The Newsletter of

The Cliometric Society

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CLIO at the ASSA

by Trevor J. O. Dick, University of Lethbridge, Carolyn Dimitri, University of Maryland, and Carolyn Moehling, Ohio State University

(Chicago) The Allied Social Science Association meetings were held January 3-5, 1998. The three Cliometric Society sessions were organized by the program coordinators Mary MacKinnon (McGill) and John Wallis (Maryland), and a fourth session was co-sponsored with the American Economic Association. The sessions were well attended and provoked lively discussions.

Gary Libecap (Arizona) presided over the first session, on "Growth and Institutions." Luciano Amaral (European University Institute) described his work reconstructing the growth record of the Portuguese economy from 1951 to 1973 using a national accounting framework. Amaral concluded that capital accumulation was the driving force behind Portuguese growth in the period, followed by total factor productivity (which was correlated with openness); human capital accumulation was the least important. As discussant, Libecap suggested that more detail about Portuguese institutions was needed to help distinguish Portugal from other countries, particularly from Argentina, a country that was less open. Institutional considerations might help explain the role of openness, as with foreign patents, labor mobility and capital controls. Ian McLean (Adelaide) wondered if openness might be endogenous to growth and Fred Carstensen (Connecticut) asked if industrial associations involved in a political economy process might provide clues about endogeneity. Amaral responded that his paper was only part of his Ph.D. dissertation; appendices deal with some of these concerns, although he is still looking for a good measure of openness. Sam Williamson (Miami) noted that a problem with the Abramovitz residual is its tendency to hide technical change in the measure of capital and suggested it would be helpful to separate industries according to whether or not they imported capital.

Next, Ian McLean and Kris James Mitchener (UC-Berkeley) presented their revisionist work on US regional growth and convergence, 1880-1980. Beginning with Easterlin's regional income differentials, McLean and Mitchener introduce regional differences in prices, labor input *per capita*, and labor productivity as proximate causes of the differentials. Their main result is that nominal income in the West advanced substantially above the national average in the late 19th century because of higher prices and labor input *per capita*. Discussant Philip Coelho (Ball State) noted that the degree of convergence depends on the time chosen to begin the analysis; there would be less observed convergence if one began with 1860 instead of 1880. Coelho noted that a neoclassical growth model fails to address why differences emerge. He also questioned the use of state income data, rather than individual city data on prices and wages, to resolve the puzzle of why people went to the Midwest after 1850 when *per capita* income there was relatively low. A member of the audience

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Conference on the *Historical Statistics* Project

by Christopher Meissner, UC-Berkeley
and Susan B. Carter, UC-Riverside

A conference entitled, "Historical Statistics on Labor, Human Capital, and Labor Markets: A First Look" was held at the Center for Economic Policy Research (CEPR) at Stanford University on June 7, 1997. The conference was designed to solicit input on the development of the new, Millennial Edition of *Historical Statistics of the United States*, a major, collaborative effort of the scholarly community aimed at developing an authoritative compilation of quantitative indicators of our country's history. The editors' goal for the new edition is to assemble quantitative time series data that better reflect today's research and policy concerns, and to include the best of the new scholarship that has been completed in years since the publication in 1975 of the current Bicentennial edition, providing data that best illustrate the social and economic changes that the profession feels are salient. Editors-in-Chief for the project are Susan B. Carter, Scott Sigmund Gartner (UC-Davis), Michael R. Haines (Colgate), Alan L. Olmstead (UC-Davis), Richard Sutch (UC-Berkeley), and Gavin Wright (Stanford). The work will be published in print and electronic editions by Cambridge University Press in the year 2000.

The conference was organized by Susan Carter in collaboration with Richard Sutch. The National Science Foundation, Methods, Measurement, and Statistics Program; the Alfred P. Sloan Foundation; the Institute of Business and Economic Research, UC-Berkeley; the Center for Economic Policy Research, Stanford University; the All-University of California Group in Economic History; the Institute of Governmental Affairs, UC-Davis; and Cambridge University Press provided financial support. Gavin Wright was local host and Robert Barde, Institute of Business and Economic Research, UC-Berkeley, served as conference coordinator.

After welcomes from Wright and Carter, Sutch described the genesis of the project in November 1993, when a small group of scholars met with Glenn King, Chief of the Statistical Compendium Staff, US Bureau of the Census. The scholars were delegates of the Economic History Association, the Social Science History Association, and The Cliometric Society and arranged the meeting with King in order to try to persuade the Bureau to issue a new, fourth edition of *Historical Statistics*. Despite agreement from all parties that a new edition was both long overdue and vitally important to the scholarly community and to the general public, it soon became evident that if *Historical Statistics* were to be updated and revised, the project would have to be undertaken by the scholarly community itself. Sutch then described efforts in the intervening period that developed an organization to facilitate the conduct of the work, solicited project funding, found a publisher, organized the chapter structure, and enlisted the services of scholars across the country to serve as chapter editors. At the time of the conference, the group had digitized the Bicentennial Edition of *Historical Statistics*. A CD-ROM version of the Bicentennial Edition is currently available to Cliometric Society members at a special price. [See advertisement on page 19.]

Sutch identified three major goals of the project. One is to retain and enhance the authority of the preceding editions of *Historical Statistics* by developing and publishing data that represent the profession's consensus on the best science now available. A second goal is to enhance the accessibility of these data both by making them available electronically and by adding interpretive commentary and clear and careful descriptions of the data and their relevance by prominent scholars in each area. The third goal is to focus attention upon and link the data to current public policy concerns. Sutch also emphasized that the project would not end with the publication of the Millennial Edition, but that the process of revising and updating would continue.

The first conference session, "Perspectives on Long-Term Change in American Labor Markets," was chaired by Gavin Wright. The session began with a presentation by Jonathan Leonard (UC-Berkeley) who suggested that the Millennial Edition should include information on the changing nature of regulation in the labor market, changes in income inequality, and measures of economic mobility. He also discussed the merits of including the changing role of the state and the need to find a way to include phenomena such as legislative and regulatory change even though they are inherently difficult to quantify. Leonard suggested that the volume should include a chronology of legislative acts covering regulation of the labor market, with the inputs of regulation as well as the outputs chronicled. Other important labor market phenomena worthy of inclusion, in Leonard's view, are data

Executive Director's Notes

New Trustees

Lee Craig (North Carolina State) and Kevin O'Rourke (University College, Dublin) have been elected Trustees for the 1998-2001 term. They replace Price Fishback and Timothy Hatton, whom we thank for their service to the Society for the past four years.

In Memoriam

We are sorry to hear about the recent deaths of two of our distinguished members, Thomas Sr. Berry and Mancur Olson. We published an interview with Berry in our July 1997 issue and regret that we will not have the opportunity to interview Mancur.

Membership report

For the 1997 membership year, there were 420 members from 32 countries: Argentina 2, Australia 7, Austria 1, Belgium 2, Brazil 1, Canada 41, Chile 1, Denmark 3, Finland 4, France 7, Germany 13, Greece 1, Hong Kong 1, Iceland 1, Ireland 2, Israel 4, Italy 10, Japan 3, Korea 1, Mexico 2, Netherlands 1, New Zealand 1, Norway 1, People's Republic of China 1, Portugal 2, Russia 6, South Korea 1, Spain 16, Sweden 4, Switzerland 2, UK 30, US 248. There were 26 student memberships, 380 regular memberships and 14 comps; 77 members sent donations. *EEH* subscribers totalled 209, 108 members joined EHES through Clio and 20 joined Clio through EHES.

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1997 Budget Report

Income		*Expenses*	
Dues	9,024.00	ASSA/Trustees	312.08
Donations	3,752.00	Membership	1,308.41
Interest	380.03	Newsletters	2,246.21
Other (*e.g.*, ads)	240.00	Office	786.12
Total Income	13,396.03	UG Paper Prize	110.77
		Personnel	7,389.37
		Capital purchases	1,180.31
		Total Expenses	13,222.50
		Diff:	+173.53

EH.Net News

Executive Board members, several editors and constituent organization representatives met in Columbus, Ohio, in December to discuss the future of EH.Net. An outcome of the meeting was revising the charter to give ownership to EH.Net "sponsors": the Business History Conference, The Cliometric Society, the Economic History Association, and the History of Economics Society.

EH.Net has been busy the last few months with new employees and new web designs – the Society home page now looks like the cover of the *Newsletter*. Please let us know how you like it. Back issues of newsletters are being added to Clio Publications, and will be available "on line" to current members only with the password **purdue60** Directions for access, the security form, and the newsletter archives are at **http://www.eh.net/Clio/Publications** We will change the password periodically and publish new passwords in our *Newsletter*. Of course, we ask that you not give the password to non-members.

The Curse of the Can

Since we are Cliometricians, I thought I would try to predict who posts abstracts to *Abstracts in Economic History* at **http://www.eh.net/AEH/** I did a regression of the number of postings by each individual on a variety of exogenous variables including age, time since presenting his/her first paper at a Cliometrics Conference, field, if his/her major professor said it was a good idea, how often I have given reminders at meetings, and if the person had been awarded the "Clio Can."

I then did a correction for nonstandard errors, used a McCloskey significance test and checked the Universal Worm Can Quotient. The results were unequivocal: if you win the Can and do not write a book with another

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on unions, and labor market transitions by earnings class, industry, and occupation. Finally, Leonard proposed that some users would find helpful, as aids to interpretation, so-called "table statistics" (*i.e.*, standard errors and means). These might be printed alongside key series so that users could perform "table regressions." Discussion focused on some of the difficulties in implementing these suggestions and also on strategies for overcoming them.

David Card (Princeton and UC-Berkeley) followed this discussion with comments on the level, trend, and dispersion of wages. Card began with questions regarding the minimum length of series that might be included, whether these series would be required to continue up to the present, and whether they should be required to be annual series. Card also raised questions concerning the intended audience for the Millennial Edition and the preferred sources of information. He pointed out that the selection criteria and organizing principles for the tables and series in the previous edition had not been articulated, and wondered why were there so few tables that highlighted wage differentials according to race, gender, nativity, and skill level, when trends in these values have been an important issue in recent debates in both scholarly and policy circles. He also voiced concern about the absence of data from standard sources such as unemployment insurance or the Social Security Administration. Card argued that for the Millennial Edition to be a valuable tool for scholars, it would be important to include new time series on trends in the level of wages and on wage differences across sub-groups of the population. He also proposed inclusion of measures of wage dispersion within various groups and other such indicators of wage inequality, with separate series by gender, race, type of employer, and occupation. Discussion focused on other labor market distinctions for which wage differentials might usefully be presented, such as part-time *vs.* full-time workers, overtime rates, and rates of pay at second jobs. There was also a discussion of problems of interpreting long-term trends in wage inequality across groups over time when the relative levels of human capital for the groups being compared have changed substantially.

Sanford Jacoby (UCLA) spoke next, making a strong pitch for what he called a "presentist" approach, meaning that current concerns of policy makers and scholars ought to drive decisions regarding data inclusion and emphasis. Such an approach, Jacoby felt, would dictate the addition of much more data relating to employers and employing organizations, training expenditures, the structure of direct compensation, and emerging types of indirect compensation such as child care. Finally, he argued that readers could obtain a sense of world-wide trends from inclusion of comparative data available from the BLS and the ILO. The discussion that followed was largely concerned with strategies for quantifying changes in labor market institutions, such as personnel policies. John Pencavel (Stanford) commented that the conference was focusing almost exclusively on what should be included in the Millennial Edition, and urged the group to consider also what should be excluded, such as occupational wage series, since the content of many occupations has changed significantly over time.

John Haltiwanger (Maryland) began his presentation by quoting Alan Greenspan's suggestion that an unprecedented and fundamental transformation in the structure of the US economy had recently occurred, with its origins in information and high technology advances, the result of which was to increase job insecurity to levels far higher than any previously recorded. Haltiwanger questioned Greenspan's view by presenting several time series showing that the rate of job destruction and creation in US manufacturing exhibits no trend for the past half century. Haltiwanger concluded that knowledge of long-term processes is a requirement for effective policy formation and that documentation of long-term labor market trends often requires data from a variety of sources. Clair Brown (UC-Berkeley) argued that the distinction between voluntary and involuntary worker mobility is crucial. Robert Gordon (Northwestern) was critical of generalizing about the American economy on the basis of the behavior of manufacturing, noting that today the non-manufacturing sectors account for nearly 75% of total output.

Gordon then presented his perspective on the historical data most relevant to understanding long-term trends in macroeconomic performance. He discussed competing versions of series that display change in variability in macro statistics over time and suggested that the Millennial Edition present both Romer and Balke's and Gordon's versions since there is not yet a consensus about which is the superior series. Gordon advocated retaining wage series by occupation since these are not as polluted by compositional shifts among high- and low-skill occupations over the business cycle as are the more aggregated wage series. With regard to unemployment statistics, he argued that the Millennial Edition should be wary of using older series since there are anomalies in the relationship between unemployment and output when applying Okun's Law. For economic growth, Gordon argued that four series are of utmost importance: on nominal expenditures, price deflators, labor inputs, and capital inputs. The recent controversy regarding price behavior and a possible bias in the CPI prompted him to suggest that this controversial area receive special attention. In Gordon's view, better series on the development of stocks of human and physical capital would further the profession's understanding of the processes shaping long-run economic growth. Discussion centered on the prospects and problems of selecting authoritative statistical series for presentation in a field as controversial as macroeconomics.

L. to r.: Margo, Fishback, Leonard, Haltiwanger, Olmstead, Frank Smith (Cambridge University Press), Fairlie, and Wright.

Daniel Hamermesh (Texas) could not attend the conference but sent a letter, presented by William Sundstrom (Santa Clara), that proposed including more series relating to the demand side of the labor market, such as employment structure by industry and occupation and returns to work by skill level. Hamermesh also urged the inclusion of data relating to long-term change in time use and family labor supply, as well as indicators of Federal Government involvement in the labor market, especially information on the minimum wage and on job-training programs, affirmative action, and Equal Employment Opportunity.

Clair Brown provided perspectives on long term change in earnings and the standard of living, arguing that statisticians must break down earnings by social class and by occupation. She was critical of series which use rankings of income among income-earners to evaluate standards of living because this type of table does not allow one to relate findings on living standards to labor market processes. On the other hand, she argued, once one knows people's roles in the labor market, it is relatively easy to map their positions in the income hierarchy. Brown suggested using three types of goods as measures of the well-being of individual consumers: "basics", which meet basic physical needs and which facilitate social integration; "vanity goods", which make life more interesting; and "status goods", which provide social distinction. Using these categories, Brown demonstrated how to construct a sample index of the standard of living and showed how it has changed for different social classes over time.

Carole Shammas (UC-Riverside) discussed data relevant to changing patterns of inheritance and wealth distribution over time. The current debates over inheritances and wealth, according to Shammas, revolve around historical discontinuities in the role of the household, an institution central to the transfer of wealth in the 19th century. Shammas said that the art of using available statistics properly lies in knowing when each series is appropriate and in being willing to change series when the institutions responsible for the transfer of wealth change. Some important institutional transformations which bear on wealth transfer include those mandated by compulsory education legislation and by married women's property acts. The discussion began with comments from a variety of participants bemoaning the paucity of quantitative evidence on the role of the household in wealth transfer. Sutch emphasized that, while the Millennial Edition would compile the best scholarship currently available, he and the other Editors-in-Chief hoped that this systematic effort to evaluate the currently-available statistical record would stimulate further research aimed at improving that record. Lee Craig (North Carolina State) asked whether there would be a chapter focusing on laws and regulations. Wright commented that although such a chapter might not be feasible, it would certainly be desirable. Shammas mentioned that the nature of wealth-giving is a subject of debate given the data and the complicated wealth strategies that actors adopt. Internal Revenue Service data would be ideal, but such data are not currently available.

Michael Hurd (Michigan) explored data requirements relevant to the economics of aging. He noted that the field of aging research is quite young and that it must be concerned with data on the delivery and quantity of health services provided to the elderly. With regard to labor markets and demography, Hurd outlined areas where the economics of aging lacks appropriate data, for example, on morbidity experience, on the economic status and material well-being of the elderly, and on saving for retirement. Hurd also suggested the presentation of additional information on the labor force participation rates of cohorts of men over time, on pension coverage, on Medicare and Medicaid payments, and on the effect of such programs on the labor force participation rates of the eligible population. Lastly, he called attention to the substantial rigidities in the current labor market that make it difficult for workers to work their preferred number of hours per week; changes in rigidities of this sort, with links to their possible implications for retirement behavior, should be identified in the Millennial Edition. Sutch commented that aging will be the subject of one of several proposed "cross-cutting chapters" designed to address directly topics only partially addressed in other chapters.

The afternoon session, chaired by Alan Olmstead, featured the chapter editors, who described preliminary plans and invited suggestions for improvement. Carter and Tom Weiss (Kansas), editors of the "Labor Force" section, began with remarks on two fundamental aspects of their selection criteria: the first on the salience of an issue for scholarly and policy debates, and second on the quality of the available series. Carter indicated that series which made few assumptions and were well-respected in the profession would be ideal, but that the editors were willing to compromise on issues such as coverage or consistency if the data addressed important issues of current debate and were accepted as the best scholarship in the area. Carter reminded the conference that the CD-ROM will have nearly twice the space of the print edition, and asked what types of series might be candidates to fill this space. Weiss followed Carter's comments by noting that the editors also needed advice on what to omit. To begin discussion on this sub-chapter, Card noted that annual data are not always necessary, and that five-year or decennial data may be justified for some series as a space-saving option. Weiss responded that this style of presentation may neglect crucial years in cycles. Card, however, argued that tracking cycles may not be important for some issues. Robert Fairlie (UC-Santa Cruz) suggested inclusion of workforce series by agricultural and non-agricultural sector; he also noted that the sample size should be reported to facilitate calculation of standard errors. Haines said that data by state level could be useful. Shammas inquired as to whether the chapter editors would treat women's work hours in the traditional way. Carter affirmed that they would, but added that household production and women's use of time would be presented in their own chapter. Weiss added that the introductory essay would discuss the many links between market and non-market work.

Robert Margo, editor for "Wages and Wage Inequality", began his discussion by noting that he had two tasks: assessing old series, deciding which to include and which to omit, and enforcing the rule that if a new series comes into the chapter, another series would have to go. He said a new series would be included if it brings new evidence to bear through archival work or if it represents a substantial advance over an existing series. He prefers presentation of nominal series rather than indices. Peter Lindert (UC-Davis) opened the discussion by questioning Margo's inclusion criteria, which emphasize what might be called "value added". Instead, Lindert proposed that the best series should be included, even if it is only marginally better than another contender. Card wondered whether users, who may already have the Bicentennial Edition, would want series from that edition included in the Millennial Edition as well. Pencavel described what he termed a fundamental disposition of economic historians to look at behavior over time, and not in the cross-sectional or cohort approach favored by most economists. Margo stressed that one can look at data by cohort by using the Integrated Public Use Microdata Samples (IPUMS). Discussion followed which suggested that many series on earnings by characteristics would be desirable including breakdowns by gender or race. Pencavel said that people worry about many permutations of variables and that the Millennial Edition should not construct series controlling for characteristics. Jacoby also endorsed an approach that minimized data manipulation and instead put warnings and suggestions for use in the accompanying essay.

William Sundstrom, editor for "Hours, Working Conditions and Non-wage Compensation", presented his ideas for that section. He discussed indicators of working conditions such as turnover rates, workplace fatalities, and quit rates. He warned of the difficulty of coordination among chapters. For example, Fishback's chapter on social spending includes some series on fringe benefits that would probably also fit within Sundstrom's chapter. Another coordination problem related to data on hours of work. Sundstrom noted that, after World War II, significant portions of leisure time took the form of paid vacations, but this time was counted in some series as "hours

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Report on the All-UC Conference

by Gregory Clark, University of California-Davis

(Davis, Cal.) The All-UC Economic History Group held its autumn 1997 conference November 14-16 on the theme "Rethinking the History of Wages, Prices and Living Standards." The aim of the conference was to consider the progress historians have made in measuring the various dimensions of living standards, and the implications of these measures for our thinking about such issues as the distinctiveness of pre-industrial Western Europe, and the convergence of living standards among advanced economies since 1870.

The conference opened with a paper by Aimee Myers (UC-Riverside) and Carole Shammas (USC), "Housing Standards in the United States, 1790s-1990s." The paper tackled the difficult problem of including housing consumption in measures of material well-being over time. Using the records of the Federal Direct Tax of 1798, which assessed taxes based on characteristics of dwellings, the authors are able to compare square feet per person in townships of different characteristics with recent measures for the US. Contemporary Americans enjoy 3.5 to 6 times as much space as their forbears (but living space in 1798 in the US was much greater than in Calcutta in the 1960s). In discussing the paper, Martha Olney (UC-Berkeley) wondered if there was any way to fill the gap in measures of dwelling space per person between 1798 and 1985. A conferee raised the issue of the dependence of living space on relative prices. Dwellers in Manhattan, New York, may consume less housing space than those in Manhattan, Kansas, but, in part, that is because of the very different relative prices of space in the two locations. The authors, however, have little information on the price of housing relative to other commodities in 1798.

The second paper, by Rebecca Menes (UCLA), "English Spinsters: Labor Requirements and the Employment of Women in Eighteenth-Century Wool Spinning", was in part inspired by her own considerable knowledge of wool spinning. Menes sets out to estimate the proportion of female and child labor devoted to the production of woolen thread in 18th-century England. Spinning was the most labor-intensive part of woolen textiles, the largest manufacturing industry of the time. She finds that female employment rose during the first two-thirds of the century, starting at around 9% of all women's working hours and peaking in the 1760s at around 15% of hours. The introduction of the carding mill and spinning jenny into woolen spinning, and the partial adoption of the spinning mule in worsted spinning, caused employment in hand spinning to plummet to around 3% of women's labor time by 1800. In the last part of the paper, Menes argues that the decline in demand for women's labor in woolen spinning significantly worsened their economic position in the early Industrial Revolution. The discussant, Norma Landau (UC-Davis), praised the paper's fresh approach of using information on technological parameters to shed indirect light on trends in women's labor market position. There was discussion about whether these methods could be extended to the other textile industries to give a more complete view of the position of women in the Industrial Revolution.

The last paper of the first afternoon was by Michael Huberman (Montreal) and Wayne Lewchuk (McMaster), "Glory Days? Work Hours, Labor Market Regulations, and Convergence in Late Nineteenth Century Europe." Bucking the general view that European economies experienced a generalized convergence in incomes *per capita* and in real wages in the late 19th century, Huberman and Lewchuk argue that most of the apparent convergence comes from mismeasuring work hours. Using a newly-constructed series of work hours for nine European countries between 1870 and 1900, the authors find that GDP per hour worked showed little convergence from 1870 to 1913. Indeed, leisure-augmented GDP *per capita* diverged over the period. In a spirited discussion, Hans-Joachim Voth (Stanford) questioned their iconoclasm. Among the issues raised was whether the link between differences in work hours and inferences about social dumping and international competition was underdeveloped. Some in the audience also questioned the conceptual basis of the leisure-augmented GDP *per capita* measures.

Saturday morning began with a presentation by Robert W. Fairlie (UC-Santa Cruz) of his paper with Bruce D. Meyer (Northwestern), "Trends in Self-Employment among White and Black Men: 1910-1990." The authors examine self-employment rates among black and white men in the years 1910 and 1940 to 1990. Over the period, black and white rates fell in the same proportion, with black rates remaining only about one-third those of whites throughout. The paper focuses on explaining this disparity, which they find for all industries. The authors had difficulty pinning down a cause for the disparity, arguing that the likely cause was small asset holdings by blacks, but admitting a lack of data to rule out other explanations. Roger Ransom (UC-Riverside) praised the paper as generally convincing but asked for more work on some issues. In particular, the aggregate nature of the data conceals some interesting micro-structure, for example that the rise in self-employment from 1970 to 1990 was concentrated among those aged over 55. Second, while there was no long-term trend in relative black and white self-employment rates, there was a big increase in relative black self-employment rates between 1910 and 1940, followed by a decline. Alan Olmstead (UC-Davis) questioned the authors' premise that, absent any other information, self-employment was a good thing, since self-employment might also be a sign of failure. Earnings should be the focus. Fairlie noted that the black community itself believed business ownership was important, and this justified the concern over its level.

Kenneth Ng and Nancy Virts (California State-Northridge) followed with "Changes in Black and White Income, 1880-1900." Using the agricultural Censuses of 1880 and 1900, the authors look at the movement of black and white southern farm incomes. Contra the position taken by Robert Higgs, this was a period of divergence in incomes between the two communities. They find that, while 1880 to 1900 saw income gains for rural southern blacks, incomes of rural whites grew by even more. Garland Brinkley (UC-Berkeley) praised the paper, but asked the authors to rule out possible accidental causes of the divergence in incomes. 1900 was a bad year for cotton; did that affect black farmers particularly? The Census did not include payments on mortgage debt by farmers, so measured incomes for whites may be exaggerated if they had more mortgage debt. Virts responded that there was no correlation between the difference in share of cotton by state between black and white farmers and relative incomes in 1900. Gavin Wright (Stanford) noted that money income may not measure welfare if farmers also seek self-sufficiency. Richard Sutch (UC-Berkeley) suggested the authors apply the same techniques to agricultural incomes in 1940 to measure how much of the closing gap between white and black incomes came from changes within agriculture. Ransom noted that some of his work with Sutch on crop income supported the general conclusions of the paper.

James Gerber (San Diego State), in "Agricultural Expansion during the Gold Rush: California Grain Farming as a 'Booming' Lagging Sector, 1849-1861", confronts the puzzle of why California exported grain during the Gold Rush when labor costs were very high by international standards. General equilibrium models suggest that a resource boom should depress the tradable goods sector. In 1849, for example, day wages outside mining were more than $12 per day. Thus, in 1850, the ratio of agricultural wages to grain prices in California was nearly three times as high as in New York State. Since grain was tradable with low transportation costs, why would California export grain in the 1850s? Gerber suggested several explanations for this puzzle, focusing on a lack of integration in grain and other goods markets created by transport costs and the slow spread of price information. In discussion, Paul Rhode (UNC-Chapel Hill) noted that one of the key contributions of the paper was Gerber's wage data set, which tell a much more plausible story of wages in the Gold Rush era than the wages collected by Margo from Army forts, which show only a modest increase. While Gerber focuses on the wage element of costs, Rhode pointed out that capital costs in California were also extraordinarily high in the Gold Rush era – as much as 9% per month. Rhode argued that grain farming in that period was a form of soil mining – crops were grown with little labor, relying on the accumulated fertility of the soil. In response to a question from Ken Pomeranz (UC-Irvine), it emerged that California land tenure was in a very unsettled state in the 1850s; this further encouraged farming with a short time horizon. Thus, experiments with dwarf fruit trees to reduce the time needed to get the first crop were observed in this period.

The last paper of the morning was by Christopher Hanes (Federal Reserve Board), "The Rise and Fall of the Sliding Scale, Or Why Wages Aren't Indexed to Product Prices." Wages were indexed to firms' output prices for many workers in the late 19th and early 20th centuries under "sliding scale" agreements. Hanes provides a brief history of this system in the US and Britain, and argues that sliding scales were a mechanism to avoid strikes in an institutional environment that made long term contracts impossible. He also discusses why, despite its attractions, the system did not survive and the implications of this for current issues in wage indexation and the structuring of employment contracts. Gavin Wright discussed how this work relates to Hanes' earlier work on slavery and the institutions of labor contracting in the US. He urged the author to provide a better explanation for the demise of the sliding scale in Britain, which, unlike the US, never adopted institutions allowing employers and unions to make binding long-term employment contracts.

After lunch, four graduate students presented progress reports from their dissertation research. Jason Seligman (UC-Berkeley) gave "Social Security: A Regulatory History with Comparative Benefit Measures." This paper tracks the eligibility requirements and benefit determination of the Old Age Survivors Insurance program of 1935 and the Disability Insurance program of 1954 through five different regulatory frameworks. The paper also gives preliminary results of comparative calculations of benefit expenses using the New Beneficiaries Data System for the 1980-1981 cohort of new beneficiaries.

Melissa Thomasson (Arizona) presented "Tax Policy, Group Insurance, and Health Insurance Demand: New Evidence on How the 1954 Tax Subsidy Encouraged Market Expansion." A 1954 change in the tax law excluded an employer's contributions for health insurance from employees' taxable income. Thomasson investigates whether that change had an effect on health insurance demand using data on health insurance purchases in 1953 and 1958. The tax change stimulated health insurance purchases in two ways: by reducing the price of individual insurance and by promoting the growth of group health insurance. She attributes 16% of the gains in coverage over the period to the tax change. Thus, the tax change had important institutional effects in the health insurance market. Gary Richardson (UC-Berkeley) noted that the paper does the hardest thing in microeconomics: a multi-stage parametric estimate of many unobservable elements. This means that many assumptions are required. He suggested more summary statistics to show that her sample population was representative of the US population. Also, he thought that ancillary information from other sources such as the BLS data on collective bargaining agreements, and whether these incorporated group insurance, would bolster the case. Naomi Lamoreaux (UCLA) noted that only some employers would collect a tax benefit from subsidizing employee's insurance, and wondered whether Thomasson was able to identify the effects of the changes from this cross-sectional difference.

In "The Evolution of Employment Systems in the US and Japan, 1900-1960: A Comparative Historical and Institutional Analysis", Chiaki Moriguchi (Stanford) uses a conceptual framework based on game and contract theory to explore the evolution of employment systems in the US and Japan. He argues that the distinctive employment systems observed in the two countries in the 1960s were two different equilibria and examines equilibrium selection empirically. The analysis identifies parallel institutional developments in the US and Japan during the first three decades of this century, and documents the subsequent processes of bifurcation induced by the Great Depression. The two paths diverged further during World War II and, despite the drastic labor reforms in Japan under the postwar US Occupation, the two institutional trajectories did not converge.

The final dissertation, by Dafne Reymen (Stanford), "The Economic Effects of the Marshall Plan Revisited", casts doubt on commonly-held beliefs about the program. In particular, because of the Plan's financial and organizational structure, the aid actually received by individual participating countries differed substantially from the aid allotted, even though the latter has traditionally been used in assessing the effect of the Plan. Using "net inflow of funds" as the measure of aid for each country, Reymen estimates the Plan's contribution to growth by simulation experiments through an econometric analysis similar to that of Eichengreen and Uzan. With this correction, her simulations imply that Marshall Plan aid was an important direct stimulus to growth for only two countries.

To end the second day, Kris James Mitchener (UC-Berkeley) presented his paper with Ian W. McLean (Adelaide), "US Regional Growth and Convergence, 1880-1980." In 1880 nominal incomes *per capita* differed by a factor of 4 to 1 across regions in the US. By 1980 the differences had shrunk to closer to 1.5 to 1. Mitchener and McLean derive improved measures of regional labor productivity differences by correcting for price level differences and differences in labor input *per capita*. With these corrections, they find less dispersion of real labor productivity in the years before 1940 than nominal incomes *per capita* would suggest; consequently, they find less dramatic signs of income convergence. Their discussant, Mary Gregson (Knox), questioned how the regional price indices were constructed, since only urban prices were employed. She argued that, given the importance of rural areas in the earlier years, they needed to make some attempt to examine rural prices. Clark raised the issue of the role of the percentage of workers who were black in different regions on regional income differences in 1880. Given the disparities in income *per capita* between racial groups then, how much less income inequality between regions would there be now if black and white workers were in the same proportions in each region? Was the migration of black workers out of the South an important, but peculiarly American, contributor to regional convergence?

Saturday evening the conference attendees feasted at the Recreation Pool Lodge. A dearth of local talent forced the abandonment of a long tradition at the All-UC conference, the after dinner speech. In its place, Gregory Clark amused the diners by reading a satirical proposed letter from the Davis economics department to bright potential undergraduates.

Sunday morning was devoted to an extended session on the Chinese experience. The first presenters were James Lee (Caltech) and Wang Feng (UC-Irvine), on "Malthusian Mythologies and Chinese Realities: From 200 Million to 1.2 Billion Chinese, 1700-2000." Lee and Feng's paper derives from a book manuscript they are completing on the Chinese demographic experience. In this extract they seek to contrast the view of China derived from Malthusian theory with the realities of the Chinese experience. They note that the Chinese population grew in almost all periods from 1700 to 1997, yet there is little sign the population was immiserized as a result of this growth. Mortality rates did not increase from 1700 to 1900 and thereafter declined. *Per capita* grain production again seems to have held constant from 1700 to 1900 and thereafter increased. From 1900 to 1990 average male heights have also increased substantially. Further, recent demographic research has shown that Chinese fertility rates were modest in comparison even with the Europe of the "European Marriage Pattern". Discussing the paper, Gregory Clark agreed that the authors had demonstrated that a crude "Malthusian" interpretation of the Chinese experience (high mortality, high fertility, low living standards, and population kept in check by periodic subsistence crises) clearly did not apply. He believed, however, that the authors were not rejecting the Malthusian model *per se*, but just one realization of it. An economy could have high living standards, low fertility and mortality, and even steady population growth and still be governed by the peculiar logic of a Malthusian economic/demographic regime.

In "Re-Thinking 18th Century China: A High Standard of Living and Its Implications", Kenneth Pomeranz (UC-Irvine) argues that 18th-century Chinese living standards were quite high: not only were life expectancies comparable to England's, but *per capita* sugar consumption was much higher than in continental Europe, and *per capita* cloth consumption was comparable to that of France. In the Yangzi Delta (population *ca.* 32 million) *per capita* cloth output roughly matched the UK's. Further, comparisons suggested Chinese processes of household labor re-allocation and increased market involvement are similar to those which Jan DeVries has called Europe's "industrious revolution." Pomeranz suggests that the sharp differences between Chinese and European "core" regions that emerged in the 19th century are best explained by differences in the relationships between "core" and "peripheral" regions in the Atlantic world and in East Asia. Susan Mann (UC-Davis) praised the paper as a welcome reappraisal of the relative performance of China and Europe on the eve of the Industrial Revolution. She attributed some of the success of China in industrializing on the structure of Chinese families, and particularly on the power of the "Chinese mother-in-law," which encouraged very high levels of participation by women in market-oriented work.

Continuing the revisionism of the first two papers, in "Were They Better Off? A Comparative Study of Living Standards in Rural Yangzi Delta: 1650-1800", Ming Te Pan (SUNY-Oswego) argues that peasants in the rural Yangzi Delta did not suffer any decline in nutritional intake between 1650 and 1930 and were reasonably well nourished by the standards of pre-industrial Western Europe. Energy intakes, for example, were in the order of 4,700 calories per day for 17th-century agricultural laborers. Arturo Giraldez (University of the Pacific) raised a number of points in discussion. The study area, the Yangzi Delta, was the core area of China and may have had much better living standards than the rest of the country. The source of living standards for the 17th century was just one agricultural treatise reporting the normal consumption of agricultural laborers. Voth asked why Chinese laborers were so short in the early 20th century if they were so well fed. Ming Te Pan responded that the problem was lack of protein in the Chinese diet. Pomeranz and Lee both argued that heights were not a good measure of living standards, in part because of accidental features of diet patterns.

The conference closed with a paper by G. William Skinner (UC-Davis), "Modeling the Spatial Economy of Agrarian Societies: France 1850s and China 1980s." Skinner emphasized that the study of prices, wages, and living standards in any agrarian society is enhanced by recognition of the spatial structure of these economies. In all such economies, a regional hierarchy developed around the major drainage basins. Population, fertile land, and capital were concentrated in the cores of these economies, so that the core contained intensive agricultural systems, urban areas, and extensive market involvement. On the periphery, population was thin, land was poorer, capital was scarce, and transport was difficult. Thus, market involvement was limited on the periphery, as was urbanization. This implies that our impression of the nature of a society will be very different if we sample only from the regional cores or from the regional periphery. Pomeranz praised the paper as both fascinating and agenda-setting. In part he liked the paper because it engaged in a project close to his own heart – normalizing China and making it seem less distinct from the European economies that cradled the Industrial Revolution. Many kinds of correlation we observe across space between economic and demographic variables need not imply any kind of causation; they may link simply because they indicate the location of a place in the regional hierarchy.

The next All-UC Conference, on the theme "Communication and the Location, Structure, and Organization of Economic Activity", will be held at Santa Clara University, March 20-22, 1998, hosted by Alex Field.

Call for Nominations
Fourth Annual Cliometric Society
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.

Papers will be judged by the Selection Committee Ann Carlos (Colorado at Boulder), Chair, Colleen Callahan (Lehigh) and Linda Barrington (Barnard) on significance of findings, soundness of method, originality, understanding of existing body of work, clarity of writing, and overall quality. The award will be announced at the EHA meetings in September. The prize-winning paper will be published in *The Newsletter of The Cliometric Society*, and an abstract of the paper will be published in *Explorations in Economic History*. Its author will receive a cash award and a complimentary one-year Society membership. Previous winners are Ari Gerstle (MIT), Melissa A. Roe (Lafayette) and Eric Bickford (UC-Berkeley), whose work is published on the EH.Net web server: **http://www.eh.net/Clio**

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 have been written by a student who was an undergraduate during the 1997-98 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. A hard copy should also be submitted. Maximum length is 5,000 words, with an additional five 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, 1998.**

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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 EH.Net fileserver. Runners-up may be invited to submit abstracts of their papers for publication.*

ASSA Report *(continued from page 1)*

observed that price indices are often weighted toward transportables and recommended looking at the regional price dispersion literature where some pertinent data are available for the later period. McLean responded by acknowledging that history matters when choosing a starting point. Perhaps more complicated life cycle models could explain migration to regions of lower income. As for the data, McLean and Mitchener noted that they had in fact used the revised BLS city price series that Coelho suggested. Williamson wondered about the effect of using a standard national basket in price indices, and McLean replied that the basket was not totally fixed.

In the third paper, Carolyn Dimitri explored the evolution of contracts in the American fresh fruit industry from 1890 to 1930. Production growth was concentrated in California and Washington, while the market grew mainly in the east, leading to problems of adverse selection and moral hazard despite rail transport and refrigeration. In response to the agency problem, farmers sought f.o.b. contracts while buyers preferred consignment contracts. The result was that fruit was misallocated by quality between local and national markets. The innovation of government inspection helped to overcome informational asymmetries. Discussant Ann Harper Fender (Gettysburg) asked when quality becomes observable and whether this determines the price system that emerges. Exactly how does information enter the models and who is more risk averse? Why government inspection rather than private? Dimitri replied that farmers were typically more risk averse than wholesalers and f.o.b. contracts had emerged before consignment. Western states also grew higher quality fruit and could afford to organize and obtain government inspection, whereas in the east there was more variation in quality and organizing institutional innovation was more difficult. Private inspection would have been less likely to emerge since transactions were typically one period games, so that reputation could not develop. Libecap noted that Florida had more difficulty and pushed for federal controls.

In the final contribution to the session, Der-Yuan Yang (UC-Santa Barbara) examined the emergence of the Bank of England as a mechanism for making the King promise a credible commitment to Parliament to avoid sovereign default. The bank overcame the Prisoner's Dilemma implicit in sovereign debt; the dominant strategy of both creditor and debtor is to defect rather than to cooperate, yet cooperation offers the higher payoff to both. The Bank provided the incentive for King and Parliament to cooperate to maintain financial solvency. Discussant Fred Carstensen argued that all markets are politically determined; they link together the credibility of private and public debt. It has been historically important to have a stable value of money, but more historical background is needed to explain the particular institutions that emerged to promote stability. The way to deal with a "bad game" is to change it, as did the revolution in England in 1688, following which the national debt was depersonalized, the King was prohibited from changing the value of money by the Recoinage Act of 1692, and could be sued after the Act of Settlement in 1701. Yang agreed that this kind of historical detail should be elaborated. Albrecht Ritschl (Pompeu Fabra) noted, by way of illustration, that the German Reichsbank provides a counterexample to the English story.

The "Counting and Laboring" session, chaired by Joseph Ferrie (Northwestern), began with a paper by Warren Whatley and Stan Sedo (both of Michigan). They observe that previous studies have not reached a consensus on how to measure job duration over time. One method used by economists is the use of current duration data to estimate completed job duration, estimates which frequently rely on a steady-state assumption. The authors use records of completed work histories between 1919 and 1947 at Ford Motor Company, and find that the results are quite sensitive to the steady-state bias (the difference between the predicted and actual steady-state). Lou Cain (Loyola and Northwestern) began his discussion by quipping that age may not bring wisdom, but it does bring perspective. Cain argued that the authors rightly remind us that the assumption of a stable labor market underlies the steady-state assumption. Thus, he unconditionally accepted their premise that the steady-state should be used with caution, but pointed out that the paper contrasts the results from one firm to macroeconomic data. The Ford employment data provide evidence from an atypical firm during an atypical time period. For example, how do the data deal with those leaving the workforce to enter the war, and those reentering at war's end? The authors responded by agreeing that it would be good to have data with more variability that covered a longer period. They also stressed that their main question is whether the steady-state assumption biases job duration estimates; the answer is yes.

John Murray (Toledo) presented the next paper, which examines the viability of a nonconventional organization, a commune, investigating existence of a moral economy. In late ante-bellum New York, Shaker communities hired three types of laborers: apprentices, monthly contract workers, and day laborers. One motivation for bringing in children as apprentices was that, being bound to the community, they were potential members. He finds patterns similar to other ante-bellum labor markets, and argues that the Shakers showed market sophistication in hiring. Sam Williamson, discussant, commented that the data set used by Murray was quite useful. Murray can ask whether the Shakers relied on a moral economy of labor exchange, and is able to reject this hypothesis with the interesting observation that, in hiring outside workers, the Shakers chose not to be self-sufficient. Murray's results suggest that apprentices who were literate enough to sign were more likely to stay. Williamson also asked whether rewards to the literate exceeded rewards to the illiterate, and wondered whether the parents of the child-apprentices received rewards. Robert Margo (Vanderbilt and Harvard) suggested the use of hedonic indices rather than averages; he also suggested Murray go to Albany to collect labor market data from the Manufacturing Census of Social Statistics for New York. Martha Olney (UC-Berkeley) asked why parents had apprenticed their children, and whether the non-Shaker children were treated in the same manner as Shaker children. Murray replied that many of the apprentices had single or remarried mothers, and that, although apprenticed children were treated like the Shaker children, they were raised separately. Ferrie suggested that Murray attempt to compare the New York Shakers with other Shaker communities, despite data limitations, and try to see if their willingness to enter the external labor market varied by community.

In the next paper, Carolyn Moehling questioned whether unemployment of husbands caused a shift in household production by substituting labor for market goods. Moehling uses data from the BLS cost of living survey taken from 1917 to 1919 and finds a steady increase in labor force participation of wives as their husbands' unemployment spells increased. Moehling also finds that expenditures on commercial laundries and wages of day workers declined, but expenditures on meals outside the home did not decline monotonically or as much. The length of the husband's unemployment had little effect on purchases of commercial canned and bakery goods. The discussant Robert Margo first stated that, of all the data sets used by cliometricians, this one is a total pain in the ass, and he admires anyone who will use it. Documenting the added worker effect, he continued, is not easy, but Moehling has demonstrated that it was alive and well

At the Clio party: Joseph Mason, Joyce Burnette, and Knick Harley

during WWI, while it is difficult to find with more recent data. Margo suggested that Moehling better motivate the analysis: household production effects are second order (the industries are small), and so it might be better to understand the historical evolution of income variability and household production. A formal household production model would be helpful. The added-worker effect would be a comparative static result from the theoretical model, and Moehling's regressions would be consistent with Margo's proposed model. And for the econometrics, Margo suggested estimation using a Heckman model with selectivity bias correction and wondered if cross sectional variation in prices could be included. He finished by stating that, all in all, Moehling's paper was excellent. Other commentators focused on whether Moehling was picking up heterogeneity in the data, since the added-worker effect is a time series outcome, and suggested she try to get transition data.

In the final paper, Joyce Burnette (Wabash) examined child care in 19th-century Britain. Her research reveals that the child care issue was just as important to 19th-century women as it is to women today. Burnette's main conclusions are that today's children are better off than their historical counterparts in several ways. Seven year olds were child care providers, and young children were frequently sedated by opiates so their mothers could work (she jokingly compared this behavior to the television baby-sitter used today). Further, child care has always been expensive and will always affect labor market participation. Discussant Martha Olney commended Burnette's use of the Parliamentary Papers, but thought she might try to find additional data, if possible. Olney argued that an examination of gay and lesbian families suggests that one parent usually provides more child care, and this is usually the parent with the lower wage. Olney suggested pushing the economic model to incorporate labor force and fertility decisions as part of a family strategy, to include the husband in the model. Burnette also should question whether the return to work is a choice or an institutional requirement. Margo and Joel Mokyr (Northwestern) suggested linking this piece to the industrial revolution literature, where there was a substitution between goods produced at home and purchased goods – child care from mother or caretaker is a parallel application – and linking the paper to work on historical demography and child mortality.

The third session, on "Clio and the Economic Organization of Science", was sponsored jointly by The Cliometric Society and the AEA. Session chair Zvi Griliches (Harvard) opened the proceedings by noting the timeliness of the topic, arguing that historical analyses of the evolution of scientific research, as exemplified by the papers presented in the session, provide important insights that should inform and enhance the current debate about how best to organize and fund scientific research.

Paul David (All Souls College and Stanford) discussed the transition of the pursuit of scientific knowledge from a closed and secretive endeavor to an open and collective endeavor during the Scientific Revolution of the 17th century. David argues that a driving factor in this transition was the court patronage system, and describes the relationship between patron and scientist as a principal-agent problem with an informational asymmetry. The patron sought to enhance the reputation of his court by establishing relationships with brilliant scientists, but he lacked the information or ability independently to evaluate the intellectual prowess of different scientists. Scientists therefore had incentives to publish and present their results publicly to demonstrate their abilities and to secure patronage. Thus, David concludes, the norms and conventions we associate with scientific research in the modern period emerged as a response to the economic constraints faced by scientists and their patrons during the Scientific Revolution.

Timothy Lenoir (Stanford) then presented his research on the role of the state in the development of the German research system from 1810 to 1910. Lenoir argues that the political and economic objectives of state ministers fundamentally shaped the organization of scientific research in Germany in the 19th century. In the early decades of the century, ministers' objectives were shaped by the complete collapse of the German economy following the invasion of Napoleon. The collapse engendered the belief that the state needed to foster the development of personal freedoms and promote the growth of a class of risk-taking entrepreneurs. With that intent, German states established institutes for training in technology. State ministers intended that science provide the basis for industrial development and growth. After the revolution of 1848, German universities established laboratories for training students, a response to increased competition for scientific talent and the desire of state ministers to attract scientists to teach at their universities. Finally, Lenoir argues that the establishment of extra-university research institutes at the end of the century was intended to increase scientific research in service of industry. By the 1880s, universities had become overburdened with teaching. State ministers believed that research for industrial applications required creating research centers outside the constraints of the university system. Lenoir echoed David by emphasizing that the German case demonstrates that economic constraints influence the direction of scientific research.

Next, Christophe Lecuyer (Stanford) discussed the development of a "permeable" engineering school at MIT between 1890 and 1925, one that developed and maintained strong links to the industrial community and was responsive to its needs. Lecuyer argues that the evolution of MIT reflected the outcomes of struggles between different factions of its faculty. In the early 20th century, the factions labeled by Lecuyer as the "practical engineers" and the "engineer-reformers" defeated the "scientific faction" in setting the school's agenda. The victorious factions sought industrial patronage for the school and emphasized training engineers who would be immediately useful in industry. Lecuyer dismisses claims made by other scholars that MIT became the pawn of industry during this period. Instead, his research demonstrates that the visions and ideals of the MIT faculty, rather than industry, determined the path of the school's development.

Marjory Blumenthal (National Academy of Sciences) then discussed US Federal Government funding for computing and communications research in the past 50 years. This funding has paid off in terms of technological breakthroughs and advances. It is therefore instructive to ask

"What made government funding in this area so productive?" Blumenthal examines two key Federal programs, Project Whirlwind and the High Performance Computing and Communications Initiative. These programs matched potential consumers of a technology with the developers of that technology. Funding was directed at real problems and specific application contexts. Scientists and technologists were given adequate time to build and test real systems. These programs had multiple funding and input sources that allowed for increased information flows across organizations and sectors. Moreover, the programs contained human resource components which fostered the development of a talent base for future research.

Paul Rhode, Karen Clay, and Eugene White enjoying the Sunday evening party

Kenneth Flamm (Brookings Institution) and David Mowery (UC-Berkeley) discussed all four papers. Flamm noted that the papers of Lenoir, Lecuyer, and Blumenthal all emphasize the role of training in the organization of scientific research. He challenged David to consider how the need to replicate and expand the scientific community contributed to the development of the "open science" system. Flamm suggested that the establishment of intellectual property rights may have been an important element in the emergence of this system. Flamm pointed out the similarities between the German research system as described by Lenoir and the direction taken by MIT in the early 20th century as described by Lecuyer. He suggested that the transfer and transmutation of the German system to MIT and elsewhere was a process important to both authors' stories and deserved more attention and study, and argued that an interesting element in the MIT story was the return after World War II to the visions of the "scientific faction". Studying this reversal, Flamm argued, would be a valuable extension of Lecuyer's research. Finally, Flamm turned to government funding of scientific research in the postwar period, arguing that the key to the success of the programs Blumenthal described was that they were not targeted to develop specific technologies but rather had multiple and adaptable objectives.

Mowery discussed several themes running through the four session papers. First was the theme of the tension and interaction of the disclosure norms of science with property rights in technology. The papers also demonstrated the role of the state in shaping the direction of scientific research. In addition, they illustrated the interaction between utilitarian and ornamental motives for scientific research. Mowery argued that the evidence in the papers, though, clearly indicated that the utilitarian motive trumped the ornamental motive in the case of government support for research. Finally, Mowery noted that the papers provide strong evidence that funding sources influence the disclosure norms in scientific research.

The fourth session, with Eugene White (Rutgers) presiding, focused on "Money Down the River." Marc Flandreau (CNRS-Paris) opened with a "new" theory of bimetallism that allows for arbitrage costs. In contrast to the commonly-held view that bimetallism is constantly on the verge of collapsing into monometallism, Flandreau, following Irving Fisher, explained how fluctuations of the gold-silver exchange rate around the legal ratio become an essential part of the equilibration process maintaining bimetallism. The spread between market and legal ratios is always smaller than the cost of arbitraging it away. Bullion shocks can result in persistent departures of the market ratio from the legal ratio without ending the bimetallic system. For example, between 1840 and 1870, France possessed sufficient gold and silver reserves to play a key role in stabilizing the gold-silver price ratio on world markets. Discussant Warren Weber (Federal Reserve Bank-Minneapolis) proposed, by contrast, a two-country gold-silver-bananas model of exchange rates and used this to reinterpret Flandreau's model. He argued this model could only be closed by assuming France pegged her mint ratio, a closure apparently absent from the Flandreau model. Flandreau responded by noting that his model is not the same as Weber's; his is aimed at explaining how it was that the gold-silver price ratio drifted away from the legal ratio, yet remained in the vicinity of it. The French ratio was not fully pegged, only up to arbitrage costs, and hence the observed departures from the legal ratio do not represent a violation of the commitment to a fixed exchange rate. François Velde (Federal Reserve Bank-Chicago) wondered exactly how arbitrage worked in the Flandreau model. Flandreau replied that a bimetallic country pays with the currency option that is most profitable, and when money flows, equilibrium is attained just as the "gradient of a river" helps water to find its equilibrium level.

Next, Matthew A. Martin (Kent State) re-examined agricultural shocks in the interwar US economy using a structural VAR analysis. Martin concludes that recovery from the 1930s was aided by government assistance to agriculture, that the early recovery years witnessed large positive shocks to agriculture, and that agricultural recovery complemented the monetary recovery from the Depression produced by gold inflows experienced after the gold standard was abandoned. Discussant Mark Siegler (Williams) argued that VAR analysis was more suited to understanding longer time periods than to a narrative of the New Deal period. Was the data trend- or difference-stationary? Perron finds a break in most series in 1929, yet Martin points to the second quarter of 1933. Were these permanent or temporary shocks? Martin replied that the data were trend-stationary after World War II and that he was following Temin and Wigmore in choosing his dating of a break. White wondered if the possibility of having more than one break had been considered. Velde pointed out that more breaks always produce a better fit; why not try reestimating with a break in 1929? Ritschl asked if there could be a reverse transmission mechanism at work, a shock in credit going to, rather than from, agriculture. Martin responded he had found convergence difficult to achieve when 1929 was used as a break.

In the third paper, Albrecht Ritschl eschewed the common reparations and Keynesian explanations of the Great Depression in Germany. He proposed analyzing sovereign debt, connecting constraints in the international credit market with the various reparations settlements. Germany borrowed heavily under the Dawes Plan because it offered "transfer protection"; debt service on commercial credits took priority over reparations. The Young Plan introduced in 1929 ended transfer protection and produced a run on the Reichsbank, a public finance crisis and ultimately depression, just as Schacht, the president of the Reichsbank, had predicted. Discussant François Velde agreed that Ritschl's argument was a natural way of looking at the links between reparations and Germany's depression experience, but was unsure why the reparations creditors under the Dawes Plan had been willing to bear default risk. He believed that it would be better to assume the choice of a plan was endogenous, within a model specifying the optimal program for getting the maximum resources from Germany, taking account of the value to Germany of getting foreign capital as insurance. Ritschl responded that it was rather too difficult to model agents and optimal reparations, and that, in fact, Germany at one point nearly did default.

In the final paper, Patrice Robitaille (Board of Governors, Federal Reserve System) considered the evolution of the Mexican private payment system, whose collapse early in the 20th century led to the founding of the Bank of Mexico in 1925. A principal private bank, Banco Central Mexicano, had redeemed state bank notes and acted as fiscal agent for the government. It is not clear that there was excessive risk-taking under this arrangement. Only Banco Yucateco, the largest state bank, appears to have taken a more risky position than warranted. In 1905 Mexico left a silver standard to adopt bimetallism. The banks attracted capital from abroad, but, thereafter, civil war ended the inflow, and convertibility had to be suspended. Discussant Michael Twomy (Michigan) found Robitaille's story, though largely descriptive, well-researched and well-written, and a distinct advance on the existing literature. He noted that the effects of government were probably not unintentional and might be explained in terms of the political economy forces operating at the time. Weber argued that the Banco Central should not be compared with the Suffolk system in the US, since the latter was only a clearing system and was never required to pay out specie as was the Banco Central. White suggested that more effort should be spent on understanding and explaining the monetary mechanism at work. Robitaille responded that her study was still in progress and that some questions may be hard to answer, since much archival material was lost in the Revolution.

Cliometricians and their friends at the Chicago 1998 ASSA meetings rewarded themselves with a well-earned, well-attended and well-enjoyed cocktail party Sunday evening!

Historical Statistics *(continued from page 6)*

worked." He concluded that the official "hours worked" measure should be adjusted, where possible, to indicate paid vacation time. Finally, he noted that data on job destruction and creation would have to be included in this chapter as it was in the Bicentennial Edition, but he asked for opinions about the appropriate level of aggregation. Discussion began with Haltiwanger's comment that turnover rates and job flows fit in the chapter on the labor force. Wright observed that people are not always paid by the hour and that the time unit for which wages are paid is an interesting feature of the labor contract.

Joshua Rosenbloom (Kansas) followed with his plan for the "Unions and Labor Relations" chapter, where coverage of topics such as union membership and unionization rates should be retained from the Bicentennial Edition. Rosenbloom asked whether raw numbers, densities, or some combination would be the best style for presentation. He also raised the question of how much detail should be included; although later years seem to have a great deal of detail, the same is not true for earlier years. Rosenbloom noted that he was proposing to splice together some series when sources changed, but in other cases he was proposing to create separate tables. He suggested that some wage differentials could be constructed using regression analysis, and asked if this type of data construction seemed appropriate. Pencavel opened discussion by arguing that Rosenbloom's proposal included far too much detail. He reminded everyone that comparisons of union and non-union wages and other outcomes are very difficult to make because of selection biases, noting that data on union finances are available back to World War II, and that company unions are a topic of great interest. Jacoby said that these independent types of unions have existed for a long time and that he had access to a series on one union from 1935 to 1975.

Speaking on behalf of Stanley Engerman and Gavin Wright, as well as himself, Richard Sutch described preliminary plans for the "Slavery and Indentured Servitude" chapter. Sutch noted the recent (post-1970) explosion of interest on this topic has ensured that this will be a salient new chapter. Despite all the new scholarship, there are only a few time series available covering topics such as slave populations, imports of slaves, and slave consumption. Margo suggested that a series on slave prices should be included, as well as a chapter highlighting not only slavery, but also the post-bellum South and some statistical comparisons between blacks and whites, pointing to Card's and Krueger's series on school quality as an exemplar.

Sutch then stepped into the position of presenter once more to introduce the international migration chapter, which he is editing with Barde and Carter. He outlined some of their planned innovations, including efforts to improve the conceptual clarity of terms such as "immigrant" and adding information on return migration and on the flow of "non-immigrants," a category of entrants that has become increasingly important in recent years. Additionally, the editors consider it vital to include information on regulatory and legal changes which have affected immigration flows. Brown mentioned that a series on what language immigrants spoke would be salient to many labor market questions. Carter stated that one way to find evidence of illegal immigration was to check the statistics on the stock of foreign born for comparison with the flows. Gordon asked how the authors intended to make compact tables when they propose to list immigrant flows from over 150 different countries. Fairlie asked whether quota information will be listed by country of origin and noted that, even if economists weren't interested in such information, political scientists, among others, might be.

Price Fishback then presented his chapter on social welfare spending. Fishback began by proposing three spending categories: local, state, and Federal, observing that in the Bicentennial Edition there is no table on social welfare spending prior to 1930. Steve Ziliak has committed to finding information for state and local level spending; also they hope to present some annual data on 19th-century spending. A problem he faces in constructing such series, such as for Medicare and Medicaid, is lack of consistent definition of beneficiaries of these programs over time. Fishback stressed the need for information on differences among states in their social welfare spending and proposed a table to highlight such differences. A problem in doing work in this area involves finding indicators of state program generosity, because both program eligibility and the underlying characteristics of populations vary enormously across states. Margo initiated discussion by urging Fishback to consider work by Hannon and by Lebergott on private charitable donations, but Lindert warned that Lebergott's numbers may not be comparable with others because they indicate statutory rates rather than monies actually collected. Leonard claimed that variation across states in their level of spending could be useful data for policy debates in the future, but that this type of detail might be better put in the CD-ROM. Olmstead argued that information regarding the size of the welfare bureaucracy and changes in its organization might be useful data. Colin Burke (Maryland) pointed to a redundancy in Fishback's proposed series on education since these are slated for inclusion in other chapters. Sutch explained this redundancy as a result of US efforts to bring its definition of "Social Spending" into line with the definition developed by the International Labor Organization.

Lee Craig, editor for the chapter on "Household Income and Expenditures", said his deepest concern in presenting data on the distribution of income across households was to select a scheme that made sense in terms of the issues, but at the same time was accessible to a lay audience. He feared that measures favored by economists had too little intuitive appeal and that they would take too long to explain. Craig also thought that organizing consumer expenditure data by occupation might be a useful way of presenting them and that he could develop such a presentation rather easily from the IPUMS. Comments from the floor began with Brown, who pointed out that her classification of occupations would be sociological in nature, and that by detailing income by source it was possible to tie together welfare spending, labor markets issues, and family structure. Hurd pointed out that non-cash income was absent from the previous tables, but that it was an important source of support for some low-income households. He also pointed out that consumption is usually studied as a life-cycle phenomenon using synthetic cohorts and that average expenditures for all households could be more misleading than revealing. Haines commented upon the occupational stratification scheme, stating that most scholars agreed that the 1950 US Census classification with its 10 categories was quite useful.

Michael Haines chaired the last session, on "Perspectives on Access and Distribution of Electronic Data." Matt Sobek (Minnesota) began with an overview of the Integrated Public Use Microdata Sample (IPUMS) project, which is of great relevance to development of the Millennial Edition because it permits estimation of values of interest to scholars and policy analysts, which are not available in published Census reports. Examples of values that might be of interest include the number of foreign-born workers by age and gender or the labor force experience of different birth cohorts over their life-cycles. Sobek began with a description of the project, which codes Public Use Microdata Samples (PUMS) from many different Federal Censuses. Sobek reported that PUMS from all the Censuses beginning in 1850 are now complete except for 1890, the manuscripts of which were destroyed in a fire; 1920, which should be completed by the summer of 1997; and 1860 and 1870, which should be 20% complete by the end of 1997. Sobek illustrated some possible uses of IPUMS with tables of the structure of occupations over the period 1880 to 1990, occupational structure by nativity and unemployment by major occupational group. Finally, Sobek warned that some numbers estimated using the IPUMS have been found to differ from numbers in the published Censuses. The reasons for these differences are not yet well understood. Sobek suggested that, if one were to fill holes in other series with IPUMS data, some sort of conversion might be necessary.

The final presentation of the conference was by John Haltiwanger, newly-appointed Chief Economist at the United States Bureau of the Census. Haltiwanger related the history of the collaboration between the Millennial Edition Project and the Census Bureau. Severe budget cuts made the Census Bureau decide that it could not develop a new edition of *Historical Statistics* despite its recognition of the value of this reference work as a part of the intellectual infrastructure of the nation. Moreover, because of some obstacles to Census Bureau support of the initiative begun by the scholarly community, the relationship between the Census Bureau and the Millennial Edition Project is not yet resolved.

Notes *(continued from page 2)*

Can winner who lives in a state on an opposite Ocean, it is predicted you might have an abstract worth posting every 20 years. I am worried that winning the Can is a detriment to research, since only 4 of the 13 Can winners have posted abstracts (whoops, make that 5, since I am posting an abstract myself.)

I have a deal to offer all members. To see if anyone reads this, I will give a free sailboat ride this summer in Charlevoix, Michigan, to the first three members who post an abstract and then send me an e-mail. If you cannot make it to Charlevoix, I will buy you a drink at the next meeting we both attend.

Call for Papers

The Cliometric Society will sponsor sessions at the 1999 ASSA meetings in New York, January 3 through 5. Please circulate this announcement to colleagues and students who may wish to submit their work.

Authors interested in presenting papers should send three copies of a two-to-five page proposal to the address below, or submit proposals *via* e-mail or the form in the EH.Net web server at **http://www.eh.net/Clio** At least one author must be a member of The Cliometric Society at the time of proposal submission. Summaries and abstracts of all papers will be published on the EH.Net Economic History Services web site.

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Three copies of paper proposals to The Cliometric Society office	**May 1, 1998**
Authors notified of acceptance of papers	**June 20, 1998**
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