic life in primitive societies and “issues involving human values and other effects of economic changes” have also been “central themes for economic historians in the past.” And Paul David, a leading practitioner of cliometrics appears to have shared Goodrich’s concern when he noted in a letter on Fogel’s 1965 reunification article that “it is important, I think, to preserve the distinction which recognizes ‘growth problems’ as a subset of the problems of secular change.”

In a 1971 evaluation of quantitative economic history co-authored with Albert Fishlow, Fogel himself acknowledges that the new economic history had emphasized issues of growth and development at the expense of distributional and welfare issues. Fogel lists, among other deficiencies of the new economic history, a focus on growth at the expense of equity and welfare issues (Fogel and Fishlow 1971). However, Fogel also argues for continuing work by economic historians on issues related to economic growth, while acknowledging the importance of other issues in economic history.

VI. Robert Fogel’s Substantive Contributions

Robert Fogel made major contributions in three basic areas: a) estimates of the contribution of the railroad to American economic growth b)an examination of various dimensions of the antebellum U.S. southern slave economy c) anthrometrics and technophysics
evolution. Each of these contributions and their legacy on subsequent cliometric research illustrate different aspects of the power of cliometric research. Fogel’s project first involved developing an innovative conceptual tool: social savings, and applying it with considerable skill and diligence. The social savings approach, as well as offshoots and reactions to it, have been applied to a wide range of other countries and historical settings. And recent research on the economic impact of the railroads and transportation more generally have employed new conceptual and computational tools to revisit the findings of the social savings approach. While Fogel’s second project on slavery began with a focus on estimating the relative efficiency of slave versus free agriculture in the antebellum U.S., it expanded into a quite wide-ranging examination of not only the economics of slavery, but also of slave society and demography. And while this research made extensive use of the basic theoretical and quantitative tools of economics, narrative accounts, especially in Fogel’s second book on slavery, Without Consent or Contract (1989), featured prominently as well. Fogel’s final project was marked by its interdisciplinary character using methods and concepts from physical anthropology, nutrition, and related health science disciplines.

A. The Economic History of the U.S. Railroad

i.) Union Pacific as Premature enterprise

Fogel’s first published book on the railroads was The Union Pacific Railroad: A Case in Premature Enterprise. It appeared in 1960 and was based on his master’s thesis at Columbia, written under the supervision of Carter Goodrich. The book is particularly relevant for understanding cliometrics because it represents a bridge between the “old” and “new” (i.e. cliometric) approaches to economic history. Fogel indicates in the preface that the topic for the book was suggested to him by Carter Goodrich. Goodrich was a more institutionally oriented economist who had serious interests in history, and was president of the Economic History Association, but also was active in various international labor organizations. He also wrote extensively on the role of government in the economy and one of his major books was Government Promotion of American Canals and Railroads. Thus, Fogel’s book, as a study of a major American business enterprise reflecting a combined role for the government and private enterprise, clearly reflected long-standing interests of Goodrich (See Goodrich 1960a). The term in the book’s sub-title, “premature enterprise,” was a central one in the book. It has resonance, but contrasts with a parallel term, “building ahead of demand,” articulated in Albert Fishlow’s study of the antebellum railroad, published around the same time (Fishlow 1965).

The preface of the book indicates both continuities and differences with previous approaches to the history of the Union Pacific by previous historians. He outlines four differences, the first three of which pertain to issues raised by previous historians including a) indicating that Congressional legislation on the Union Pacific reflected not a flight from a role for government in such enterprises, but instead a persistent commitment to them; b) new material bearing on the difficulty of raising funds for the enterprise as reflected in new estimates of the market evaluation of the likelihood of failure; and c) evaluating the wisdom of government involvement by providing new estimates of the social rate of return of the enterprise.

He then describes the fourth difference:
“…it draws on formal economic theory in the determination and analysis of historical facts. Interest theory is combined with the theory of a ‘fair game’ to deduce, from the market
price of the railroad’s first mortgage bonds, the market’s evaluation of the probability that the Union Pacific would fail. The theory of rent forms the basis for the estimation of the social rate of return on the capital invested in the railroad. The concept of present value is used in the determination of the relative efficiency of the various proposals that were put forth for the financing and construction of a Pacific road.” He then goes on to defend the use of counterfactual analysis as articulated by Fritz Machlup (in advance of his 1964 book usually associated with this). He goes on to defend the role of theory “as helpful in the determination of facts as it can be in the explanation of them.” (Fogel 1960, 10-11)

Previous historians of the Union Pacific had claimed that the government subsidies of the construction of the railroad in the 1860s resulted in the corruption and excessive profits that characterized the ‘Gilded Age” more generally. In this study, Fogel undertook to construct detailed accounting measures of the profits earned by the railroad based on primary source material. He employed information related to bond prices to construct estimates of the expected ‘risk of failure” during the period of construction of the railroad. He then made adjustments in his measured accounting profits for the large measured risk premium his failure risk estimates implied. He thus concluded that claims of exorbitant profits were overstated, while also arguing that the actual mix of public and private sources of finance for the Union Pacific may not have been the most desirable choice. An important contribution of this work in applying economic theory to historical analysis was its utilization of financial models to estimate market risk premiums.

Another important contribution that he was to use more fully in his subsequent book on the railways and economic growth was his use of land rents. He used these to measure the social benefit of the railroad not captured in the private rate of return to investors. This then allowed him to calculate the excess of the social rate of return to the railroad over and above the private rate of return.

ii. Railroads and American Economic Growth.

His doctoral dissertation, and the subsequent book Railroads and American Economic Growth: Essays in Econometric History (1964a), challenged the prevailing view that the railroad had a decisive influence on the growth of the American economy. He calculated how much higher the costs would have been to the U.S. economy in 1890 of providing the same level of transportation services with alternative modes of water and land transportation. Fogel’s counterfactual methodology proposed a hypothetical canal system that would have been built in the absence of railroads. His estimated “social saving” of the railroad was less than 5 percent of 1890 U.S. gross national product. His findings spawned numerous challenges by other scholars. Fogel responded by arguing that, for the case of the United States, any plausible allowance for factors raised by critics (such as scale effects and problems of measuring freight rates on rail versus water traffic) would still imply a modest rather than indispensable contribution to economic growth. However, Fogel also acknowledged that for other economies—such as Mexico, with its more limited access to water transport—the impact of the railroad on growth may well have been substantially larger. His counterfactual methodology generated considerable controversy among historians, with some stating that it was fundamentally ahistorical and fictive. Fogel replied that an analytical and causal approach to economic history inevitably requires the posing of counterfactual questions.
Some of Fogel’s findings regarding the impact of the railroad involve relatively straightforward applications of basic price theory. Thus, one of his striking findings concerned the quite small, and by initial crude measures negative, impact of inter-regional railroads on transportation social savings. This was due to direct transport costs by water that were actually lower than rail costs given access to water routes for inter-regional transportation. When allowance is made to seasonal obstacles to water transportation and to the advantages of speed of the railroad over water, the contribution of the railroad increases, but not markedly.

However, his further striking finding was the greater contribution of intra-regional savings from the railroad. He uses two approaches for this calculation. His alpha estimates entail direct cost-savings. However, to allow for spillover effects, as in his Union Pacific study, he goes on to construct beta estimates that use changes in land rents due to railroad access.

Fogel’s work initially generated lots of controversy over various dimensions. These include McClelland’s (1968) critique of Fogel’s (and Fishlow’s) empirical evidence and David’s (1969) critique of the book’s analytical framework. A reprise can be found in Attack and Passell (1994) and Fogel (1979). Fogel (1979, 51) notes “some observers of the debate [over the social savings of the railroad]...have interpreted the sharp disagreements among the cliometricians as evidence of the failure of social science methodology, and particularly of quantitative methods, in history. There is in this view a confusion between artistic and scientific processes...Scientific creations...are usually protracted over long periods, approach perfection quite gradually, and involve the efforts of a large number of investigators...[In the case of the social savings controversy] The results of the interaction between the investigators and the critics have been a gradual deepening of the analysis, an improvement of estimating procedures, and the searching out of additional, or more reliable, bodies of evidence bearing on the points at issue. Rather than being a sign of the failure of the cliometric method, the controversy is a sign that the method is working.”

Although Fogel’s basic work on this topic had been completed by the mid-1960s, his reprise of the controversies and his replies to critics formed his Economic History Association Presidential Address, delivered in 1978 and published in 1979. Over the few decades since, there has been renewed interest in returning to the impact of the railroad. One issue concerns examining the impact of the railroad in a wider range of countries than those considered in the first wave of railroad impact studies. Herranz-Loncan (2006) provides a quite useful survey. Summerhill’s (2003; 2005) estimates of the social savings of the railroad for Brazil and Argentina in 1913 are of the same order of magnitude as Coatsworth’s (1979) findings of 25 percent or more for Mexico in 1910. However, a further issue concerns using both considerably enhanced data bases, geographic information system techniques, and more sophisticated modeling tools based on general equilibrium theory to examine the impact of the Railroad. (Atack 2013, Atack, et al. 2010; Donaldson and Hornbeck 2016).


In the spirit of applying neoclassical tools to the study of economic growth, Fogel and his frequent co-author Stan Engerman (Fogel and Engerman 1969) developed a model of the U.S. nineteenth century iron and steel industry to consider the factors behind the ups and downs in its
antebellum expansion. In particular, they sought to distinguish between the role of technological advance and tariff protection in influencing the expansion of the industry. They estimated a basic supply and demand model and a Cobb-Douglas production function to assess the relative importance of tariff protection and technological advance in influencing the relative fates of the charcoal and anthracite sectors of the industry. They argue that tariff protection would have facilitated ongoing expansion of the anthracite sector, which was sustained by growth in demand for its relatively crude metal products, such as rails, while this sector received only a modest boost from technological advance. However, they also argue that growing domestic demand would have been sufficient to boost domestic expansion even in the face of foreign competition. In contrast, the more refined charcoal iron sector would have declined in relative terms given the relatively slow growth in demand for its products, even in the face of tariff protection. Fogel and Engerman had anticipated continued work on this project extending the analysis to later time periods and the rise of the U.S. steel industry but abandoned these plans in order to focus on the cliometrics of slavery (Fogel 1996).

C. The Cliometrics of Slavery

i. Time on the Cross and Without Consent or Contract

By the late 1960s, Fogel’s attention was increasingly dominated by the cliometrics of slavery. Active interest in applying cliometric methods to the economic history of slavery predates Fogel and can be dated to the 1957 conference jointly sponsored by the Economic History Association and the National Bureau of Economic Research. At that conference Alfred Conrad and John Meyer presented a paper on “The Economics of Slavery in the Ante-Bellum South” in which they found that rates of return on slave plantations throughout the deep South equaled or exceeded that for northern manufacturing industries. Conrad and Meyer’s research was published in the *Journal of Political Economy* in 1958 (Conrad and Meyer 1958), and as Fogel notes in biographical memoirs, it was the focus of sustained debate among faculty and students in the Economics Department at Johns Hopkins University when he was a doctoral student there.

Fogel (1975c, p.667) noted that he and Engerman made the decision in 1968 to conclude the iron industry project described above and “to throw our full energies into the study of slavery” after being struck by the anomalous result that Conrad and Meyer found that slave agriculture was more efficient than free agriculture. This research effort can be situated in both a long-standing historiography on slavery as such, and a long-standing historiography on the extent to which slavery contributed to Southern economic stagnation. With the latter issue, there was continuity with Fogel’s previous focus on economic growth.

Fogel and Engerman initially decided in 1968 that a cliometric approach could contribute the most to ongoing debates about slavery among mainstream historians by estimating the relative efficiency of slave versus free agriculture, bypassing previous work on the profitability of slavery, or questions of paternalistic masters, the psychological impact of slavery on blacks, or the role of slavery in dismantling slave family life. Their preliminary efforts using total factor productivity measures to compare the relative efficiency of Southern slave agriculture with Northern free family agriculture yielded the result that slave agriculture was 6 percent more efficient than Northern free agriculture. They found this result quite surprising, given the presumption of many commentators that slave labor was inherently inefficient. Further adjustments to refine their measure actually increased the relative advantage of slave agriculture
to almost 40 percent (as summarized in Fogel 1996). Subsequent research by Fogel and Engerman (1977) and others (Schaefer and Schmitz 1979; Field-Hendry 1995) considered the role of economies of scale in producing this outcome. Fogel and Engerman (1974; 1977) also focused on the role of the gang system in achieving high levels of labor productivity. They suggest that the gang system achieved high levels of productivity by setting a pace of work that forced all members of the gang to keep up with the most active members. Although their initial calculations were based on the Parker-Gallman sample of slave farms, they subsequently extended the data base and recruited James Faust and Fred Bateman to collect and code a sample of 20,000 Northern farms. As their data collection effort expanded, so did the research questions they considered, including slave demography and the material treatment of slaves.

Their efforts unearthed considerable amounts of new data sources to address a wide range of issues concerning slavery. It also generated considerable amounts of controversy both among cliometricians (see David et al. 1976) and between mainstream historians and cliometricians. The sources of controversy included technical issues, such as in the interpretation of their relative productivity measures of slave versus free agriculture. The controversy extended to the larger narrative about the slave system and imputations that they were defending slavery as a moral system. Further elements of controversy concerned their decision to publish a volume for the general reader accompanied by a volume of supporting technical findings, the speed with which the general volume was produced, and the lack of time allowed for feedback from other scholarly specialists.

After the publication of *Time on the Cross* in 1974, Fogel continued follow-up work addressing critics, and Engerman has continued with wide ranging scholarship covering slavery in a variety of countries. This culminated in Fogel’s *Without Consent or Contract: The Rise and Fall of American Slavery*, published in 1989, with several volumes of supporting technical material. Two features noteworthy of this second volume are the 29 page “Afterward” on “the Moral Problem of Slavery,” and the extended, almost 200 page, narrative account in Part II on “The Ideological and Political Campaign Against Slavery.”

Much of the impetus for the interest in slavery in the late 1960s in the U.S. stemmed from the civil rights movement of the 1960s. Indeed, Fogel and Engerman (1974, Vol.2, p.17), in one of the appendices to *Time and the Cross*, mention “the national tension over race relations” as one reason why discussion became so angry in a 1967 session on “Slavery as an obstacle to Economic Growth.” “It must be remembered,” they continued, “that 1967 marked the third successive summer in which race riots engulfed American cities with arson, violence, and death.” The implicit shift in Fogel’s research to a historical topic that resonated with current events may have been of some consequence for the subsequent direction of cliometric work. It implied a shift away from studying the determinants of long run growth, a topic that would seem to provide strong grounds for incorporating historical analysis into economics. In a 2005 interview with the author, Fogel emphasized that long run change has always been the focus of his work and that he has never lost that interest. He said that he turned to the issue of slavery in order to understand how institutions affect economic growth. (Mitch 2005).

11 Also see Toman 2005. For critical discussion of Fogel and Engerman’s work see Wright 1979. For more recent surveys of the literature on the efficiency of slavery see Wright 2006 and Sutch’s chapter on African American Slavery and the Cliometric Revolution in this volume.
In any event, Fogel certainly saw slavery as an important area for applying the tools of cliometrics and for stating with greater precision the issues formulated by previous historians of slavery.

ii. The Decision to aim at a broad public audience

However, in his work on slavery, Fogel also sought to reach a much broader public audience than professional economists. Other economists associated with Chicago, including Friedrich Hayek and Milton Friedman, published work aimed at broad audiences. Fogel may have been distinctive for the more focused nature of the work he was trying to bring to public attention. He discussed this decision at some length in three articles published in 1975 (Fogel 1975 a, b, c). He notes that recent research on slavery had increasingly touched on larger issues than those of narrow profitability and efficiency on which Conrad and Meyer’s initial cliometric research had focused. Fogel explains that ongoing collection of plantation and probate records expanded the scope of issues beyond “such purely economic problems as profitability and efficiency…It became clear that our monograph should be broadened to cover such topics as the skill-composition of the slave labour force, the slave family, slave mortality, and slave morbidity. (1975c, p.670)” And “the principle feature of the third phase of cliometric research on slavery is the shift of emphasis from how the slave system worked to the recovery of black history. The onset of the third phase has not brought the second to an end. Rather the two phases coexist, each giving vitality to the other” (Fogel 1975b, p.42). Finally, he explains his decision to reach out to a larger audience (Fogel 1975c, p.670):

“We also decided to bring the cumulative findings of more than a decade and a half of cliometric work on slavery to public attention and to do so without waiting for the completion of the research in progress. The decision to write a book for the general public was not an easy one nor a sudden one…But it was only when we began to sift through the new data from plantation and probate records that we became convinced that the cumulative weight of cliometric research had reached a critical level…Since we viewed the interpretive volume as initiating a new debate rather than closing an old one, such a publication schedule seemed reasonable [italics in original]. Naturally, our colleagues would reserve the right to disagree with our findings until they had an opportunity to scrutinize thoroughly the technical procedures…Although most comments on our publishing strategy were quite positive, we encountered some sharply negative reactions…Still another reader, more perturbed than any of the others with the decision to publish technical findings in such popular form, warned that we were flirting with professional suicide. Stick to the monograph and the technical papers, he advised, adding that if we could not resist the urge to bring our findings to the public, we should write an article for Scientific American.”
iii. The fallout from the slavery controversy

Nevertheless, to some in the economics profession the intensity of the debate over slavery raised doubts about the credibility of cliometrics (see Heckman 1997). And when Fogel was under consideration for the Walgreen Professorship in 1979, his predecessor in the chair, George Stigler made a point of sending letters to a number of prominent economic historians both in the U.S. and England inquiring whether the controversy over Time on the Cross had seriously tainted Fogel’s scholarly reputation. Their response was an unequivocal no, and that they still regarded Fogel as one of the pre-eminent economic historians in the world. However, John Hope Franklin, the prominent African American historian in Chicago’s history department did have some reservations based on the arguments of some of Fogel’s cliometric critics. He also noted Fogel’s lack of engagement with Chicago’s History Department, though he mentioned that he got along well with Fogel personally.

In summing up some two decades of work on slavery, Fogel (1989, p.13) states:

“I began it like many other cliometricians, not because I was especially interested in the history of American slavery, but because an accident of scholarship made the economics of slavery a major testing ground for the application of cliometric methods. Once drawn into the subject, however, it was the substance of the issues that maintained my interest. Although my principal professional expertise was, and is, in the areas of economics and demography, I found myself led down a road that forced me to grapple with the work of colleagues in cultural, political, and religious history…”

He concludes that book with an afterward on “The Moral Problem of Slavery” a point to which he returned in a series of published lectures (Fogel 2003, see especially, pp.45-48; also see Fogel 1994b). Thus, Fogel acknowledges moral considerations that transcend and shape the interpretation of his economic findings, or might be implied by a narrowly defined “Chicago” approach employing rational, maximizing behavior. This interest in moral and social issues that transcend economic considerations comes to the fore in Fogel’s 2000 qualitative exposition, The Fourth Great Awakening and the Future of Egalitarianism.

Fogel, in an epiphany reminiscent of John Nef, thus came to appreciate that work on the relatively restricted topic of the economics of American slavery had led him to pursue wide ranging cultural, ethical, and political issues. And one of Fogel’s faculty appointments at the University of Chicago at the end of his career was with the Committee on Social Thought, established by John Nef. But if Fogel’s work on slavery had resulted in a detour from his work on economic growth, it was also to lead to his return to the study of long run economic change.
D. Demography, Anthropometrics and Technophysio Evolution.

One major aspect of Fogel’s research into slavery focused on demographic issues. Fertility and mortality measures provided key indices of the material conditions of slave life and of slave family patterns. A related element focused on nutrition. After publication of Time on the Cross Fogel became aware that international public health specialists were using anthropometric measures (including not only measures of height, but also weight and body mass index or BMI—a measure of weight controlled for height) to measure nutritional status of populations in less developed nations. Fogel and his collaborators realized that a variety of the sources they had collected, including for example, coastal shipping manifests of slaves, reported information on slave heights and could be used for comparing heights of southern slaves with other populations, which in turn could provide evidence bearing on relative nutritional status.

Fogel spent much of his time as Pitt Professor of American Institutions at Cambridge in 1975-76, reading demography. At this time, he became interested in more fully documenting trends in mortality in North America, with a view to resolving current uncertainty about demographic historians over whether trends in mortality rates during the 18th and 19th centuries in North America were increasing, decreasing, or level. He thus began a project with the working title “the Economics of Mortality in North America, 1650-1919.” His commitment to demographic issues was evident when, upon his return to the University of Chicago in 1981 as the Walgreen Professor of American Institutions, he also established and became Director of the Center for Population Economics. Through his work on mortality he became increasingly aware of the potential insights that anthropometric measures could provide on nutritional status and the health of populations. This led Fogel to initiate a second large scale project he called “Secular Trends in Nutrition, Labor Welfare, and Labor Productivity,” which aimed to collect numerous data sets on stature, mortality, and related measures for hundreds of thousands of people in North America and Europe. This, in turn, has generated a burgeoning literature using anthropometric measures to examine spatio-temporal patterns in nutrition and its relation to biological well-being and health status. Among other interesting findings generated by this research were the observations of cycles in nutrition as evidenced by cycles in median heights in populations (see Craig 2016 for a survey).

Fogel’s initial major source for his work on the U.S. was the pension records of the Civil War Union Army that provides very detailed medical histories of these veterans from the Civil War into the Twentieth century.

During his American Economic Association presidential address, Fogel (1999, 2) put forward the concept of “technophysio evolution,” which he defined as “the existence of a synergism between technological and physiological improvements that has produced a form of human evolution that is biological but not genetic, rapid, culturally transmitted, and not necessarily stable.” Fogel et al. (2011, 3) set forth the following five building block mechanisms contributing to technophysio evolution:

1. The nutritional status of a generation---shown by the size and shape of their bodies---determines how long that generation will live and how much work its members will be able to do.

2. The work of a generation, measured both in hours, days, and weeks of work and in work intensity, when combined with the available technology, determines the output of that generation in terms of goods and services.
3. The output of a generation is partly determined by its inheritance from past
generations; it also determines its standard of living and its distribution and wealth, together with
the investment it makes in technology.

4. The standard of living of a generation determines, through its fertility and the
distribution of income and wealth, the nutritional status of the next generation.

5. And so on *ad infinitum*

What this translates into in long-run trends is that in the last few centuries, the human
body has become taller and heavier per unit inch in response to improvements in the food supply. This
in turn led to substantial increases in effective labor supply as improved nutrition provided
additional energy for the population to work intensively for many hours per day on average
throughout the year.

One important exposition of the implications of this was *The Escape from Hunger and
Premature Death, 1700-2100, Europe, America, and the Third World* (2004), which argued for
nutritional improvements as a key driver of economic growth and improvements in health and
decreasing of mortality. Fogel’s last major book, co-authored with Roderick Floud, Bernard Harris,
and Suk Chul Hong, *The Changing Body. Health, Nutrition, and Human Development in the
Western World since 1700* (2011) provides a survey and synthesis of evidence on how the five
building block mechanisms interacted and played out in the cases of Britain, Continental Europe,
and North America. It has been observed (Margo, 2012, 542) that while richly interdisciplinary,
incorporating work by medical doctors, nutritionists, demographers, statisticians, and historians,
economic analysis plays “a supporting role” with not much coverage of “behavioral incentives,
or market equilibrium, or the economics of the underlying institutions of food processing and
distribution.”

VI. Conclusion: Fogel, Kuznets, and the Empirical Tradition in
Economics

During his stay at Harvard, Fogel also became involved with the reorganization of the
National Bureau of Economic Research and was influential in its [Development of the American
Economy](http://www.nber.org/research/dae) (DAE) project. Both the DAE project and his work on demography and nutrition
implicated a focus on long run change, arguably the basis for integrating economics and economic
history. In this way he followed in the footsteps of his mentor, Simon Kuznets. Kuznets did not
define himself as an economic historian (see de Rouvray 2004). Fogel’s own subsequent work
has focused more on long run trends in [demography](http://www.nber.org/research/demography) than economic history as such. He described
his research areas as the [bio-demography](http://www.nber.org/research/bio-demography) of aging and health economics rather than economic
history (Mitch 2005); all the same, his influence on economic history continues through his
students. His pursuit of the inter-relationships between nutrition, health, and human heights was
a major impetus behind the rise of the field of historical [anthropometrics](http://www.nber.org/research/anthropometrics) (Meisel and Vega
2006).

In a 1978 interview with Simon Kuznets, Fogel (1978) observed “even though it [NBER
project] started out being called the program in Economic History, my own conception of it is as
a program in American economic development, with emphasis on trying to get a better picture of
the long-term trends that have influenced the development of the economy—to determine whether or not these trends are still at work and what they are.” 12

While teaching at Harvard in the late 1970s Fogel had continued to label his economic history course “Strategic Factors in American Economic Growth.” But on returning to Chicago in the Fall of 1981 he offered a course entitled “Long-term factors in American Economic Growth.” He indicates in his lecture notes that in the Winter 1982 Quarter, he would offer a course entitled “Problems in the development of American Economy,” aimed at those intending to do research in economic history. The “Long-term factors” course was intended “to provide students interested in issues of current economic policy – interested in the policy issues of the 1980s, with the empirical background they need to adequately assess those issues.” He goes on to elaborate, “I have placed an emphasis on long-term factors that affect current policy in order to emphasize that many issues that are today treated as of recent origin are quite long-standing and may not yield to treatment aimed at quick cures.” 13

A defining feature of his modus operandi on his return to Chicago was the research team. Fogel (1975c) noted that cliometrics had “ushered in a new style” featuring the research team made necessary by the large-scale collection and analysis of quantitative data. And he notes at the end of this article (p.670) that:

“Interaction and cooperation among scholars is not new but it is now being practised on a new scale. The use of numerical evidence was always a feature of historical analysis, but earlier investigators did not have the large grants needed to finance the massive collection of data, nor the hardware required to process them.”

And in his 1983 essay on traditional versus scientific history, Fogel notes that “large-scale, collaborative research….is] a hallmark of cliometric work (Fogel 1983, p.61).” His work since the mid-1970s on long-run trends and determinants of nutrition, health, and mortality has featured the utilization of very large data bases, such as Union Army pension records, which has necessarily required large research teams. The theme of big data and use of population level sources was taken up by Fogel’s student, Richard Steckel, in his SSHA presidential address (Steckel 2007).

Fogel had already employed a large research team for his work on slavery. His collaborative work with frequent co-author, Stanley Engerman date back to the 1960s.14

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12 Transcript of interview located in Robert W. Fogel papers Box 84, NBER program folder, quote is from p.4, 3/13/78 interview of Robert Fogel with Simon Kuznets.
13 Syllabus and Lecture notes for this course located in Robert W. Fogel papers Box 59.
14 For Engerman’s perspective on this collaboration see Engerman (1992).
Although Fogel achieved renown for his application of economics and quantitative methods to the study of history, throughout his career his research was informed by the view that economic history is indispensable for understanding economic processes and current economic issues. He believed, to quote Schumpeter (1954 12), “the subject matter of economics is essentially a unique process in historic time.” (Mitch, 2005). His work on the railroads was intended to address a key issue regarding economic growth. His work on slavery was motivated by a desire to use an understanding of the past to inform contemporary social issues. His work on nutrition and mortality focused on the centrality of long run change (2004). And his presidential address to the American Economic Association argued that the discipline of economics requires historical perspective to come to grips with the problem of accelerating technological change (Fogel 1999).

Fogel’s overall assessment was an optimistic one in the tradition of Kuznets. He viewed technological change as a long-run driver of human improvement, which, with interactions with the human body itself, has led to dramatic improvements in life expectancy and well-being. In this he contrasts with North’s underlying pessimism, or at least cynicism, about prospects for improvement given inherent difficulties with human institutions. Nevertheless, Fogel did have concerns about spiritual aspects of human experience, considered at length in his 2000 book The Fourth Great Reawakening, and one that he returned to in his final volume on the legacy of Kuznets (2013). In sum, Robert Fogel’s remarkable career and contributions point to both the power and the challenges of pursuing cliometrics.
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