

# The Cliometric Society

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## Summary of Papers and Discussion from the 35th Annual Cliometrics Conference

by

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(Lawrence, KS) The 35th Cliometrics Conference, hosted by Tom Weiss and Joshua Rosenbloom, brought together 50 international participants at the historic Eldridge Hotel, May 19-21. Richard Sheridan, a member of the KU economics faculty since 1952, provided a colorful context for the conference with an introduction to the history of Lawrence, including the devastating visit in 1863 of Quantrill's Raiders.

Stephen Haber (Stanford) presented the opening paper, which analyzes the role of capital markets in the early development of Brazil's cotton textile industry (1866-1934). Much of the industry was capitalized through equity, and the regulatory environment in which these firms operated reinforced the incentives to rely on equity funding. Haber argues that reductions in information costs to potential investors increased the availability of funding through the Rio de Janeiro stock market, and relegated banks to a relatively minor position.

Barry Eichengreen (UC-Berkeley) began the lively discussion by asking why, at this time, Brazil was the only country where publicly-traded debt and equity were important to textile investment. Did this mean that financial markets were working generally better than previously thought? Haber replied by citing the many information sources facilitating market efficiency: public documents, regulatory reports, summary tables, and end-of-month statements in the financial press. He also suggested that Brazil's unique position may have been attributable to taxation of dividends, giving the Brazilian government an incentive to enforce reporting of financial information. In response to a query from Larry Neal (Illinois) about investor cross-holdings and the absence of foreign direct investment, Haber stated that stocks were widely held in Brazil by the 1890s, in contrast to Mexico, where they were held by a small group of investors. Foreign direct investment in textiles was extremely low and was deterred in this period by Brazil's comparative disadvantage, as well as the silver standard and the depreciation of silver in the 1890s. Boris Simkovich (Vassar) suggested an alternate hypothesis stressing regulatory change: an unstable monarchy produced financial market uncertainty, and, after the regime collapsed in 1889, uncertainties were resolved and investment increased. Haber replied that, unlike later transitions in Mexico, the monarchy had been

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## Executive Director's Notes

### Report of Trustees Meeting

The Trustees of The Cliometric Society were able to meet Friday, May 19 in Lawrence, Kansas, to discuss the following items of business:

The Society will sponsor four sessions at the ASSA meetings in San Francisco in January, one a joint session with the AEA. Selection Committee Chairs John Nye and Phil Hoffman have chosen 16 papers from the 38 submitted. We will also sponsor a reception on Saturday evening, January 6, 8:30-10:30 pm. Summaries of the papers and specific times and locations of our sessions and paper will be in the insert to the October *Newsletter*.

The 1996 Cliometrics Conference will be held at Vanderbilt University, May 17-19. Jeremy Atack and Bob Margo will serve as hosts. Those who might wish to host a future Clio Conference should get in touch with me.

The Third World Congress of Cliometrics has been postponed until July 1997, and will be held in Munich, Germany. Forthcoming newsletters will supply further information.

*Explorations* Editor Larry Neal reported his discussions with Academic Press about how to promote the Society in the journal. About two-thirds of Society members are subscribers.

After some discussion, the Trustees recommended that selection procedures for papers presented at the various Cliometrics Conferences should be more explicit.

### Society Provides 'Economic History Services'

The Society's files server is now called **Economic History Services** to emphasize that our server is not restricted to 'cliometrics' but is devoted to the field of economic history more broadly. Our objective is that the server can be *the* directory of economic history resources available to scholars around the world. If you have material you would like to make available on or *via* our server, please contact me. The address for gopher access to the server is **cs.muohio.edu** and for WWW is **http://cs.muohio.edu** (Some recent WWW clients can use just the gopher address.)

A new feature of the server is a set of 'buttons' directing users to resources provided by other organizations in our field. You will find specific 'home pages' for the Business History Conference and the Economic History Association, as well as for The Cliometric Society; we hope to add more related organizations. Other improvements will include reorganizing selected archives, adding some new directories and installing useful cross-referencing features. Please browse our new server and let us know what you think.

## Results of First Undergraduate Paper Competition

The Selection Committee for the First Annual Undergraduate Economic History Paper Prize has awarded an Honorable Mention to 'Fiscal and Monetary Policy and Inflation: The Confederate States, 1861-65', by Ari Gerstle of MIT. His paper was nominated by Dora Costa.

The text of the paper is available in the Economic History Services files server.

Robert Whaples (Wake Forest), Chair  
Ann Carlos (Colorado)  
Paul Hohenberg (RPI)

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## AN INTERVIEW WITH ANNA J. SCHWARTZ

*Editors' Note: Anna Jacobson Schwartz is Research Associate of the National Bureau of Economic Research and Adjunct Professor of Economics in the Graduate School of The City University of New York. In January of last year, she was named Distinguished Fellow of the American Economic Association.*

The interview took place at the offices of the NBER in New York on April 14, 1994, with responses to some additional questions in the spring of 1995.<sup>†</sup> Our interviewer was Eugene N. White (Rutgers), who writes: After graduating from Barnard College in 1934 and receiving an M.A. from Columbia in 1936, Anna Schwartz spent a year at the U.S. Department of Agriculture before returning to Columbia to collaborate with A.D. Gayer and W.W. Rostow on *The Growth and Fluctuation of the British Economy, 1790-1850* (1953), a classic of British economic history. She joined the National Bureau in 1941. Her collaboration with Milton Friedman produced a trio of books: *A Monetary History of the United States, 1867-1960* (1963), *Monetary Statistics of the United States* (1970) and *Monetary Trends in the United States and the United Kingdom* (1982). In addition to having taught at Brooklyn College, Baruch College, Hunter College and New York University, she is a founding member of the Shadow Open Market Committee, and served as staff director of the U.S. Gold Commission (1981-82). Her current research investigates the relatively unexplored area of foreign exchange market interventions. Characteristic of her large oeuvre of articles and books is the scrupulous compilation of statistical data to test her interpretations of history. It is fair to say that without Anna Schwartz modern macroeconomic history would be very different from what it is today, perhaps unrecognizable.

### What led you to become an economist?

From the time I had a high school course in economics at Walton High School, an all girls public school in the Bronx, I have never ceased to find the subject matter challenging. I majored in economics at Barnard, and economics was my choice for graduate school.

### How did you become interested in monetary and financial history?

Possibly it was from the influence of Arthur Gayer,

<sup>†</sup>An earlier interview with Anna Schwartz, by David Fettiġ of the Federal Reserve Bank of Minneapolis, was published in Fall 1993 in *The Region*. Rather than repeating questions from that interview, Eugene White focused on Dr. Schwartz's general observations on monetary and financial history. With permission of Dr. Schwartz and of Kathy Cobb for the Minneapolis Fed, we reprint portions of Fettiġ's interview, denoted by \* at the head of each of his questions.



known as 'Archie' Gayer, who was one of my teachers at Barnard. He was the author of an article on the Banking Act of 1935, which I didn't understand well enough at the time to see that it moved the Federal Reserve in a direction that I would not now support. He edited a collection of essays in honor of Irving Fisher in the mid-1930s that introduced me to the work of noted international financial economists of the period. I was a research assistant to James W. Angell who taught money at Columbia, during a brief period when he was associated with the NBER, and started the project that eventually became the estimated money stock numbers.

### Who else had an early effect on your career?

[Wesley] Mitchell certainly was an influence. He was a supporter of the study that I worked on with Gayer and Rostow, the study of British business cycles and growth from 1790 to 1850. Mitchell's interest influenced our adoption of the NBER method of cyclical analysis. Periodically, we would meet with him to report on what we were doing. Mitchell's integrity and commitment to research that was thorough made a lasting impression on

me. What [Arthur] Burns achieved was indoctrinating me to insist on checking not only numerical data but every statement in a manuscript. Rostow, at the time we were colleagues, already had fully formed views, which I believe he still entertains. He was a lot of fun to be with, but didn't have a permanent influence on my intellectual development. Friedman's influence on me has been profound, but it came later than the influence of the others I've mentioned.

**Doug North says that Walt Rostow was a major contributor to the early development of cliometrics. What do you think of his influence, or the influence of Mitchell, Gayer, Burns, and Schwartz?**

If Cliometrics is a combination of measurement and history, Rostow was an early practitioner. Burns, Mitchell and Gayer can also claim that distinction.

**How did your work with Gayer and Rostow arise?**

Well, Gayer had written his dissertation at Oxford on British unemployment from, I think, 1815 to 1850. Although his dissertation was never published he was interested in expanding that work. I think that he proposed the project to Mitchell, who thought it was worthwhile. And because of Mitchell, the Columbia Council for the Social Sciences was ready to make a grant. I was probably the student most interested in economics in all the classes that he [Gayer] taught at Barnard. Rostow appeared after we had gotten started, but he became the center of the project.

I thought that the book was ignored because, by the time it was published in 1953, the denigration of the Bureau's method of cyclical analysis was already firmly in place. Although there was a lot in the book that was Keynesian, the fact was that the technique we used was just copied from how the Bureau handled its time series. I thought that limited the influence that the book had at the time. But on the other hand it seems to have lived. It hasn't died out and it's been republished. R.C.O. Matthews gave it a rather negative review, but said many years later he hadn't been just in his evaluation. Maybe that helped. But, you know, in general, business cycle analysis lost luster until quite recently. It was not the key kind of subject that economists discussed. Even though the Bureau's technique hasn't been revived, dating business cycles is [now] a big deal.

**How did you and Milton Friedman come to work together?**

I met him at the National Bureau. He had been in New York during the war when he was working on a mathematical project at Columbia. I might have run into him, but I didn't really get to know him until he returned to the Bureau in the early 1950s. It was Burns who made the arrangement and decided we should work together. And he was right.

**\*What inspired the [*Monetary History*] and what did you hope to accomplish through the work?**

What inspired the book was the National Bureau's program to the study the cyclical behavior of different economic processes – transportation, inventories, consumption and so on. We had constructed estimates of the U.S. money stock from 1867 to 1960; annual estimates before 1875, semiannual until 1881, annual again through 1906 and monthly from May 1907 on. It was our assignment at the National Bureau to study the cyclical behavior of the money estimates.

Our plan was to begin with a narrative describing fluctuations in the growth rate of the money stock, organized in accordance with the NBER dates at which business activity reached a cyclical peak or trough. We wanted to examine the factors that accounted for the fluctuations in money growth and how the changes in money affected the course of events

We initially proposed to prepare another study dealing with trends and cycles in the stock of money. We published the study of trends, which appeared 19 years after *A Monetary History*, relating the trends not only in the U.S. but also in the U.K. money estimates to income, prices and interest rates. In between those two dates, we published *Monetary Statistics*, describing in detail how the U.S. money estimates were constructed.

**When the *Monetary History* was first published, did you feel that it would have the impact it has had?**

I was highly uncertain that *A Monetary History* would have a favorable reception. Our views were so distant from mainstream macroeconomics in the importance we accorded money. It took years for our views to have an impact. (Incidentally, *A Monetary History* served as my [Ph.D.] dissertation at Columbia.)

**You describe the book as part of a larger research program, but there's a sustained passion in the volume which makes it good reading. Did you feel that you**

**were laying down a challenge or a new foundation?**

Both, I suppose. We presented empirical research that investigated the channels by which changes in monetary growth were transmitted to the economy. That was a controversial view that challenged prevailing macroeconomic approaches. But the study also laid the foundations for the proliferation of econometric work on money demand and theoretical developments like rational expectations.

**\*Have these new treatments of monetary history caused you to rethink any of the book's suppositions?**

New treatments of monetary history have usually challenged our interpretations of particular events, such as the failure of the Bank of the United States in December 1930, why national banks didn't fully exploit profit opportunities that issue of national bank notes afforded, whether it is news or fundamentals that explained the behavior of variables like the exchange rate. These challenges don't really cause me to rethink the book's suppositions.

The Romers have challenged the monetary shocks we identified in *A Monetary History* as actions of the monetary authority that were independent of contemporary changes in output and that were followed by cyclical declines. They allege possible bias in our selection, and in their view only two qualify as a monetary disturbance – the discount rate hikes in 1920 and 1931. However, they conclude that bias does not account for the contractionary effect of the monetary shocks.

We ourselves have modified two interpretations we offered in *A Monetary History*. One was a reference to the permanent income elasticity of demand for money as much higher than unity, that money was a luxury good, the percentage change in demand for which increased by more than the percentage change in income. Comparison with velocity in the U.K. convinced us that we had overestimated the income elasticity for the decades before 1903 because we did not allow for the effect of the changing financial structure of the U.S. economy...

The other interpretation in *A Monetary History* that we have since modified relates to deposit insurance, which we celebrated in the book as the greatest success of the New Deal. We attributed the absence of bank failures to deposit insurance. Yet, there were no bank failures in other industrialized countries that had never adopted deposit insurance. Bank failures emerged in the mid-

1970s both here and abroad. The explanation seems to be that a relatively stable world price level until the mid-1960s contributed to sound banking. Sound credit analysis depends on the assumption of price stability. Unexpected price change can invalidate the assumptions underlying bank lending and investing. We associated sound banking with deposit insurance, when the explanation we now believe was price level stability.

**The 'cliometric revolution' began approximately the same time as you and Friedman were working on the *Monetary History*. A key event in the development of cliometrics that many point to is the 1957 NBER Conference on Income and Wealth. Were there any connections between the two projects?**

Both involved measurement. I contributed a chapter on gross dividend and interest payments by corporations at selected 19th century dates to the Income and Wealth volume. For the monetary history we needed a measure of the money stock among other variables. The NBER sponsored both, but one, the Income and Wealth conference, was an annual project in which improved measurement was the objective, but each year different dimensions of income and wealth were examined. The other was part of the business cycles program with the time of gestation of the project determined by the authors. Measurement is the only link.

**Economic historians find a big divide before and after the cliometric revolution. Is there a similar divide for monetary history?**

Monetary history before the publication of our book applied a credit history approach to the subject. Our approach was to study changes in money supply and the effects of these changes. So it might be said that there was a big divide before and after our book appeared, but the credit approach did not disappear. We added something to the mix but we haven't displaced anything.

**\*You have [also] written extensively about Great Britain over the years. What lessons does that country's economic history hold for the United States?**

With respect to the lessons the U.K.'s economic history holds for the U.S., the importance of the difference in institutional structures of the two countries is clearly dominant. The Great Depression was far more catastrophic in the U.S. than in the U.K. One reason is the ineptness of the Federal Reserve compared to the Bank of

England's performance. Banking panics in the U.S. occurred in the 19th and 20th centuries, whereas the last one to occur in the U.K. was in 1866. The banking system in the U.K. has been much more stable than in the U.S. I'll leave the comparison to that dimension -- the difference in institutional structures.

**Do you think that economic history has been downplayed by the economics profession?**

My impression is that it was downplayed in the postwar period by the emphasis on econometrics, but in recent years it has recovered ground. History for most beginning economists seems to begin in 1945. How to imbue students with an interest in the past -- a thirst to learn how the present relates to the past -- is not obvious.

**How has economic history recently 'recovered ground'?**

American economic history is one of the areas that has attained prominence in the work of Fogel and his students. I'm not sure that the economic history of other areas of the world has been the focus of equal concentration.

**You have often criticized the treatment and use of data, especially historical data, in economic research. Do you think the economics profession has in recent years improved its use of data?**

No. The main disincentive to improve the handling and use of data is that the profession withholds recognition to those who devote their energies to measurement. Someone who introduces an innovation in econometrics, by contrast, will win plaudits. The fact that it is so easy to access data stored in a computer has discouraged familiarity with the problems in the data, let alone an interest in the construction of data. Users are unaware of the large margins of error surrounding statistics that they take at face value and happily apply in the econometric exercises they conduct.

I recently reviewed *Studies in Income and Wealth*, Volume 55, on measuring *International Economic Transactions*, where exposing all the problems, all the deficiencies, all the shortcomings of one series after another leads Ed Leamer, a discussant, to ask why we are so hipped on the latest fad in econometrics, instead of devoting our energies to improving the data we plug in.

**Do you think that financial and monetary historians have adequately treated the role of institutions? And have financial and monetary economists adequately treated the role of institutions?**

My impression is that historians are more likely to treat the role of institutions than are financial and monetary economists. Having said this, let me add that, whether identified as a historian or as an economist, indubitably one cannot discuss basic issues underlying finance and money (such as what determines output) without concern for the institutional environment, including prevailing organizational forms, contractual arrangements, and the structure of property rights. Similarly, one cannot discuss labor markets without concern for the institutional environment, including the role of unions, welfare provision and so on. With respect to finance and money proper, economists tend to take institutions for granted, while historians tend to explore the development of institutions.

**What have been the most important recent advances in monetary and financial history?**

I'm not sure that recent developments should be described as advances. They represent new directions. One direction is the focus on finance, the behavior of asset prices and credit rationing. A problem I find with all these new -- I'll call them fads -- is that the people generating the fads don't bother to see if there is anything in the past in economics that anticipated what they want to say. This problem fits in exactly with a paper I discussed at a conference on the interest rate spread between high grade and low grade securities. There is a big literature about it that predates what's going on now. Did the authors ever look at what Braddock Hickman had done for the Bureau on just that subject? I know they didn't. So maybe it wouldn't have altered one *iota* of what they wanted to do with this concept, but it should at least have had the feeling it was grounded in something, and that this did not start *de novo* the day they began work in that area. I think that the profession is poverty stricken in that sense. It doesn't really take advantage of past work that the common phrase, 'standing on the shoulders of giants', suggests.

**Have macroeconomists and monetary economists absorbed enough history?**

The role of history as a testing ground for theoretical propositions has won wide acceptance in many areas

of economics including labor economics, petroleum economics, the economics of fertility, and monetary reform, to name only a few areas. It's not a matter of absorbing history but exercising imagination to see how historical evidence can enrich one's understanding of economic relationships.

### Do you consider yourself an empirical economist or an economic historian?

I suppose I'm both. I don't know that we can make it 'either/or'.

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## Quantitative Economic History (QEH) Group Meets in Japan

by Matao Miyamoto and Takeshi Abe, Osaka University  
with Yasukichi Yasuba, Osaka Gakuin University

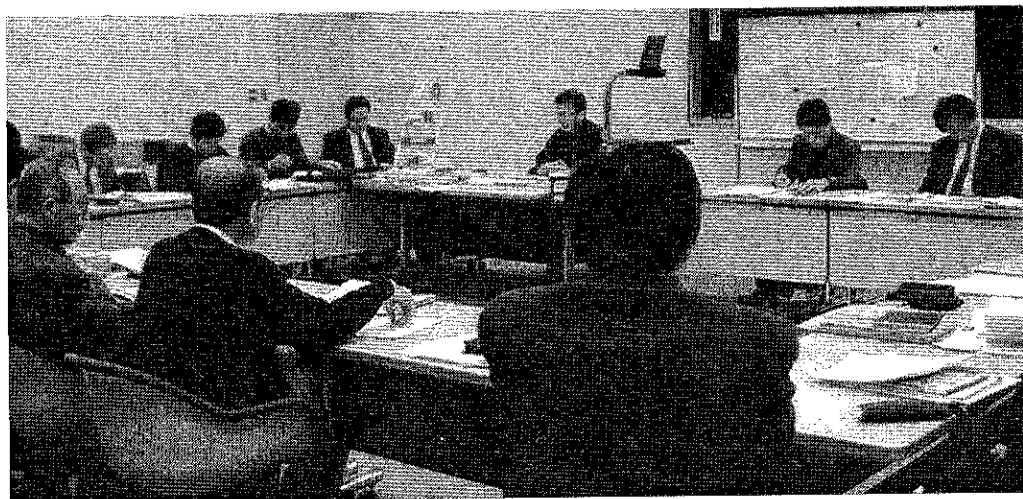
(*Shizuoka, Japan*) The tenth conference of the QEH group was held at the Fuji Educational Center, December 25-27, 1994, attended by 25 representative quantitative economic historians. The theme of the Conference was 'Problems Related to the Rise of Industrial Regions, with particular reference to Kansai.' The Conference opened in the afternoon of December 25 with a framework talk by Minoru Sawai (Osaka).

The first paper, by Masatoshi Amano (Kobe), characterized the rise and decline of four major industrial regions, particularly with respect to heavy industries, using statistics of operatives at factories. Takenori Inoki (Osaka) warned against the uncritical use of official classifications for such industries as machinery, metals, and chemicals, since a lot of

small-scale indigenous workshops would be included under these headings. Abe suggested that the use of factory statistics would denigrate the importance of textile and apparel industries, since most of the silk-reeling, weaving and apparel workshops and all the household manufactories would not be represented. Finally, Yasuba commented that the rise of heavy industries was not a natural phenomenon but would have to be explained, to a considerable degree, by rising protectionism after 1911.

In the first session of the second day, Matao Miyamoto and Abe reported on their project to compile a national database for managers and the rich for 1988. Osamu Saito (Hitotsubashi) asked whether there was any association between landed wealth and industrial wealth. Takafusa Nakamura (Toyo Eiwa) added that the asset values available in the list of 'Urban Land and Houses' should be useful. Shunsaku Nishikawa (Keio) welcomed

the research and commented that more efforts of this kind using computers should be made. While agreeing wholeheartedly with Nishikawa's proposal, Yasuba asked the authors to take good care of their brains, because the use of a computer almost inevitably reduces one's IQ, just as the use of a word processor tends to reduce one's literacy. (Two of Yasuba's laws.)



*Japan's cliometricians in session. Notice Takenori Inoki taking a siesta, and Takafusa Nakamura looking at his notes. Yasukichi Yasuba recognizable only by the prematurely bald head. (Caption by Yasuba.)*

The second paper of the day, by Masayuki Tanimoto (Tohoku), tried to explain the decline of the Niikawa cotton industry, which integrated the entire process (from ginning to spinning to weaving), in contrast to the growth of the Iruma cotton industry, where cotton-yarn merchants played the role of intermediaries in a rural putting-out system.

Then Sawai reported on the machinery industry in Osaka in the Meiji Period. He said its growth accelerated after the Russo-Japanese War (1904-05), not only because of the expansion of internal demand but also in response to increasing demand from Asia. He also emphasized the role of engineers in such expansion. Hiroshi Ueda (Osaka Municipal) asked about competition from Tokyo and other regions, and Atsushi Suzuki (Tokyo) asked about the extent of the market. Sawai explained that, with the expansion of the market and entry of new firms, the Osaka machinery industry continued to expand until



World War II. Finally, Yasuba observed that the machinery industry in Japan rose in the absence of any significant protection before 1911.

The fourth paper, on the linkage between the Osaka Army Arsenal and the metal and machinery industries in the Kansai Region, was presented by Hiroshi Miyake (Mukogawa). He explained that the Arsenal played an important role in importing and disseminating basic engineering knowledge and supplying a large number of the skilled workers employed by the medium and small-scale factories of the region. Suzuki asked about the intensity of such a linkage, and Ueda commented on the changing (weakening) role of the linkage as the private sector developed.

The final paper of the day, on the *zakka* (sundries) industries for export in Osaka in the Meiji-Taisho Periods [before 1926], was presented by Susumu Yamanaka (Kumamoto). The paper singled out two such industries, namely tooth-brushes and shell-buttons, and discussed the geographical distribution of 'factories' and the formation of 'industrial regions'. Hwan Wanson (Kyushu Industrial) and Yuzo Yamamoto (Kyoto) asked about the relationship between putting-out merchants and manufacturers and the linkage with surrounding villages. Nakamura pleaded for a better definition of the sundries industry. He even asked whether 'sundry' is a proper English name for the industry. Yasuba tried to calm him down, since that was the name used by shipping firms, but failed to persuade Nakamura, who asked whether hosiery, blouses, handkerchiefs, hats, boots and shoes, and furniture are included.

The third day's sessions were opened by Jozen Takeuchi (Hiroshima) who reported on Osaka's secondary industrial schools and the Osaka Municipal School of Engineering. The paper clarified the roles of these schools in fostering engineers and middle-managers for Osaka and vicinity. The paper made it clear that a vacuum, created by the inaction of the Ministry of Education and the Prefecture, was beautifully filled by the City, which established progressive secondary schools, including the Osaka Municipal School of Engineering. It also showed quantitatively the career paths of the graduates from the

latter. In the discussion, by Hiroshi Mitani (Tokyo), Masakatsu Daimon (Tsuru Cultural) and others, the following points were established. The quality of education at the Osaka Municipal School of Engineering was higher than at other places (such as Tokyo). Graduates from the mechanical department tended to become entrepreneurs, and the graduates from the department of civil engineering tended to become public officials. Finally, most of the graduates got jobs in or near Osaka.

Konosuke Odaka (Hitotsubashi) next presented an experimental and 'half-boiled' paper on the factory system and labor-management relations. He stated that the concept of the factory was relatively new (about 1905), an assertion challenged by Yasuba, and the method of systematic labor-management relations was born with the factory. Toshiaki Ushijima (Keio) questioned whether the change from indirect to direct regulation in shipbuilding can be generalized. Inoki commented that factories were actually created both from above (as in shipbuilding) and from below (as in textiles, food, and most other industries). Yasuba, who was apologetic about his frequent interventions, commented that the factory system did not create immiserization of workers but a rise in real wages from the start in Japan, in contrast to most follower industrializers.

In the third session, Makoto Hirota (Kobe Gakuin) reported on the establishment of public markets in the Kansai Region, with special reference to the City of Osaka and the neighboring town of Amagasaki. Takeshi Hirano (Keio) commented on the demand side of the problem as well as the role of the local government. Ushijima asked why these markets rose widely only in Osaka. Finally, Abe suggested that it is important to find a proper place for such markets in the system of distribution not just in the Kansai Region but also in other regions.

In the final session, Miyamoto wrapped up the discussion by summarizing major findings and posing problems for future research. Then, everybody congratulated each other, observing that the QEH conference was held for the first time, after a lapse of more than several years, prompted, without question, by the honor given to Bob Fogel and Doug North.

## **The Cliometric Society Announces The Second Annual Undergraduate Economic History Paper Prize**

The goals of this award are to provide undergraduate students with an opportunity to achieve recognition for excellence in research and writing, to enable their work to reach a wider audience, and to encourage economic history teachers to cultivate undergraduate writing and research.

A Selection Committee of three Society members chosen by the Board of Trustees will judge papers on significance of findings, soundness of method, originality, understanding of existing body of work, clarity of writing, and overall quality. The prize will be announced in the summer of 1996. The prize-winning paper will be published in *The Newsletter of The Cliometric Society*, and its author will receive a cash award and a complimentary membership for one year.

### **Rules:**

Papers must be nominated by a member of The Cliometric Society.

All types of papers will be accepted, *e.g.*, archival research, statistical analysis, analysis and review of literature. Papers may cover any geographic area and any topic, as long as the primary focus is economic history.

Papers must be written by a student who was an undergraduate during the 1995-96 academic year. 'Undergraduates' are defined as students in the first degree program of their higher education, *e.g.*, US Bachelor's Degree. There are no age restrictions.

Papers must be submitted by e-mail or on disk, using a commercial word-processing program. They must be *one* document, with graphs, charts, tables, *etc.*, embedded in the text. Maximum length is 5000 words, with an additional maximum of 5 pages of graphics. Papers must be in English.

Author's name and address, nominating instructor, institution, and course title must appear only at the beginning of the document.

Papers must be received by **June 30, 1996**.

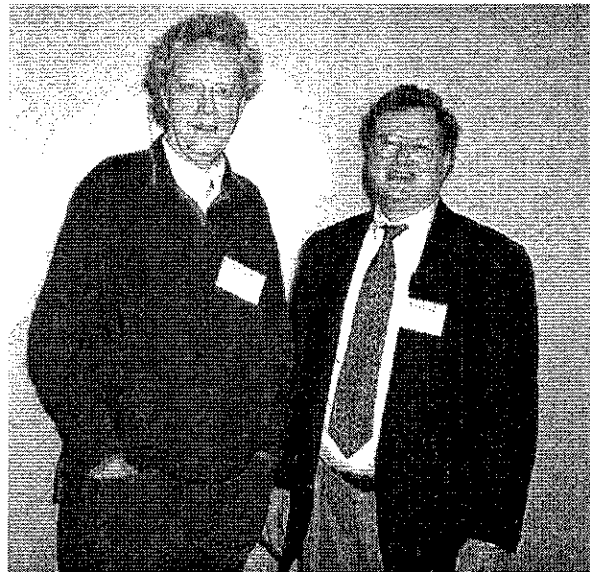
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*Submission of a paper is a grant permitting The Cliometric Society to publish the work in the Society's Newsletter and in the Economic History Services fileservers. Runners-up may be invited to submit abstracts of their papers for publication.*

## Report on the NBER Conference on Health and Welfare during Industrialization

by Gail Honda, University of Chicago

(Cambridge, MA) From the Americas, Europe, and the Pacific Rim, participants convened on April 21-22, 1995 for the Conference on Health and Welfare during Industrialization, organized by Richard Steckel (Ohio State) and Roderick Floud (London Guildhall). Thanks to the generous sponsorship and efficient organization of the National Bureau of Economic Research, conferees were comfortably accommodated at the Royal Sonesta Hotel, site of the fruitful and often heated meetings. The overall project seeks to answer one of the longest-lived and most important questions in economic history: How does industrialization affect the health and welfare of a population? This issue, originating in the 19th-century British Standard of Living Debate, is being addressed in a project using a vast array of data from eight countries, ranging from records on nutrition and stature to statistics on morbidity and mortality.



Conference organizers Roderick Floud and Richard Steckel.

Stanley Engerman (Rochester) opened the conference with a sweeping analysis of standard of living indicators in historical perspective from the 17th century to the present. Beginning at least as far back as William Petty's estimates of national income in 1665, economists and historians have wrestled with various measures of economic and social progress. Population, used as a proxy for economic growth and living standards in the 18th century, has been followed by mortality, life expectation, real wages, literacy, occupational structure, *per capita* income, and the Human Development Index (HDI). Over the past two decades, height has risen to prominence as an indicator of living standards. Age-specific population height, Engerman explained, is evolving into an important measure because of the relative ease of access to data, the generally high correlation between height and income, and physiological relationships among height, nutrition, and disease. He then posed the foremost question

of the conference and its 400-year historiographical precedent: Can one measure be fully satisfactory in capturing the standard of living? Engerman concluded by suggesting that perhaps the best strategy is to accept a specific contribution for each indicator while maintaining an awareness of its inherent complexities and difficulties.

Discussant Robert Gallman (North Carolina) expressed admiration for Engerman's comprehensive review of a highly diverse literature. 'What, no Plutarch?' he asked in a rhetorical vein. 'Was Pericles tall?' He went on to discuss two additional indices of the standard of living, age at menarche and age at the second growth spurt. He noted that both have dropped dramatically over time, but took issue with the ready acceptance of these phenomena as unqualified goods. Taking the concept of early maturity to its limit, Gallman asked whether five-

year-olds fully grown would be the same as five-year-olds today. He recalled Kuznets' belief that measures of national product without welfare have little meaning. Gallman then deftly demonstrated the importance of carefully interpreting the changes in indices. In the discussion which followed, Nevin Scrimshaw (United Nations University) emphasized the need to gather more information on age-specific mortality and to look at the influence of fetal malnutrition and birth weight on the duration of life. Joel Mokyr (Northwestern) pointed to the importance of considering the *quality* of product, and not just the price, citing water supply as an example of a product whose quality (cleanliness, ease of access) can have a major impact on a population's welfare.

The first country-specific paper of the conference was by Dora Costa (MIT) and Richard Steckel. Their work on long-term trends in economic growth and health in the

United States synthesizes previous evidence on stature and mortality in the 19th and 20th centuries with new evidence on body mass index (BMI), lean body mass, waist-hip ratio (WHR), and prevalence of chronic conditions. Regarding previous evidence, perhaps the most perplexing problem of secular trends in height in the United States concerns the decline in average height of white, native-born soldiers in the 19th century during what is considered a period of economic prosperity. Many sources of this decline have been proposed, such as greater exposure to infectious diseases, greater inequality in the distribution of income, and deterioration in diet. To date, there has been no strong consensus. Costa discussed BMI, defined as weight in kilograms divided by the square of height in meters, as potentially an even stronger indicator of productivity, morbidity, and mortality than height. She then introduced WHR, a measure of abdominal body fat, which has been shown to be a good indicator of risk of death, especially from heart disease. All these measures have been shown to be related to chronic conditions, and their improvement over the past century has been accompanied by a decline in chronic conditions.

Discussant Clayne Pope (Brigham Young) first expressed concern about the consistency and quality of data for the United States. Most of the work to date has been dependent on the Civil War sample of Union soldiers; there is no consistent long-term series on health vs. product and income. As an example, Pope cautioned against comparing average height for native-born whites with *per capita* GNP for the entire population. He also noted that there were virtually no data on women and that better data on heights for 1860-1900 are needed. With regard to welfare, he was skeptical of the value of a single metric for health, especially one which mixes cross-sectional and cohort measures. Although much work remained to be done because of the vast scope and numerous measures of health and welfare in the United States, Pope concluded that the paper has made good headway and has pointed to important avenues for future research. In discussion, Robert Margo (Vanderbilt) noted that composite indices like the Human Development Index (HDI) are dependent on the social choice system of a particular era. Gallman suggested that since much of the work was dependent on the Civil War sample, and since the Civil War severely damaged the country physically, politically, and economically, perhaps there should be more investigation and discussion of the War's consequences.

Changes in height, health and welfare in Britain over the past 250 years were next examined by Roderick Floud and

Bernard Harris (Southampton). Harris elucidated three main topics on British health: general debates over indicators of the standard of living, secular trends in adult male heights, and the impact of exogenous events on children's heights. Much of the standard of living controversy has focused on the measurement of real wages, the rate of decline in mortality, opportunities for education, and levels of literacy in industrializing Britain. From this swirl of debates has emerged an interest in heights. Given the controversial nature of British economic historiography, it is not surprising that much of the original work on 18th- and 19th-century adult male heights has been challenged on both data quality and methodological fronts. He then showed that, although WWI had little impact, definite improvements in children's heights were observed during WWII. Harris concluded by demonstrating that an HDI for Britain exhibits slow and steady improvement over the past 250 years.

Discussant Peter Temin (MIT) remarked that he found the time period covered in Floud and Harris's paper quite extraordinary and the variety of data bewildering. He was primarily concerned with questions of synthesis: Can we hope to get a single picture of health and welfare in industrializing Britain? Temin noted that it was important to distinguish among data which were conceptually disparate and to guard against invoking comparisons among them indiscriminately. He cited three examples of conceptually distinct kinds of data: income, which reflects conditions 'at a moment'; literacy, which reflects conditions of the past; and height, which reflects conditions cumulated over time. Is it possible, he asked, to get comparable data by class or subgroup? Regarding the HDI, Temin reminded the audience that it was established in a development context and may not be appropriate for comparisons among developed countries. Furthermore, for analysis of health and welfare it might be interesting to consider the 'new view' of industrialization as an aggregation of localized phenomena. In discussion, Peter Timmer (Harvard) cited differentials in exposure to disease and public investments in health as important determinants of regional health experience. Jane Humphries (Cambridge) pointed to early feeding practices and intensity of work at different ages as having significant effects on health.

Following a break for lunch at the elegant Skyline Room, with a magnificent view of the Charles River, Lars Sandberg (Ohio State) and Richard Steckel presented their paper on Sweden. Sweden provides an interesting

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## All-UC Group In Economic History

by Roger Ransom and Linda Van Ingen, UC-Riverside

(Riverside, CA) The All-UC Group in Economic History held its 1995 spring conference at the Mission Inn, March 17th - 19th. The focus of this year's conference was 'Microeconomic History and the Public Use Samples of the United States Census, 1840 - 1940.' Papers and round-table discussions concentrated on development and use of the computerized samples drawn from manuscript population Censuses of the United States between 1840 and 1940, with particular emphasis on the current development of a set of 'integrated public use micro data series' (IPUMS) by the Social History Research Laboratory at the University of Minnesota. [The IPUMS Project is described in detail in *Historical Methods* 28:1 (Winter 1995).] Conference sessions mixed technical discussions of data collection for the IPUMS with presentations of interest to economic and social historians on applied work with various PUMS.

The opening session centered on the state of the IPUMS Project. Diana Magnuson (Minnesota) initiated proceedings with her paper on 'Sources of Change in the Census: Examples from the Population Schedule, 1850-1990', which carefully reviews how both the purpose and scope of the Census have changed over the years, with particular attention to changes in the quality and nature of the data resulting from modifications of data collection procedures. Her paper highlights factors affecting choice of the local administrators overseeing data collection, selection and training of enumerators, and the nature of supervision provided by the national census office. Her presentation was followed by a discussion of the IPUMS project, led by Steve Ruggles and six of his Minnesota colleagues: Todd Gardner, Ron Goeken, Patricia Kelly Hall, Chad Ronnander, Matthew Sobek and Magnuson. Ruggles retailed a quick history of the evolution of computerized census samples, beginning with collection of the 1900 sample at the University of Washington in the late 1970s through the current effort at Minnesota for 1920. In a wide-ranging discussion with considerable participation from the floor, Ruggles and his colleagues related in detail how the existing samples were combined into a set of IPUMS with integrated codes and variables. The audience agreed that the presentation was a *tour de force* on the part of the Minnesota researchers.

Three additional papers dealing with technical aspects of the IPUMS were presented in various sessions. Matthew Sobek discussed 'Occupation Classification and Measurement: Issues for Historical Analysis Using the IPUMS', focusing on problems in developing comparable occupational codes for different years. Sobek noted that most problems were tractable, and, for those who question decisions made by the team, codes for the original occupational descriptions are retained in the IPUMS. A more serious difficulty is posed by the inferior quality of occupational data before 1910, which differ fundamentally from later census data. Jan Reiff (UCLA), discussant, thought that Sobek's paper provided a 'compelling guidebook' to the link between data on the enumeration schedule and in the sample. She reminded us, however, that there may be a 'coded' language that raises potential problems with the previous link between enumerator and what was recorded in the schedule. Further discussion raised issues concerning interpretation of unemployment data, persons with multiple jobs, the issue of domestic work (particularly for women), and interpretation of income and prestige scores in the later census samples.

Todd Gardner discussed how different approaches to metropolitan classifications can be applied to the IPUMS in his paper, 'Measuring Suburbanization: Metropolitan Classifications for Census Years Prior to 1950.' Most of his discussion focused on the pros and cons of the two most common urban definitions: Standard Metropolitan Area (SMA) and Metropolitan District (MD). Because SMAs follow county lines they are the easiest to discern from the Census, but the MD is the more discriminating measure for analysis. He pointed out that, curiously, there is more detailed geographic information in Censuses prior to 1940, enabling researchers to identify with reasonable precision both the SMA and the MD. For the post-1940 samples, still subject to privacy considerations, we must rely on geographic information already in the data. Commentator Eric Monkonen (UCLA) pointed out the significance of 'where Americans live', especially the growing tendency of Americans to live in 'edge cities', and thus the importance of being able to identify suburban locations as well as core cities in our statistical data.

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## Foam on the Plains

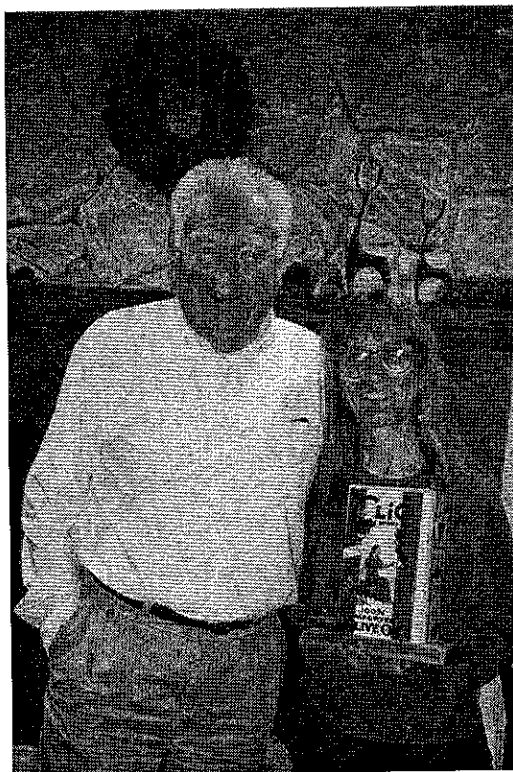
The jayhawk tribe was barely ready for the onslaught of clioms making their way to the scene of Quantrill's greatest triumph. Only as the great silver birds approached were the final touches being made to the program, the banquet menu and even its venue. The Mullah had mixed feelings as the annual rites would be held in Lawrence this year. He fondly recalled his last trip to KC when the jayhawks surprised the blue devils and sooners and wondered whether similar magic would be at work. He wondered whether the desert wildcats were all absent because this year they were rudely removed in the roundball tournament by the five from the tribe of clioms' year-round home or because of their success at last year rites.

Every year the clioms are reminded that the truths sought by the Mullah come only from spontaneity, but every year at least one cliom tries to sway the Mullah with pre-emptive grabs at the prize. The clioms should remember such rings of truth are not golden, but brass. One of the more desperate attempts came from the hoosier student of the three orbs who queried, 'Why isn't Argentina like Ohio?' This may be truth, but that seems unlikely. Does anyone mention the beaches of Cleveland or Toledo in the same breath as those of Buenos Aires?

Your obedient servant must confess there were few utterances that merited attention. The generally dispassionate tone of the discussion caught the Mullah by surprise. This dearth, compounded by the long pre-Conference days helping to preen the garden for the banquet *alfresco*, may have caused his mind to wander. Much of what he noticed was methodological.

The Keynesian quaker claimed that 'In labor economics

as in all of economics, you can never get proof positive of anything.' This is not all that appealing, because a preferred version of this truth is offered in the story of the man who wanted to borrow the Mullah's donkey, wherein the Mullah refused to allow the man to use the donkey's braying as proof of its presence. Moreover, as that notable free-loader Thoreau noted, even circumstantial evidence can be persuasive, as when one finds a trout in the milk. Likewise, the odd member of the trio from the lithic buffalo tribe warned the group that 'some r-squareds are excruciatingly high, and are too good to be true.' Good advice is not without pain.



*Canned in Kansas: Claudia Goldin receives the Clio Can from last year's winner, Lance Davis.*

haps, given the lack of sleep, it is best to wait until afternoon, especially if one anticipates the pain of a high r-squared.

A final methodological note was struck by the anonymous cliom who remarked, 'When it is time to get down to business, you must say "counterfactual".' Absent the clever wording, this is little more than Chapter 1 of any responsible economic history text. The Mullah is delighted the younger generation of clioms has absorbed tribal truths, but, had 'old' economic historians been more forward thinking, would such an admonition be necessary?

The second runner-up came from the bruin who, trying carefully, if not bluntly, to distinguish economics from history, said, 'Unless you hold some things constant, you will just get into narrative and nothing will be resolved.' The Mullah, of course, cannot abide this sort of sophistry, as his entire life has been otherwise inspired.

The first runner-up was contributed by the effervescent techster responding to the British wildcat's lingering obsession with scale effects: 'If one disagrees with a premise, one need not answer the question.' In a more vocal year, disagreement might have been inferred from silence. Yet, what if one agrees with a premise, and no question is asked? Silence is no longer tactful dissent; it's just tactful.

The font of this year's timeless wisdom, one who clearly has made a continuing and determined effort to have his name inscribed in the great book of cliometry, is the Keynesian quaker, who said, 'Unions are just bubbles on the foam of the competitive economy.' Superfluity notwithstanding, his is a good head, one that must have watched many waves meet the shores of Alabama, if not Argentina or Ohio. As the sea recedes from the beach, the foam left by each wave dissolves into individual bubbles that persist as a thousand points of light held in place by a few grains of sand. The competitive economy is the beach that grows smaller, then larger, as the waves come and go. The countercyclicity of organized labor

throughout American economic history was never so elegantly described.

Sunday morning provided the Mullah with some encouragement. The rain that had transformed dining *alfresco* into dining all over *chez blanc* loosened the tongues of the clioms. In rapid succession, the British wildcat suggested 'the index for stupidity was U-shaped.' The studious hoosier reminded us that 'bending your elbow does not burn a lot of calories.' And, 'contrary to his belief about economics,' the quaker claimed about his civic rivals, 'it has been proven that New Yorkers sleep less than Americans.' Evidently, the tired and poor sent to our lady of the harbor remain tired.

At the Saturday evening repast, the venerable techster traced his lot back to the clioms' origins within the boilermaker tribe. Having seen quite enough cliom song-and-dance routines, he canned the golden gapologist straightaway; she replied with her own tales of Mendota provenance. The venerable member then bade the clioms reassemble one year hence amongst the tugboat commodores of Music City, a place where local cable televises much singing and dancing. The Mullah plans to put his hound in the pickup, scoot his boots, and boogie down.

Humbly submitted by the faithful  
and obsequious servant of the Mullah.

## What is real evidence?

A neighbour called on Nasrudin.

'Mulla, I want to borrow your donkey.'

'I am sorry,' said the Mulla, 'but I have already lent it out.'

As soon as he had spoken, the donkey brayed. The sound came from Nasrudin's stable.

'But Mulla, I can hear the donkey, in there!'

As he shut the door in the man's face, Nasrudin said, with dignity: 'A man who believes the word of a donkey in preference to my word does not deserve to be lent anything.'

From

*The Pleasantries of the Incredible*

*Mulla Nasrudin*, by Idries Shah.

New York: E.P. Dutton, 1971, p.62.



## Clio Report (continued from page 1)

secure, but it collapsed quickly and a quiet transition to a stable regime ensued. Capital markets, therefore, did not reflect expectations of future instability. Lance Davis (Cal Tech), observing that some São Paulo textile firms traded on the Rio market, asked how difficult it was to get a market listing. Haber responded that the São Paulo and Rio markets did not have different listing requirements, but that floating stock in Rio depended on a known track record.

Next to present was Alan Taylor (Northwestern), whose paper examines the role of large scale estates (*latifundia*) in Argentina. As Taylor noted, *latifundia* are denounced in the standard literature on Latin American for retarding economic development and perpetuating inequality, but, curiously, they have largely escaped quantitative analysis. Using data from census records and other published sources for the period 1890-1914, he tests three hypotheses derived from the conventional literature: whether *latifundia* owed their existence to economies of scale in agriculture, whether their owners invested more than tenant farmers because of easier access to credit, and whether, over time, *latifundia* came to dominate the land distribution. Taylor finds only weak evidence in favor of any of these.

Several members of the audience advanced possible alternative explanations for *latifundia*. Lisa Geib-Gundersen (UC-Riverside) and Mike Haines (Colgate) urged Taylor to consider Argentina's relatively limited labor supply, while Mary Gregson (Knox) wondered about the limits to social mobility and the legal and institutional difficulties involved in breaking up large land holdings. Richard Sutch (UC-Berkeley) worried that the data do not allow Taylor to control for crop mix when testing for scale effects. Although such a control is possible for data on equipment investment, crop choice and form of tenancy were both endogenous. Haber stressed the time path of cropping, since there had been a typical life-cycle of land use, from sod-busting and tillage to pasture

and fodder cropping for livestock. Ann Carlos (Colorado) and Jean-Laurent Rosenthal (UCLA) were concerned about the alternative investments available to landlords, while Susan Carter (UC-Riverside) asked about the workings of the local land market as the frontier expanded.



Goldin presiding; Fohlin presenting.

Caroline Fohlin (Cal Tech) presented a paper on German universal banks in the late 19th century, which explores the importance of bank attachments in reducing liquidity constraints of attached firms. She finds that close relationships between firms and 'great banks' did not generally have a dramatic effect on industrialization, beyond decreasing short-run liquidity constraints.

Fohlin's paper provoked an enthusiastic discussion of how alliances between firms and banks could be formed. Rick Sullivan (Federal Reserve Bank, Kansas City) broached the question of reverse causation. Were firms seeking out attachments to banks, or *vice versa*? Fohlin replied that attached firms were larger, older, and better known than non-attached firms, suggesting they had not sought out attachments themselves. Chris Hanes (Pennsylvania) suggested that, to ascertain the direction of causation, Fohlin must try to explain why a firm would affiliate with a bank, drawing an analogy between attached firms and hospitals to highlight the selection bias: there are more sick people in a hospital, but going to the hospital does not make you sick. Fohlin agreed that she should explore this further, adding that her data reveal sizes of attached firms as their only significant characteristic. She expected banks to form attachments with firms in information-constrained industries, such as electrical technology in the 1880s. Simkovich then argued that the dependent variable in the analysis should be firm profitability, not investment. Fohlin replied that she estimated the investment function to look at liquidity constraints; using profitability is a good idea for a different paper. She responded to a question from Elyce Rotella (Indiana) that banks did not necessarily

make winners, but they certainly did pick winners, and Rotella admonished the conferees that perhaps they were asking Fohlin to generalize too much from a narrowly-focused paper.

Closing the formal proceedings for Friday, Sam Williamson (Miami) demonstrated the use of The Cliometric Society Internet server and conducted an animated conversation on the role of electronic discussion lists in the field. The list editors in attendance – e.g., Rosenbloom, Kiesling and Fred Carstensen (Connecticut) – discussed the objectives of their lists, and received useful commentary and suggestions from many participants.

In the first session Saturday morning, Peter Mancall (Kansas) presented a paper which seeks to restore American Indians to the economic history of colonial America. Focusing on the eastern woodlands in the 17th and 18th centuries, he examines population trends, local and long-distance trade and migration, and the formation of new Indian communities. The devastation that disease wrought among the Indians is well known, but Mancall notes that it was localized. The survivors often migrated westward and formed new communities. Whether they moved or stayed put, they continued the long established practice of trading with one another. Many also traded animal pelts for European manufactured goods, even though the long-run effect of this trade was to deplete the stock of animals.

Several members of the audience urged Mancall to reconsider some of his evidence and to incorporate additional sources and data from other regions. Sutch asked whether the evidence for population decline included Indians who had assimilated. Jeremy Atack (Vanderbilt) recommended using archeological findings to study trade, while Neal suggested considering the relative price of deer skins and European goods. Carlos thought Mancall should consider the Canadian experience, Simone Wegge (Northwestern) wondered about the extent of resistance by settled groups to the migrating tribes, and Dora Costa (MIT) urged comparisons with other regions that have experienced an onslaught of consumer goods, such as Africa or Latin America. Williamson reminded Mancall that gains from trade did indeed occur, while Haines noted that such gains could march hand in hand with greater mortality, as Indians moved in search of trading opportunities and thereby increased their exposure to disease. Sutch pointed out that trade with Europeans gave poorer

coastal Indians an upper hand over the previously wealthier Indians further inland.

Donald Morrow (Colorado) followed with a paper on voting at the US Constitutional Convention which combines political economy with attention to institutional design and trade policy. Morrow argues that the delegates' votes on trade issues followed both their individual interests and the interests of the states they represented. Those who might have been harmed by trade diversion, or who represented commercial states, generally voted against federal trade regulation.

Most comments revolved around the paper's methodological perspective, the Stigler-Peltzman idea that 'everything that is not economic is ideological.' Bill Sundstrom (Santa Clara) asked why ideology was treated as a residual, as opposed to a systematic variable, and whether vote trading might not introduce measurement error. Morrow agreed with Sundstrom's concerns, but stressed that evidence of vote trading does not appear in the public record. Steve Ziliak (Iowa) pressed Morrow on Beard's characterization of constitutional voting as 'myopic self-interest', which Morrow had interpreted as maximization of a utility function without altruism. Claudia Goldin (Harvard) thought that Morrow's econometric specification suffered from identification problems, and several solutions were offered. Rosenbloom suggested separate analysis of voting patterns for the 11 proposals not related to trade regulation. Rich Sicotte (Illinois) suggested looking at a broader range of the delegates' personal characteristics to separate wealth and utility maximization from ideology, but Morrow replied that such additional variables are collinear with constituent characteristics. Mancall thought that examining state-level ratification debates and the Annapolis Convention would add useful information, and Kiesling thought his suggestion could be treated game-theoretically, and might solve the identification problem.

In a paper that revises estimates of American productivity growth, Lisa Geib-Gundersen and Elizabeth Zahrt (UC-Riverside) address the problem of how to allocate 'laborers not otherwise specified' to industry or agriculture in the Censuses of 1880 and 1900. Using samples from the Census of 1910 (Integrated Public Use Microdata Series), when laborers were clearly assigned to agriculture or industry, the authors employ logit regressions to find characteristics that would predict whether laborers were in agriculture. Their findings are then used

to classify unspecified laborers in the earlier Censuses, with the net result that non-agricultural productivity was probably higher and growing more rapidly in the late 19th century than previous studies have shown.

data for 1907 were readily available, but she plans also to proceed to other years. Tomas Nonnenmacher (Illinois) highlighted the simultaneity problems mentioned in the paper among infrastructure spending and both taxable

Commentators agreed that the authors should be commended for their use of IPUMS data to try to resolve an important question, but suggested several ways to refine the results. Sundstrom and others worried that structural change over the three decades might invalidate the imputations estimated from the 1910 data. Simkovich, Haines, and Rotella each argued in favor of using more data from the 1910 Census: individual data such as relationship to head and unpaid family labor, county level data, and, given the large sample size, a variety of interaction terms. Goldin pointed out that there is some record of why the classification scheme was changed for the 1910 Census, and this might shed light on the ambiguous terminology before 1910.



Those attending a Cliometrics Conference for the first time: (l. to r.) standing, Richard Sheridan, Jill Van Stone, Peter Fearon, Peter Mancall, Rebecca Menes, Greg Hess; sitting, Richard Sicotte, Gregory Stutes, Elizabeth Zahrt, Hans-Joachim Voth, Boris Simkovich.

The economics of urban machine politics in the US at the turn of the century was then examined in a paper by Rebecca Menes (Harvard). She finds that cities with effective political machines had larger budgets and spent a higher proportion of their budgets on current expenses than non-machine cities, where more was spent on infrastructure.

Taylor was concerned about measuring the productivity of infrastructure, and asked whether Menes had a way to control for age of the city and its place on the frontier. He also asked, 'Why 1907?' Sutch added that 1907 might be a bad choice for a city like Seattle, which spent a lot of money in that year to elevate much of the downtown and to install cable cars. Menes replied that past debt provides a good proxy for existing infrastructure, and, further, that

real estate and growth rates. Menes commented that the likely source of these problems is the negative relationship between past and current infrastructure spending, because past spending is capitalized into real estate values. She intends to look more deeply at

the political structure and the role of foreign-born residents in the persistence of machines to try to solve the simultaneity problems. Joachim Voth (Oxford) suggested using measures of efficiency of service provision other than spending, such as staffing levels or times to completion of new projects.

To understand the political economy of national health insurance, Dora Costa's paper examines the evolution of demand for public and private health insurance and California in particular, where voters faced referenda on state-provided health care in 1918 and 1994. County level data show that by 1994 public health care was far more likely to be a partisan issue than it had been in 1918. The implication is that support for 'national' health insurance has become confined to groups within the Democratic party which favor income redistribution.

Sutch cautioned that health insurance early in the 20th century was really disability insurance. Carlos, Kiesling, and Ziliak pointed out that fraternal organizations had often provided substitutes for other forms of insurance, and Sundstrom suggested that Costa include spending on such organizations in her calculations of demand for health insurance and its income elasticity. Goldin and Jill Van Stone (Colorado) asked what precisely was on the

1918 menu and wondered whether the issue had been discussed widely in local newspapers and editorials. Costa replied that public discussion was limited before the referendum was placed on the ballot, but there had been recognition of various moral hazard problems. Rosenthal asked whether it is possible to imagine a version of the 1918 referendum that *would* have passed. Finally, Carter and Carstensen urged Costa to make comparisons with other states and countries to reveal more clearly what ultimately blocked adoption of national health insurance in the United States.

In the final Saturday session, Chris Hanes presented his paper, which addresses the persistence of nominal wage rigidity during the US economic downturns of 1893, 1929 and 1981. He argues that the rigidity resulted from bargaining in a bilateral monopoly composed of employers and incumbent workers, regardless of whether unions represented the workers.

Greg Stutes (Iowa) worried that the paper's approach might be too selective in looking only at downturns, but Rosenbloom suggested the rigidity should be symmetric both upward and downward, since labor is a quasi-fixed factor. James Conklin (Texas) turned to the theoretical underpinnings of the paper, citing Lucas's general-equilibrium model of a shock with monetary non-neutrality and asserting that Hanes could not make the same informational assumptions as Lucas. Hanes replied that recession leads to mass quits in Lucas's model, but inclusion of the bilateral monopoly produces layoffs rather than quits. Other current work also shows that firms will bargain over wage rates when workers are risk-averse and have firm-specific information. Hanes asked how to discriminate between the effects of workers' implicit threat to shirk and the effects of specific human capital, and he and Rotella suggested that looking at the behavior of unskilled labor or emigrants could help make the distinction. Carter urged Hanes to stress that wage rigidity persisted in the face of changing institutional characteristics, despite the institutional differences

of the three downturns. Hanes replied that the most obvious changes were increases in establishment size and capital/labor ratios, but the stable characteristics are exactly those that early neoclassical economists



*More 'first timers': (l. to r.) standing, Stephen Ziliak, Lisa Geib-Gundersen, James Conklin, Simone Wegge, Mehrene Larudee; sitting, Donald Morrow, Tomas Nonnenmacher, Caroline Fohlin, Stephen Haber, Carl Strikwerda. Not shown: Brian A'Hearn, Gail Bossenga.*

associated with wage rigidity: multiple fixed factors and supernormal profits.

As usual, a high point of the Conference was the Saturday evening buffet banquet at the home of Pat and Tom Weiss. Visitors from less hospitable regions were treated to the generous hospitality of the Midwest. The traditional awards ceremony was closed by Lance Davis, the senior cliometrician present, who passed the Clio Can to Claudia Goldin for her extensive contributions to the development of the field.

Sunday morning sessions began as Philip Hoffman and Jean-Laurent Rosenthal presented part of their ongoing work with Gilles Postel-Vinay (INRA and EHESS) on the long-run evolution of financial markets in France. Their paper, using extensive data from private credit contracts rather than exclusively from public financial instruments, is an attempt to fill in some of the political and institutional *lacunae* in recent work on the French Revolution by Eugene White and by Thomas Sargent and Francois Velde.

Many in the audience were bemused by the peculiarities of the financial data examined in the paper. Hanes wondered whether contracts could specify repayment in

silver instead of currency, Atack wondered why private loans were un-callable, and Williamson asked whether there was any indexing. Hoffman and Rosenthal replied that specie repayment clauses were not enforceable, that indexing was illegal, that prohibition of call loans was common both in France and elsewhere on the Continent, and that the King set the maximum nominal interest rate. Conklin then pressed the authors to explain how their incorporation of politics and institutions into the story improves on the Sargent-Velde paper, which fails to link their post-1792 political narrative with their theoretical foundation. Rosenthal said that he and his colleagues want primarily to assess who had interests in various financial policies, and who were the ultimate financial winners and losers. He added that Sargent and Velde have financial data for the 18th century which, like other French data mentioned at past Clios, are simply 'too beautiful to be true'. Rotella then asked why the government didn't simply expropriate offices to repay debt, as they had done with church property, and Rosenthal responded that offices were viewed (speciously) as real property, but church property was not. If the government believed the monetary regime was at stake, then we would not observe the debt repayment stream that we do; consequently, we can infer it did not perceive the monetary regime as being in danger of collapse. Brian A'Hearn (Munich) asked why this particular inflationary episode produced such negative consequences, and whether these consequences were long-term. Hoffman replied that, similar to an episode earlier in the century, this one virtually wiped out notarial credit in France, with over-investment in land the primary consequence in the 19th century.

In his paper, Hans-Joachim Voth seeks to measure the lengths of the work day and the work week in London during the early Industrial Revolution, turning to a new data source: testimony by witnesses at Old Bailey

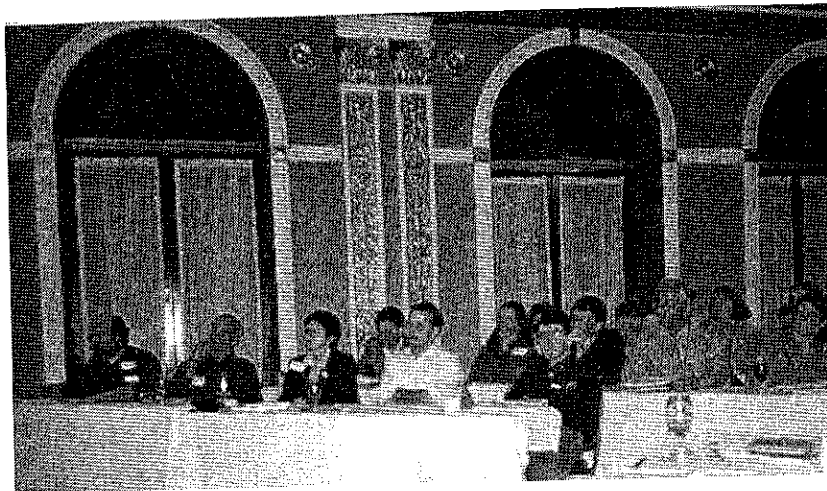
criminal proceedings for the decades of the 1750s and 1800s. Witnesses often related what they were doing at the time of the crime, yielding information like that found in modern time-budget studies. Voth finds small changes in the work day, but a greater increase in the work

week, because by 1800 the number of annual holidays and feast days had decreased; overall, these changes translate to roughly a 25% increase in average annual labor hours over the period.

While commentators lauded Voth's ingenuity in exploiting the new source, they raised a number of questions about both method and

quality of the data. Atack wondered about the witnesses' ability to tell time precisely in an era before watches were common. Voth responded that most Londoners lived within earshot of church bells, which helped witnesses without watches to know the time; moreover, watch ownership became more common in the 18th century and extended fairly far down the social ladder. Geib-Gundersen thought that reliance on witnesses with accurate time recall would leave out the poor, who were likely to have worked longer hours. A second concern was the effect of seasonality and hours of daylight, a point raised by Carlos and Rosenbloom and pursued by Rosenthal, who urged Voth to consider the effect of variable daylight on trades such as plastering, where good light was essential. Costa suggested the increase in hours might have been machine-driven, and Sullivan posed the alternative that the 'consumer revolution' had generated a voluntary increase in hours worked. John Lyons (Miami) wondered if Voth could use his results to assess the energy intensity of both work and leisure, and whether his findings would square with Fogel's on heights and nutritional intake. Finally, Sutch mentioned other potential uses of this type of information, especially to examine household production and child care.

Discussion of Simone Wegge's research ended the formal proceedings of the conference. Her paper examines



Another in our series of hotel ballrooms.

patterns of emigration during the 1840s and '50s from a large sample of villages in the German principality of Hesse-Kassel to test for so-called 'chain migration', the 'family and friends' effect attributable to information flows. Her results for networks of relatives suggest an important role for the chain process.

Two issues were of prime concern to participants: how better to distinguish between purely economic sources of migration and the chain process, and how accurately networks of chain migrants can be identified. Costa argued that the increasing migration flows of the 1850s could have been caused by local shocks (*e.g.*, harvest failure or the decline of cottage industry) rather than by accelerating chain migration, and Hoffman and Carter suggested examining variations in emigrants' occupational and age distributions across villages to test that distinction. Concerned that the lower cash holdings of later chain emigrants may not indicate better information and declining risk, as Wegge argues, Voth and Carlos suggested incorporating evidence on ocean and rail trans-

port costs, which were declining during the period; Lyons thought it would be useful to add time of departure to the current cross-tabulation of cash holding with position in a migration chain. Rosenthal worried that Wegge's ability to distinguish 'networked' emigrants from others only by surname and village could lead to serious classification errors because of previous migration within the region and the extent of village exogamy or endogamy. A partial solution, suggested Menes, might be to use the data on birthplaces of spouses. Finally, A'Hearn was unsure of the power of the posited chain effect if 'networked' emigrants had not indeed gone to the same destinations.

Although most conferees departed the pleasures of Lawrence rapidly, if reluctantly, an additional high point of the visit, for those lucky enough to have had a long layover in Kansas City, was the opportunity to sample the home cooking of Stroud's and Arthur Bryant's. The 36th Clio Conference will be held at Vanderbilt University in May 1996, with Jeremy Atack and Bob Margo as hosts.

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### Larry Neal's 'Top Ten Things That Peeve an Editor of Cliometrics Papers'

10. Authors who write 'data is'.
9. Authors who refer to themselves variously as 'I', 'we', 'one', 'this paper'.
8. Authors who think 'I-e-a-d' is the present tense when pronounced le(long e)d and the past tense when pronounced le (short e)d.
7. Authors who spell modeled with 2 l's or focused with 2 s's.
6. Authors who introduce a paper, 'This is section I, section II follows,...the last section concludes.'
5. Authors who use the word 'allegedly' more than once in a paper.
4. Authors who describe anything at all as 'whopping'.
3. Authors who think the French are capable of rational complex calculations. Or that any sense at all can be made out of any election result in California.
2. Authors who get an editor all excited by their provocative use of the word 'boodle'.
1. Authors.....



**All-UC Report** (continued from page 13)

In a paper about 'Using the 1940 PUMS: Problems and Potential', Brian Gratton, Rodney Ito, and Joseph Wycoff (all of Arizona State) examined the sampling problems of the 1940 PUMS, produced by the Census Bureau. Because the 1940 PUMS is a subset of individuals from the Census for whom extra data were collected, the authors point to serious bias toward selecting individuals living in the larger households. One can correct for this bias, but by so doing, the sample size is reduced so dramatically that some statistical analysis is impossible. The authors' essential message is that both the 1940 and 1950 samples require sophisticated weighting systems if they are to be employed in any aggregate analysis. Discussant Jay Brigham (UC-Riverside) set the tone for subsequent discussion by conceding the bias problem identified in the paper, but stressing that the 1940 IPUMS remained a valuable resource, since there are sufficient data available to correct for the problem. An additional point raised in discussion was that the allegedly random selection of individuals may have been biased toward household heads.

The remaining sessions were given over to papers analyzing IPUMS data in three broad categories: labor force behavior, immigration, and estimates of child mortality. In the first such paper, 'Fixing the Facts: Editing of the 1880 Census and Long Term Trends in the Labor Force', Susan Carter (UC-Riverside) and Richard Sutch (UC-Berkeley) use the IPUMS for 1880 to question the accuracy of occupational data published in the 1880 census. They show that comparing IPUMS occupational distributions by age and sex with published data reveals a sizable under-reporting of youthful and older men and of all women. After examining several possibilities, they conclude that this must result from systematic editing by census officials. Correcting for the 1880 undercount then suggests, by comparison with previous results, a more rapid reduction of child labor, greater employment stability for older men, and a modified pattern of married women's labor force participation over the course of industrialization. Commentator Daniel Scott Smith (Illinois-Chicago) observed that the suspect nature of the published occupational data for 1880 had been known for some time, but he remained skeptical of the Carter-Sutch editing theory. His own explanation – which he admitted could not explain all of the error – was that unintentional errors by clerks who tabulated the age categories produced the problem. Although discussion did not resolve

this issue, the general acceptance that some correction was indeed necessary underscores the significance of the IPUMS in using census data.

In 'A New Look at U.S. Productivity Growth: What the IPUMS Reveals, 1880-1900', Lisa Geib-Gundersen and Elizabeth Zahrt (both of UC-Riverside) present new estimates of output per worker for 1880 and 1900. By examining and reclassifying a large number of workers who were 'not elsewhere classified' in the published census data, Geib-Gundersen and Zahrt conclude that a higher fraction of these workers belong in the agricultural sector than has been estimated in other studies – most notably in those of their commentator, Tom Weiss (Kansas). An important implication of their study is to revise upward the rate of productivity growth in manufacturing, with a corresponding decrease for agriculture. Weiss applauded their method. However, he and several others suggested that the authors may have over-allocated workers to agriculture by applying the published figures for unclassified workers, rather than the share of unclassified workers coded by the IPUMS researchers, who made corrections for unspecified farm workers.

Two papers dealt with 'secondary workers' in the labor force. In their paper, 'Labor Force Participation of Secondary Workers Before World War I', John James and Mark Thomas (both of Virginia) use the 1910 PUMS to examine the possibility that households had a 'taste for labor', presenting a model of labor supply for children and women. Based on what they admitted were still very preliminary results, they argue that the decision of children to work tended to be bimodal – either all the children worked, or none. For women, they found that labor force participation was largely independent of the presence of children. Discussant John Moen (Mississippi) interpreted the results in a game-theoretic scenario of bargaining between husband and wife. He pointed out that James and Thomas's results may be influenced by their use of occupation as a proxy for income in the regression equations, since they must assume a fixed income for each occupation even though the number of children might vary. Discussion from the floor was animated, as people tried out a variety of interpretations of the results, particularly those for children in the labor force.

Using data from the 1880, 1900 and 1910 PUMS in her paper 'Supplementary Workers and the Family Economy', Carolyn Moehling (Northwestern) investigated whether the presence of supplementary workers



was a response to negative economic shocks, with mixed results. Families with women, black men, or unskilled workers as heads of household showed a greater propensity to contain supplementary workers, while families where the head had no reported occupation contained fewer. Commentator Martha Olney (UC-Berkeley) thought that the norm might have been that all family members would work. The core question is then why some members didn't. Gratton and others added that the relation of household income and savings – variables which are not easily handled with census data – might have exerted a major influence in the decision to have children work.

Two papers use the IPUMS with other census data to examine issues of immigrant assimilation into the United States. Joe Ferrie (Northwestern), in 'Immigrant and Native Mobility in Historical Perspective: Comparative Economic Progress in the United States, 1850 - 1970', uses three samples to look at the economic mobility of immigrants in two very different periods of US history: the 1850s and the 1970s. Ferrie collected a sample of immigrant arrivals from ship passenger arrival lists, creating a linked sample of 1850s immigrants from the 1850 IPUMS and the 1860 schedules. He then compares the economic performance of immigrants in his sample to the cohort of immigrants identified in the 1970 and 1980 PUMS, concluding that 1970s immigrants exhibit fewer differences in settlement patterns, geographic mobility, and occupational attainment compared to natives than was the case in the 1850s. Ransom observed in his commentary that, despite all the current fuss over immigration, Ferrie's findings suggest that the US economy of the mid-19th century was less able to absorb large numbers of immigrants than it is now. The reason, he speculated, is that the industrial and service sectors, where 85% of Ferrie's immigrants found occupations, were then much smaller than they are today. In discussion from the floor it was suggested that the observed failure of immigrants to enter agriculture in the earlier period may derive from analysis of only one decade, and Myron Gutmann (Texas) pointed out that many German immigrants to Texas became farmers only after a considerable period at another occupation.

Mark Wylie (UCLA) examined decades bracketed by Ferrie's analysis in 'Relative Income of Immigrants to the

United States, 1880-1914.' Using occupation as proxy for income, Wylie found that immigrants did assimilate over this period, although some cohorts did so more fully than others. He also found that age at migration was a significant factor in explaining the extent of assimilation.

Joan Hannon (St. Mary's) was skeptical of the occupational proxy for income, and suggested that Wylie's arguments could be strengthened by a more sophisticated regression analysis including interactions of age, age at migration, and number of years in the US.

In his paper 'The Use of the Census to Estimate Child Mortality: Comparison from the 1900 and 1910 Public Use Samples', Michael Haines (Colgate) reminded us that the initial stimulus for collecting the 1900 PUMS was to obtain information on numbers of surviving children and of children ever born to construct a more accurate view of the mortality transition at the turn of the century. Haines's results do not dramatically change our view of the mortality transition; he finds some improvement in the period 1900-1910. Commentator Charles Wetherell (UC-Riverside) placed Haines's work in the ongoing debate over the causes of the mortality decline: Was it from introduction of public health measures or better nutrition? The answer is still not resolved. However, Haines's work provides further demonstration that individual level data from the IPUMS can contribute to a step forward in US historical demography.

Gutmann led the final session of the conference, a roundtable on 'Where Do We Go from Here?' A spirited exchange concluded that there are many paths, and many people willing to travel them. Further items of interest were a discussion of Gutmann's Hispanic oversample for 1910, comments by Kris Inwood (Guelph) about Canadian Census data, the potential of further research with manuscript schedules and the IPUMS, and some suggestions about using state censuses in conjunction with the IPUMS.

All work and no play makes for a long day, so conferees were encouraged to relax at the conference banquet and listen to Tom Weiss relate 'David Letterman's Top Ten Reasons to Love the IPUMS.' His task was made all the easier because he was preaching to the converted.

**NBER Report** (continued from page 12)

contrast to the United States and Great Britain: industrialization in Sweden was late, rapid, and largely semi-rural. After 1870, improvement in health accelerated continuously with industrialization, with the exceptions of downturns during WWI and the Spanish influenza pandemic of 1918. Sandberg argued that this relatively smooth upward trend was due largely to the spread of industrialization to rural and semi-rural areas. Thanks to limited urbanization, the short stature and poor health of inhabitants of the 'veritable pest-hole' of mid-19th-century Stockholm did not become a national phenomenon. Moreover, disparities in health between the north, whose population was taller than the national average, and Stockholm began to disappear in the late 19th century. By the 1930s regional and class differences in height had vanished because of better nutrition, better medical care, and government-financed public health measures.

Discussant Timothy Guinnane (Yale) asked for several clarifications. First, how were the conscripts selected for the militia and settled army? Were there differences in the conscription and measurement processes, and were they truly random draws? Second, Guinnane asked to hear more about what went on during the wars: according to the paper, Sweden's position of neutrality in both World Wars reduced the effects of war relative to those observed in other countries. For example, according to Sandberg and Steckel, the biggest irritation for the Swedes during WWII was the lack of coffee and tobacco. What about other health effects? Finally, Guinnane noted that Sweden had high rates of tuberculosis at the turn of the century. What were the effects on mortality and height? In discussion, Michael Haines (Colgate) pointed out that vaccination was a dubious proxy for public health. His comment stimulated a broader discussion on how to best quantify public health measures. Suggestions included quality of water supply and public welfare expenditures.

David Weir (NORC and Chicago) began his presentation by delineating characteristics of the economic development of France which set it apart from other European countries. Slower population growth due to restrained marital fertility, and a wider distribution of property ownership led to gradual transformation of the national economy, although there were significant regional differences. For example, Weir pointed to striking urban-rural *per capita* meat consumption differentials throughout the 19th century, with a decided advantage in urban areas, especially Paris. He attributed this to non-wage income

spent in cities, as well as to the urban advantage in human capital and industrial wealth. During the 19th century, heights of conscripts into the French army improved slowly and steadily, whereas the rate of mortality decline slowed considerably. In the 20th century, all indicators show accelerated progress. It is most difficult to assess human welfare of the French for the period 1780-1820, according to Weir, because of the complexity introduced by the Revolution, legal reform, war and the Continental Blockade.

Discussant Margo focused immediate attention on Weir's extensive appendix on data construction. Its detailed description of sources and explanation of methods, he said, would be a valuable 'blueprint for budding cliometricians.' Margo's second point concerned the apparent consumption squeeze in early industrializing France, as *per capita* consumption rose more slowly than *per capita* income: what were the causes and consequences? Finally, Weir's conclusion that welfare indicators moved together fairly well in France might be usefully interpreted in the context of other industrializing countries. In contrast to the cycles in height and mortality observed for Great Britain and the United States, France's experience was similar to Sweden's, where indicators moved monotonically with economic growth. Might this be attributable to France's relatively slow urbanization, like the semi-rural nature of Sweden's industrialization?

Paul Johnson (LSE) and Stephen Nicholas (Melbourne) concluded the first day with their presentation on the welfare of women in the United Kingdom. Their data consist of detailed records for women either accused or found guilty of criminal offenses in the UK between 1817 and 1876. These data, they said, are representative of the working class as a whole, since these women were not hardened criminals but ordinary working people who occasionally 'supplemented their incomes by theft.' Nicholas, covering the period 1785-1815, argued that female living standards, as measured by height, deteriorated relative to those of males because declining shares of household resources were allocated to female infants and children. Johnson, examining the period after 1815, showed that female and male heights exhibited roughly the same trajectories of decline followed by improvement. The parallel was largely the result of factors exogenous to the household, such as decreasing real wages and improved public works.

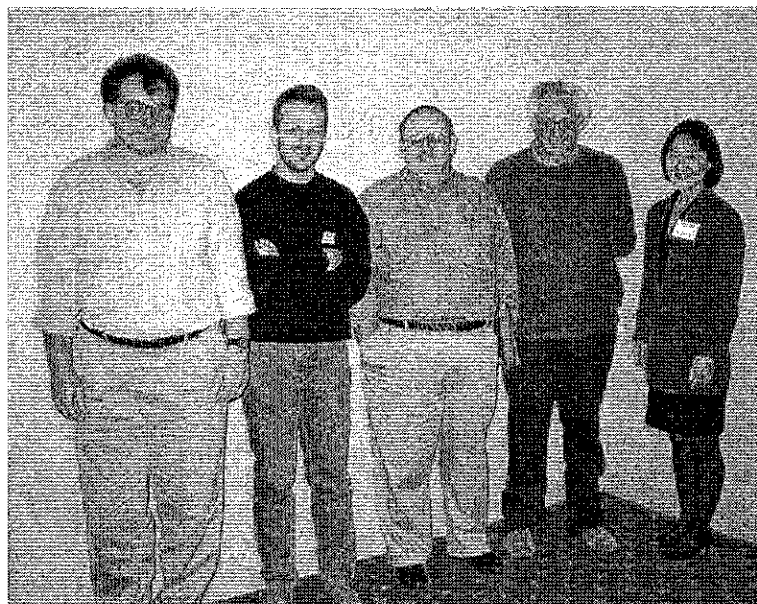
Discussant Humphries thought that too much effort was

expended in the paper on showing that the samples were representative of workers. She cared little about the issue, being more interested in the broader philosophical concerns of health standards for women. What is the normal female standard for height? What is the 'mortality norm' for women? These issues might well be addressed using height, since meaningful historical data are not available by sex for other measures such as income and consumption. She also stressed the need to examine routes to early mortality and stunting for women – excess work or overwork, in addition to unemployment and underemployment.

In discussion, Scrimshaw suggested that variations in intra-household preferences for distribution of resources could be examined by their effects on post-neonatal mortality.

Gail Honda (Chicago) started the second day of the conference with a paper on Japan, which opens with an outline of salient features of Japanese industrialization from 1868 to 1940. The paper investigates how heavy militarization and the differential development of the economy – a widening gap in productivity and real wages between the traditional and modern sectors – affected the health of the Japanese people. She argues that frequent military aggression and heavy investment in defense inhibited government investment in public welfare and resulted in minimal health improvement during this period. Life expectancy stagnated, infant mortality rates remained high, and millions succumbed to new diseases ushered in by foreign contact. Furthermore, the differential structure of the economy was reflected in a 'differential structure of health.' Over time, industrial prefectures exhibited greater average heights, lower mortality and fertility rates, but higher stillbirth rates, than agricultural prefectures. Japan is today a model of health for all countries, with the highest life expectancy and lowest infant mortality rates in the world. These postwar health

gains, Honda asserts, are equally, if not more, astonishing than postwar improvements in the economy.



(L. to r.): Tim Guinnane, Bernard Harris, Clayne Pope, Stan Engerman, rapporteur Gail Honda.

Discussant Timmer remarked that study of industrializing Japan is an important bridge between economic history and development economics. In his own work in Indonesia, China, and Vietnam, Timmer has observed firsthand many characteristics of Japan's development: industrialization to the detriment of the agricultural population, new disease environments, and contentious debates over human rights. He

raised two major issues for currently industrializing economies: What are the goals of development, and how do we measure them? Initially, increases in *per capita* income were believed sufficient, but poverty alleviation, education, health, political rights, and gender equality began gaining ground in the 1960s as important goals. He stressed three variables for analyzing industrialization and health: war, food, and occupational structure. When military aggression becomes a goal, as it did in Japan, greater life expectancy is undesirable, since it creates dependency and increases the squeeze on resources. For currently developing economies, there is also considerable debate over the estimated income elasticity of demand for food, which may be as low as zero. Finally, much work is needed on how to mitigate the increasing inequality among sectors of the economy, both with regard to income and to health. In discussion, Scrimshaw stressed the need to disaggregate urbanization as a variable into factors of nutrition, crowding, and medicine. Irwin Rosenberg (Tufts) said that most gains in longevity in Japan have been the result of reducing infant mortality, since life expectancy at age 60 in Japan is similar to those of other industrialized countries.

Because Sophia Twarog (United Nations, Geneva) was

unable to attend the conference, Michael Haines presented her paper on health and living standards in Württemberg. She argues that Württemberg was representative of the 'average' German industrialization experience, lagging behind the early and heavy industrialization of the Ruhr, but was more industrialized than such areas as lower Bavaria and East Prussia, which remained largely agricultural through 1940. Regional differentiation in Germany's industrialization also led to regional differences in heights, but those born in urban areas were taller than those born in rural areas, in contrast to experience in many other European countries. The urban advantage is attributed to good public health infrastructure, higher income and better medical care. Haines added that regions exhibiting the shortest recruits and highest infant mortality were those associated with early infant weaning or such unusual practices as refusal to suckle a crying child.

Discussant John Brown (Clark) praised Twarog's perseverance and energy in pursuing this line of research, in particular her collection and analysis of data for nearly 15,000 soldiers in the Württemberg army between 1871 and 1913. He suggested that although the case of Württemberg might be 'average', it was by no means typical of German experience. Clark pointed out that in attempting to measure the changing standard of living during industrialization, one is really measuring goods (*per capita* GDP) and the cost of producing those goods (health and welfare). He also recommended that the study be extended to include an analysis of the contemporary German standard of living and of the consequences of recent regional industrial declines. Rebecca Menes (Harvard) asked how various breast-feeding practices have been identified. Mokyr cited a paper by Paul Huck which discusses breast-feeding practices, such as age at weaning and what foods replaced mother's milk, and Steckel added that letters from new mothers to their own mothers have also been used to infer breast-feeding practices.

J. W. Drukker and Vincent Tassenaar (both of Groningen) began their presentation with a short sketch of the major geographical and socioeconomic regions of the Netherlands: the modern urban region of Noord-Holland and Zuid-Holland, the modern agricultural provinces of Zeeland, Groningen, and Friesland, and the remaining traditional rural regions of the east and southeast. Significant differentials in mortality among regions were observed beginning in 1800, with traditional rural regions

exhibiting the lowest rates, modern urban the highest, and the difference converging from the mid 19th century. In average height, the tallest conscripts were from the traditional rural regions, and the shortest from modern urban areas, with that difference roughly increasing over time. These results have important implications for the hotly-debated question of 'retarded industrialization' in the 19th century. The striking differentials in welfare among the people indicate that wealth inequality and patterns of poverty during the 19th century differed significantly from the conditions of the 'golden age' (1600-75) or the 'golden age of managed capitalism' (1960s).

Discussant Mokyr launched his comments with a general analytical model of height, where height is a function of a summation of incomes over time, the incomes themselves being a function of a phenomenon called 'modernization'. This exercise, he said, shows that we are interested in height because it is a correlate of the standard of living, not because it is important in and of itself. With regard to the 19th-century paradox of declining living standards in the Netherlands during a period of increasing *per capita* income, Mokyr attributed it, at least in part, to the disastrous consequences of the Napoleonic Wars. He also suggested that the regional analyses be extended to include differences in diet and disease, which are known to have a marked effect on heights. In discussion, Nicholas agreed that more information was needed on nutritional composition of the Dutch diet, since diet as a single entity is a 'black box'.

The closing paper, by Greg Whitwell (Melbourne), Christine de Souza (Monash), and Stephen Nicholas, sheds new light on Australia's historical standard of living debate. It is commonly thought that the 'golden age' of 1860-1890 was followed by a period of economic decline through 1940. Whitwell demonstrates that these assumptions must be reassessed because of new evidence on heights of men and women enlisting in the Australian Army during the Boer War and World Wars I and II. The drop in average conscript height in the 1870s and 1880s suggests that living standards began to decline at least a decade before 1890. Furthermore, the stable height levels from 1890 to 1919 indicate sustained living standards during the three decades prior to WWI, although average height in 1919 had not recovered to the level observed 50 years earlier. In studies of regional differences in school children's heights during the early 20th century, it was found that 'the more Australian the child is, the better the specimen.' That is, native-born children of Australian

parents were on average taller and heavier than immigrant children or the native-born children of immigrant parents.

Discussant Haines remarked that Australia is often cited as an example of a stable export-led economy, highly urbanized, with a favorable life expectancy of 52.9 years by 1890. By 1901, he noted, 52% of Australia's population lived in urban areas, whereas the United States did not attain this level of urbanization until 1920. While this high degree of urbanization has been linked to deteriorating living conditions and declining heights, Haines pointed out that it is necessary to disaggregate 'urbanization' into its various elements, such as housing density, sanitation, and public works. He also recommended that

the authors revise their section on morbidity to include disease incidence, not just disease-related mortality. In discussion, the paper's appendices on data sources, enlistment procedures, and normality tests for heights were praised for their thoroughness and exemplary explanatory value.

The conference closed in great excitement over the high quality of the papers and how the discussants' and guests' excellent comments might be incorporated into the final versions of the papers, slated for publication by the University of Chicago Press.

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## Please tell us about your data sets.

The Standing Committee on Archives of the Economic History Association has established a directory of data series, which is now available in the Economic History Services listserver. The Committee believes that many data sets which might be of great value to the scholarly community are not being utilized, and has surveyed its members for information on data sources which they would be willing to make available to other scholars. The intent is to complement, not to compete with, the work of organizations such as ICPSR.

As Chair of this committee for 1995-96, I wish to expand the directory, and invite you to register your data in the server. Please describe your data series and provide instructions for researchers who wish to use them. World Wide Web users can register their contributions directly on the survey form in the Data Series folder. Others are asked to send an e-mail message to [swilliamson@cs.muohio.edu](mailto:swilliamson@cs.muohio.edu) or a letter to me at The Cliometric Society's address. In addition, I would welcome suggestions for expanding and improving the Archives.

Samuel H. Williamson

**Call for Papers**  
**21st Annual Meeting**  
**Economic and Business Historical Society**  
**Savannah, Georgia**  
**April 25-27, 1996**

The Economic and Business Historical Society encourages interdisciplinary scholarship in economic and business history. Its international membership includes scholars with interests in economics, history, business, social science, geography, and related disciplines. The Society is particularly interested in soliciting papers both from new scholars and graduate students and from those working in areas such as business and the environment, business and culture and political economy.

The keynote speaker for the 1996 meeting is Eugene Genovese. Themes for the conference are Business and Society, Business in an International Perspective, and Labor Relations. Members and nonmembers are invited to submit papers on these themes, but all areas of economic and business history are welcome. Please enclose a two-page abstract with proposals for papers.

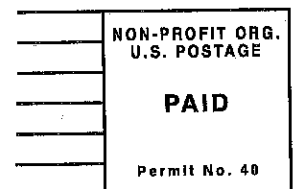
The deadline for proposals is **January 6, 1996.**

Correspondence, abstracts, and papers should be addressed to:

Dr. Charles Delheim, Program Chair  
Director, Interdisciplinary Humanities  
Arizona State University  
Tempe AZ 85287 USA

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**THE CLIMETRIC SOCIETY**  
MIAMI UNIVERSITY  
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## 1995 Cliometrics Conference Abstracts

### The Political Economy of National Health Insurance, California 1918-1994

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National health care systems have been repeatedly proposed to deal with both over- and under-insurance. National care legislation has also been repeatedly defeated. I examine demand for national health care in California. In the 1910s, California was the only state that held a referendum on national health insurance. A proposed constitutional amendment on the 1918 ballot would have given the legislature the right to establish a system of health insurance. During the New Deal, the California legislature was often dominated by the discussion of various health insurance proposals. One of these bills came to a vote in 1939. In the same year that the Clinton plan was defeated, California voters resoundingly defeated a proposal on the 1994 ballot for a Canadian-style system of health care. The availability of ballot votes allows me to investigate the demand for national health insurance. Ballot voting is more informative of the preferences of the electorate than legislators' votes, which may be influenced by constituent interest groups and by ideology.

Demand for national health care legislation is intertwined with demand for private insurance. The extent of consumer and interest group support for national health insurance will depend upon satisfaction with the extant system of private insurance. I use the 1917-1919 Bureau of Labor Statistics Cost of Living Study, published reports from the 1930s, and current published results to examine changes in the demand for national health insurance. In the 1910s health insurance covered lost wages, but by the 1930s most policies provided medical benefits, perhaps because of increases in the variability of medical expenditures. Throughout this period the income elasticity of demand for insurance remained low, in contrast to findings from recent data. Increases in income elasticity since the 1950s cannot be attributed to changes in the income elasticity of demand for medical care since that changed little, but instead may arise from changes in tax laws, increases in the variability of medical care expenses, and the availability to the poor of free medical care and government-provided insurance.

The increase in income elasticity suggests that the distribution of private coverage has

grown more skewed. But, the availability of health insurance for the poor and the old and the provision of free medical care by hospitals may have diluted the support of those without coverage for national health insurance. In fact, although there was a tendency for those with high levels of private coverage to oppose national health insurance in both 1918 and 1994, demand for national health insurance was better explained by political variables relative to socio-economic and demographic variables in 1994 than in 1918. In 1994, in contrast to 1918, the same factors that led voters to cast their ballots for candidates in the presidential election led them to vote for state-provided health insurance. National health insurance has thus become more of a partisan issue.

### Relationship Banking and Firm Liquidity Constraints: Evidence from the Heyday of the German Universal Banks

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This paper presents new evidence on the role of the German universal banks in attenuating firm liquidity constraints. Two hypotheses of financial intermediation – delegated monitoring and dynamic economies of scale – are considered and are used to create a framework for linking relationship banking with relative firm liquidity constraints. The empirical analysis tests the hypothesis that firms with close bank involvement experience lower liquidity sensitivity of investment than independent firms, and that this effect is intensified over time. The results show that liquidity constraints were lower in the post-1902 period for old attached firms than for young attached firms and for independents. In contrast, liquidity sensitivity of investment does not seem to have declined with age for unattached firms. This seems to indicate that information accrues over time and thus financial intermediaries attenuate liquidity constraints only in the long run. The pattern before 1900 is different. Firms with bank attachments experienced far lower liquidity constraints than those who did not – even in the short run. This study thus provides evidence in favor of a dynamic theory of financial intermediation but argues for a more conservative interpretation of the role of relationship banking in industrial development than that which has been favored in the past.



### A New Look at US Productivity Growth: Evidence from the IPUMS on Unspecified Laborers, 1880-1900

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The redistribution of employment from agriculture to industry has been identified as an important source of economic growth (Lebergott, 1966; Gallman, 1975; Weiss, 1993). Because productivity is higher in industry than in agriculture, the sectoral reallocation of labor is an important cause of the overall productivity rise.

The seemingly solid sense of statistics on employment in agriculture and industry for the period prior to 1910 are in fact estimates. Prior to 1910 the census form had just one column to record occupation. Many workers in agriculture and industry were recorded simply as 'laborers' but the sector in which they found employment was not specified. Prior to the publication of these occupation statistics, the Census Bureau officials allocated some of these simple laborers to the category Farm Laborer; others they left as Laborer (not specified) and tabulated them outside of agriculture. Apart from a brief discussion in a number of the published censuses, there is no detailed explanation as to how this distribution between agriculture and industry was made. Because the total number of laborers is very large, errors in the allocation could make a significant difference in the number of workers identified with agriculture. Potentially, therefore, the well-regarded estimates of Gallman and Kuznets are incorrect.

The appearance of the Integrated Public Use Microdata Samples (IPUMS) from the Federal Censuses of 1880, 1900, and 1910 provides us with some data for a more accurate allocation of laborers (not specified) between industry and agriculture. In particular, the IPUMS contains information about each laborer such as the population of the worker's town of residence, the occupation of the head of household, whether the house was on a farm, as well as a plethora of other descriptive information. We apply logistic regression analysis of 1910, the first year the census used the two-column format and recorded both occupation (laborer) and industry (agriculture), and use the estimated parameters to predict the allocation of laborers (not specified) between agricultural and nonagricultural categories for 1880 and 1900.

We find that a higher proportion of the unspecified laborers belong in the agricultural sector than has been found in previous studies. This result has implications for analyzing the level and trend of industrial productivity. Because our estimates of the number of workers in industry are lower in both years, we find a higher level of *per capita* output outside of agriculture than those of previous studies. Finally, we find a less rapid decline in agricultural employment (and a less rapid rise outside agriculture) and our estimates of nonagricultural productivity (output per worker) indicate a more rapid rise than those of previous studies.

### Capital Markets in the Early Stages of Industrialization: The Brazilian Cotton Textile Manufacture, 1866-1934

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This paper employs firm-level census data, bond and stock data, and corporate financial reports to examine the role played by securities markets in the financing of the Brazilian cotton textile industry. It argues that, unlike the pattern for most LDC's, formal financial markets played a crucial role in mobilizing capital for Brazilian industry during the period 1890-1914. These securities included both equity and debt. The paper further argues that these markets for industrial securities were the direct consequence of changes in government regulatory policies in the late 1880s that made it easier for entrepreneurs to found limited liability joint stock companies and that required firms to report data on their financial performance to shareholders. *Circa* 1882, Brazil's textile industry was minuscule even by Latin American standards. *Circa* 1907, Brazil had the largest capacity in the industry of any Latin American country. Fifty percent of the installed capacity in the industry in that year was contained in firms that were publicly held.

The development of this market was curtailed by World War I. The inflation that accompanied the war discouraged investors from holding fixed term securities. The bond market therefore ceased to be an important source of industrial finance. In addition, the war produced a temporary but pronounced downturn in firms' financial performances. Rates of return on owners equity dropped as did dividend payments to shareholders. Thus, even after the war was over, investors remained skittish. They continued to invest in already established firms, but refrained from investing in new firms. Thus, while industry capacity nearly doubled from 1915 to 1927, little of this growth was financed through the capital markets.

### Bilateral Monopoly and Nominal Wage Rigidity in the Downturns of 1893, 1929 and 1981

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Macroeconomic theory has turned away from the notion of nominal wage rigidity, but nominal wage rates were quite rigid in depressions before the Second World War. During

the depression of 1893, state labor bureaus surveyed establishments as to whether they had cut wage rates over the months following the downturn. Many establishments reported that they had cut wage rates paid for at least some jobs. But in each survey, half or more than half of the establishments reported that they had held wage rates absolutely fixed. Similar surveys conducted by the US Bureau of Labor Statistics in the early 1930s show that the same was true after the downturn of 1929. There can be no doubt that this represented nominal wage rigidity in the sense of an old-fashioned Keynesian model, for these downturns, unlike postwar recessions, saw absolute decreases in all nominal variables – money supplies, wholesale prices and consumer prices, average wage rates – as well as industrial production, real GNP and employment.

I argue that the absolute nominal wage rigidity apparent in pre-war downturns, and under-adjustment of wage growth rates that may be more important in postwar recessions, can be explained as a result of bilateral monopoly in the employment relation and bargaining between firms and 'insider' employees, for three distinct reasons that apply whether or not the workers are formally organized. First, publicly-available information about relevant macroeconomic variables may not be good enough to allow perfect adjustment of bargained wages. If workers' information about current values of the variables is noisy, then workers' beliefs about the variables can under-adjust to demand shocks, resulting in under-adjustment of the workers' wage demands and the agreed-upon wage. This is distinct from a problem of 'indexing' a long-term contract to shocks occurring after bargaining takes place and terms are set. Second, renegotiation of an existing agreement after subsequent demand shocks may involve the danger of a breakdown in negotiations, like a strike. Both sides may prefer to hold to the old wage rather than incur that danger. Third, a group of workers may not be able to perfectly coordinate their threat to withdraw effort and cooperation from the firm. As a result, the wage can hold absolutely fixed in response to demand shocks.

To test this notion I compare the characteristics of firms that did and did not cut wages in 1893 and 1929. I extend the comparison to the postwar recession of 1982 using unpublished BLS data, the components of the Employment Cost Index (ECI) at the two-digit SIC level. I show that in all three recessions, nominal wages were most rigid in firms that one would expect to be most vulnerable to the bargaining power of incumbent employees: firms with relatively high levels of capital, value-added, and profit per worker. In 1893 and 1930, firms in these industries tended to hold nominal wage rates fixed. In 1982, these industries showed the greatest rates of wage inflation in the downturn relative to long-term trend.

**No Revolution Without Politics or Institutions: France 1789-1815**

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Recent papers by Sargent and Velde and White argue that the financial course of the French Revolution can be understood either in terms of optimal public finance or as a war of attrition. The problem is that both of these papers rely on evidence from government financial markets, even though most of the costs of the Revolution's inflation were borne by private credit markets, a segment of the financial sector which scholars have ignored but for which we have extensive data. The data on private markets in fact suggest that neither the argument based on optimal public finance nor that based on the war of attrition is viable. Indeed, if one ignores the desperate will of the Revolutionaries were willing to engage in financial policies that destroyed the financial sector and severely damaged interregional trade networks. Furthermore, the timing of inflation episodes itself is best explained by the outbreak of internal revolts or international war that either reduced fiscal receipts or increased expenditures. Our evidence is thus inconsistent with the optimal public finance approach unless politics is taken into account.

Our evidence poses similar problems for the war of attrition. In the model of the war of attrition it is critical that the two groups who are at odds be distinct. Yet that assumption appears dubious when one considers who the state's creditors were. It becomes absolutely untenable when one considers who participated in private credit markets. Our paper closes by arguing that the only way to understand the Revolution is to account for the impact of political instability on government finance. In so doing, we connect our historical research to recent findings on the public finance of developing countries which shows that inflation is directly related to political instability.

**The Economy of the Eastern Woodlands**

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American Indians remain virtually invisible in the economic history of colonial America. Despite the appearance of increasingly sophisticated studies of the early modern economy, Indians remain relegated to minor roles in descriptions of the economy of British America. This paper sketches the outlines of the economic history of Indians in the eastern woodlands, a region stretching from northern New England to Georgia and from the Atlantic Ocean to the Mississippi River, from the early 17th century to the American Revolution. It focuses on the same questions that have motivated many studies of the colonial economy: the role of population growth (or decrease) in shaping the regional economy; the importance of migration and the formation of new communities in response

to demographic pressures; the local exchange economies of particular areas; and the participation of people in long-distance trade.

The evidence presented here suggests certain tentative conclusions. First, we can only fully understand the economy of the eastern woodlands by recognizing that Indians participated in both local exchange and long-distance trade because each of these exchange systems met their local needs. Indians' choices might have seemed bizarre at times but they made sense to the people who purchased traders' wares. Traders' goods appealed to Indians precisely because Indians could fit them into pre-existing economic, social, and cultural systems. We thus need to cast off any economic model that suggests that Indians went from a state of primitive subsistence to complete dependence on colonists within a few decades. Second, demography and migration played a central role in the economic history of the eastern woodlands. The declining number of Indians had a greater effect on the economy of the region than the parallel decline in fur-bearing mammals and deer. Each of these declines had its roots in a particular environmental circumstance: respectively, the lack of immunities of native Americans to European diseases; and the attraction of Western Hemisphere animals to Europeans who wanted these skins because European hunters had earlier depleted Old World stocks. But demographic catastrophe was localized, and so, too, the economic consequences of it. Finally, we need better measurements of Indian economic activity in early America. The qualitative evidence is powerful, but we must continue to develop more sophisticated methods for measuring the quantitative dimensions of the economy of the eastern woodlands.

A more complete assessment of the economy of the eastern woodlands will show us that early modern peoples there did not give up practices of local exchange when afforded the opportunity to participate in a transatlantic economy. We will only understand the economy of early America in its entirety when we see it from Shamokin and Kaskaskia as well as from London and Philadelphia.

### Machine Politics and Municipal Spending

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This paper explores the relationship in 1907 between the presence of 'machine' politics in American cities and the municipal budget. A political machine is defined as a political organization which is run by a Boss, is staffed by patronage workers, and wins elections by exchanging favors for votes.

A qualitative model of the machine and the city economy is presented. The city is divided into 'domestic' and 'export' sectors, producers for local markets, such as saloons and utility companies, and producers for markets outside the city, such as manufacturers and merchants selling nationally. Individual 'domestic' producers can gain competitive

advantages in the local market through licenses, franchises, and favors from the local government. The 'export' sector gains the most from a city government which provides public goods that lower business costs, such as paved roads and low taxes. Therefore cities with politically powerful 'domestic' sectors will be more tolerant of machines than cities with politically dominant 'export' industries.

The political histories of 40 of the 150 largest cities in the US are surveyed to produce two categories of cities, those with and those without significant machine politics. Regression analysis is used to study the relationship between the presence of machine government and municipal spending. This empirical relationship does not test the model because the existence of a machine is endogenous.

Total budget, current expenses, and spending on infrastructure are analyzed. When other factors are controlled for, the size of *per capita* total spending is not related to the presence of a political machine. The division between current expenses and infrastructure is found to be sensitive to the presence of a machine. High budget non-machine cities invested more in infrastructure. High budget machine cities spent on current expenses.

These relationships depend crucially on three cities, Galveston, Texas, Los Angeles, California, and Seattle, Washington. An analysis of the political and economic conditions in these cities illuminates the relationship between politics, economics, and city spending. All three had political establishments dominated by 'export' sector interests: railroads, timber companies, and merchants. Two of the three, Galveston and L.A., had, in the previous decade, installed 'reform' governments meant to centralize government and insulate it from 'political' forces. The three cities had the highest *per capita* spending on infrastructure and were among the highest in overall *per capita* spending in the sample. All were building large public works including seaport facilities.

When these three cities are dropped from the sample, the total size of municipal spending is a function of the current expenses and infrastructure is not.

These patterns support the hypothesis that the size and apportioning of the city budget reflects both the economic interests in and the political structure of the city. The next step is to formalize the model of the interaction of a city's economic and political structure to determine how political structure is determined and how fiscal outcomes desired by different economic interests are mediated by the political institutions.

### Ideology, Self-Interest, and Trade Policy: Evidence from the 1787 Constitutional Convention

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According to the United States Constitution, the authority to regulate trade policy lies in the hands of the Federal Government. By law, states are not allowed to determine their own

foreign commercial policy, levy tariffs or duties on imports, nor are they allowed to impose duties upon one another. The imposition of a uniform tariff is, and was at the time, known to result in a redistribution of income between states. The common external tariff mandated by the Constitution created a trade-diverting customs union from the perspective of the Southern states. States engaged in the export of staple crops such as rice and tobacco experienced a terms-of-trade deterioration because of the increase in the price of imported manufactures. On the other hand, the burgeoning manufacturing industries in the Middle Atlantic states and New England benefited from the enactment of protectionist legislation. Producers of goods such as flour, barreled meat, and gunpowder found the markets in the South more accessible.

A question which arises is whether this decision regarding institutional design (*i.e.*, customs union) was consistent with rational economic choice, or were the delegates at the 1787 Constitutional Convention merely ideologues that favored federal control of all aspects of government, including foreign commerce? Previous work by Beard (1913) and others suggests that it was myopic self-interest and not altruism that determined the final form of the Constitution. However, there is evidence that ideology is a significant factor in the determination of roll call voting outcomes in the US Congress.

This paper examines the issue of ideology *versus* self-interest in the adoption of trade rules at the Constitutional Convention. Using evidence from an analysis of the roll call voting data collected at the 1787 Philadelphia Convention, I find that individual delegate's voting on international trade issues was consistent with the predictions of customs union theory. Delegates from states that would be harmed by trade diversion tended to vote against the federal regulation of foreign commerce; while those who benefited tended to support federal regulation. The voting behavior of the delegates on these trade issues shows that self-interest played an important role in the design of rules pertaining to international trade, although, the ideological component is also significant for most trade related votes. These results differ from previous analyses of voting at the convention since they reject the Beardian hypothesis that it was personal economic interests that determined the design of the Constitution. Although the addition of personal economic variables increased the explanatory power of the model, hypothesis tests indicate that constituent interests played a more significant role in the determination of observed voting patterns.

This paper also presents a new procedure that eliminates the bias inherent in models that used vote-based rating scale ideological measures as independent variables in a logit or probit estimation. Treating ideology as an endogenous variable, and estimating it simultaneously, corrects for the bias associated with the mismeasurement of vote-based ideological indices discussed in Jackson and Kingdon (1992).

### **Latifundia as Malefactor in Latin American Economic Development? A View from the Pampas: Scale, Tenancy, and Agricultural Operations in Argentina, c. 1890-1914**

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It is often asserted that the *latifundistas*, the landed elites of 19th-century Latin America, represented a negative force in economic development, exacerbating and perpetuating an unequal distribution of land and income, and distorting the production structure and the balance of economic and political power. Rich narrative histories have documented the workings of both large-scale estates (*latifundia*) and small-scale farms, and much is known about the nature of economic and social relations in the several levels of the stratified rural society of the time. However, the extensive statistical records of agricultural operation contained in national censuses and other sources have not been opened up to econometric scrutiny that might provide answers to several key assumptions in the case against the *latifundia*.

This paper uses extensive micro-level data from Argentine agriculture *circa* 1890-1914 to explore various hypotheses relating to the supposed unusual and favored position enjoyed by large-scale estates on the pampas compared to small-scale estates (run by cash tenants, sharecroppers, and small owner-operators). I have access to several data sets which will allow me to explore whether tenancy and scale effects mattered as a determinant of technique and efficiency in the rural estates of Buenos Aires at the turn of the century. I use the data for several exercises.

First, I ask, were large estates more efficient than small estates? This hypothesis addresses one possible reason for the alleged desire to agglomerate and concentrate land. In effect, we are asking the same question of Argentine agriculture as has been asked of English agriculture in the enclosure period: was concentrated land (held by large-scale landowners) more valuable (*i.e.*, efficient in production) than land held in smaller parcels (by entry-level owners and tenants)? The conventional wisdom would suggest a positive and significant effect of scale on land values.

Second, I ask whether estate characteristics, including scale, had any impact on investment activity. Important controls would be crop mix, land quality, distance, climate, access to local banks and the like. According to the conventional wisdom in the Argentine case, larger estates enjoyed favorable access to credit, and, if this had any real effects, it should have manifested itself in investment outcomes. Thus, I look for significant negative effects of tenancy on investment choices in order to test the biased capital market hypothesis.

Third, I examine the distribution of lands in agriculture to see whether land was similarly accessible to owners and tenants. Did owners' 'monopolize' the large units, or were tenants

able to exploit extensive farming techniques without being confined by scale? I find that accumulation of land in and of itself produced no direct gain in terms of augmented land prices (due to, say, scale economies or monopoly power). Tenancy appears to matter very little as a determinant of scale or investment choices. Tenants do not seem disadvantaged in terms of access to land. I conclude that the pessimistic conventional view of tenant farming on the pampas rests, at present, on little firm quantitative evidence.

### Crime and the Use of Time in 18th Century London

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This paper uses witnesses' accounts from the Old Bailey Sessions Papers to shed new light on patterns of time-use in London, 1750-1800. I demonstrate that the information provided by witnesses fulfills a number of criteria established by contemporary sociological research. Witnesses come from virtually all strata of society; they report their activity at the time of the crime, their profession, sex, and less often, age. Occasionally, a single witness will relate his or her daily schedule. All times of the year, all days of the week and all hours of the day are present in my sample. On the basis of 7,700 court cases, I have assembled a database containing 1,845 observations.

The data is used in two different ways. First, the timing of principal events in the day like starting of work or going to bed can be established. Preliminary results indicate a working day of approximately 11 hours; hours of sleep were short, with 'best guess' estimates ranging from six and a half to seven and a half hours. While time use during the day shows no significant changes over time, the same is not true for weekly and annual activity patterns. Evidence presented on the probability of observing witnesses engaged in work strongly suggests that 'St. Monday' was much less likely to be observed in 1800/03 than in 1750/63. Another factor also boosted the length of the working year: a number of religious and political festivals sharply reduced work activities during the middle decade of the century. In 1800, no such effect can be found. I estimate that annual labour input grew by 550 to 800 hours. Tests for shifts in sample composition are presented. Amongst the aspects also discussed are the effects of occupation, social stratification and the impact of gender.

The evidence from the Old Bailey is used to place workloads in England in a long-term perspective. I argue that hours during the 1750s were approximately as long as during the 1890s. The estimate for the 1800s suggests higher labour input than even during the 1870s. Implications of these preliminary findings are then discussed in a total factor productivity framework. If the trends established on the basis of the Old Bailey Sessions Papers are

even broadly correct, then 'ingenuity' played no role during the Industrial Revolution's early years: TFP growth is easily reduced to negative values. Increases in output were largely driven by additional labour input. Only the 'Industrious Revolution' (DeVries) overcame the adverse effects of rapid population growth.

### A Test of the Theory of Chain Migration for 19th Century European Migrants

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Social scientists have posed many theories to answer why so many Europeans emigrated in the 19th century. Economists prefer to explain migration flows on the basis of an income gap, while historians attribute an important portion of migration rates to an increase in the knowledge about destination countries that previous migrations provide. This paper defines chain migration as a process in which previous migration from a village is an influence on the migration decisions of those remaining in the village. I pose the decision of the migrant as an expected utility maximization problem and incorporate both the economic and historical migration models into a single framework. Previous migrants provide new information which functions as a 'pull' factor and decreases the risk and costs of migration to a foreign country. To test the theory of chain migration I use 19th century micro data to estimate regressions of village migration rate on previous migration rates and on village socio-economic factors that proxy for village income. This test is motivated by the perspective that chain migration effects should be strongest at the village, not the regional level. I find that both the economic and historical hypotheses are correct.

This paper also examines the individual characteristics of migrants who emigrated in the mid-19th century from over 1,300 different German villages. Migrants are classified as networked and non-networked, depending on whether they were part of a kinship network or not. That networked migrants' decisions may be more influenced by previous migrations, and that such behavior might be recognized in the observable characteristics of the migrants, motivates this division. The most definitive result from comparing the two types of migrants are the figures on cash assets because they support the model's prediction that networked migrants need less cash than non-networked migrants to accomplish their migration goals. Among the networked migrants there are fewer children and fewer people traveling alone; not surprisingly, they have a high probability of moving to the destination country where their relatives live. Examining the data from the standpoint of kinship groups has great potential for illustrating complicated socio-economic factors that 19th century migrants faced.