The Newsletter of

The Cliometric Society

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Summary of Papers and Discussion from the 37th Annual Cliometrics Conference

by Livio Di Matteo, Lakehead University, and
Marilyn Gerriets, St. Francis Xavier University

(Toronto) The 37th Cliometrics Conference was held in Toronto, the provincial capital of Ontario, Friday, May 16th to Sunday, May 18th at the University of Toronto Joseph L. Rotman Centre, with local arrangements ably organized by Loren Brandt, Karen Clay and Gillian Hamilton. Participants found themselves in Canada during the Victoria Day weekend which traditionally marks the start of summer activity in Canada, although, unfortunately, this was probably one of the coldest Victoria Day weekends on record. But then, what would a visit to Canada be without a little cold weather? Inside the Rotman Center, the numbing effect of the cold was quickly removed by the fires of intellectual activity and debate.

Timothy Hatton (Essex) opened the conference with a paper examining parallels in the debates over the decline in immigrant "quality" to the US in the late 19th and late 20th centuries. Hatton estimates wage equations for 1909 allowing for nationality effects and applies the estimates to immigrant composition to measure the effect of changing composition on immigrants' earnings. He concludes that immigrant quality measured by earnings did decline by about 5%, but that these effects are only one-fifth the size of those reported in studies of immigrants since World War II. In the debate that followed, Price Fishback (Arizona) thought that a key point had been missed in the paper: in the 19th century, people felt that, if immigrants could not speak English, they were of lower quality; this tendency is not captured in the estimates. George Grantham (McGill) and Emily Mechner (Harvard) both pointed out that the state of the economy when the immigrants arrived was a key factor which might affect their long-term earnings. Ken Sokoloff (UCLA) asked why Hatton had controlled for industry. Hatton replied that the industry dummies were there because of regional differences and compensating differentials; their omission did not affect the other variables very much. Paul Harrison (Brandeis) thought there might be a heteroscedasticity problem and thought it was fairer to compare the native-born assimilated with the non-native-born assimilated. Sam Williamson (Miami) mentioned that there were native-born (*e.g.*, blacks) who were also going through an assimilation process. Hatton responded that he had controlled for heteroscedasticity, and argued that the native-born did not have to assimilate like non-natives and, therefore, do not need a separate variable.

The US service sector was then examined by Louis Johnston (Gustavus Adolphus), who argues that shifts in the demand for services and changes in the composition of the labour supply were causal factors in the growth of the

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What's Inside

Executive Director's Notes

Cliometric Society Trustees Meeting

Trustees met May 17 in Toronto, and discussed the following items of business.

Cliometrics Conferences: The 1998 conference will be held at Washington University in St. Louis, May 8-10, a week earlier than usual; deadlines will also be earlier. Trustees approved continuing the Selection Committee procedure, with the committee composed of current hosts, representatives from two previous conferences, a trustee, and the grant Principal Investigator.

Undergraduate Paper Prize: The Trustees confirmed Selection Committee members Ann Carlos (Colorado-Boulder), Robert Whaples (Wake Forest), and Colleen Callahan (Lehigh). Concerned about the small number of submissions last year, Trustees decided that the award may be discontinued unless there is an increase in the number of nominations.

ASSA: John Wallis will join Mary MacKinnon, former Trustee, as coordinator to select papers for the 1998 sessions. The Society will also sponsor a reception for 'members and friends' on Sunday evening, January 4.

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John Lyons, Managing Editor
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Budget: The 1997 budget for the Society was reviewed. The 1996 calendar year financial report to members appears below.

Income		Expenses	
Dues	8,567	ASSA Meetings	240
University Subsidy	2,000	Membership	1,299
Investment Interest	372	Newsletter	3,226
Other	602	Office	685
Grant Subsidy	1,000	Personnel	7,456
Total	**12,541**	UG Paper Prize	117
		Total	**12,906**
		Difference:	- 365

Membership Report: The 1996 membership year report was presented. There were 412 Society members from 27 countries: Argentina, 1; Australia, 8; Austria, 1; Belgium, 4; Canada, 44; Chile, 1; Denmark, 2; Finland, 2; France, 8; Germany, 6; Greece, 1; Ireland, 2; Israel, 2; Italy, 8; Japan, 6; Korea, 2; Mexico, 1, Netherlands, 2; New Zealand, 1; Norway, 1, People's Republic of China, 1, Russia, 7; Spain, 13; Sweden, 1; Switzerland, 1; United Kingdom, 23; United States, 262. There were 23 student, 311 regular, 66 sustaining, and 12 complimentary memberships. *EEH* member subscriptions totaled 235; European Historical Economic Society dual memberships totaled 220 for 1993-96. Members who had not renewed numbered 52.

Newsletter: John Wallis and his review committee created a questionnaire, included as an insert. We hope for a good return rate.

International Economic History Association: Plans for the Clio E Session were discussed. Please see the Call for Papers on page 17.

World Congress a Great Success

More than 100 Cliometricians gathered in Munich for the Third International Congress, July 10-13. Discussions were lively, the food and beer plentiful, and the weather mild (with an occasional shower). Every session ended with questions remaining in the queue, and Nick Crafts and Jeffrey Williamson presented thought-provoking plenary papers. We enjoyed a wonderful banquet on Saturday night. A full write-up of the Congress, by Doug Puffert and David Greasley, will be published in the October *Newsletter*. If participants have photographs to contribute, please send us copies.

AN INTERVIEW WITH THOMAS S. BERRY

Editors' note: Thomas Senior Berry retired from the University of Richmond in the mid-1970s, but continues his researches in economic history to this day. Our interview was conducted by William J. Hausman, of the College of William and Mary, at Dr. Berry's home in Richmond, Virginia, on May 19, 1997. The text integrates their conversation with written responses to some additional questions. Will Hausman provides the following introduction:

Thomas Senior Berry was born in Holyoke, Massachusetts, on November 21 in the year preceding the Panic of 1907. He was educated at Harvard University, receiving S.B. (1927), A.M. (1932), and Ph.D. (1938) degrees. From 1935 to 1943 he was an instructor at Duke University. From 1943 to 1947 he served in the Atlanta Regional Office of the Office of Price Administration and the Public Housing Administration. After a two-year stint at Millsaps College, Berry returned to the Public Housing Administration, this time in the Richmond office, where he worked until 1953. From 1953 until his formal retirement, he was associated with the University of Richmond, serving as placement director for the School of Business until 1970, and then as a faculty member in University College.

Berry's abiding professional interest has been in the history of prices and national output. His most well-known work, ***Western Prices before 1861: A Study of the Cincinnati Market*** *(1943), was based on his doctoral dissertation. Several publications on life insurance, law and economics, and other topics, followed. Beginning in the 1960s Berry began publishing much of his work under the aegis of the Bostwick Press. These include local and regional studies,* ***Early California: Gold, Prices, Trade*** *(1984), and* ***Richmond Commodity Prices: 1861-1865*** *(1988), and a series of papers with increasingly refined estimates of early gross national product of the USA. His continuing work is on GNP, with his most recent manuscript being a comparison of US and UK national products since 1830.*

Photograph by Erik Craft

Western Prices before 1861 **must be one of the most heavily cited works in American economic history. How did you decide to work on that issue?**

I had taken a course from Edwin F. Gay and written a paper on the jewelry industry in New England which he liked very much, perhaps because I introduced quantities where possible. I knew this industry well because my Dad was in the business and I was his cook and bottle washer all through high school. Gay came to Harvard around 1912 to organize a Graduate School of Business and served as its first Dean. Around 1927 he helped secure a grant to found the National Bureau of Economic Research and was its first co-director with Wesley Mitchell. Then around 1931 he secured a large Rockefeller grant, something like a quarter of a million dollars, to establish an International Scientific Committee on Price History, with William Beveridge as chairman and Arthur H. Cole as administrator. The Committee authorized five studies in ports between Boston and New Orleans, and a number of studies abroad. Beveridge carried annual wheat prices in England back to the 12th century. Earl Hamilton worked on Spain as far back as 1500.

In the fall of 1932 the type of teaching job I had was petering out and the pay wasn't coming on time. I went to Gay and he suggested that I see Cole about a price study. Cole actually gave me two jobs, one to work on a Latin American bibliography, which was completed even though the director ended up in jail, and the other to work on this price business. They already had the ports and wanted something in the interior. So I looked until

I picked out Cincinnati and went to work on it. So between 1932 and 1935 I divided my time between the price study and the Latin American bibliography. The *Review of Economic Statistics* published a summary of the results in 1935 and the International Committee put it out separately, with supplementary price tables. I polished up the work and filed the dissertation in 1937. I continued to work on it and finished it in 1942. At the behest of Abbott Payton Usher, who had taken over the price study when Gay retired, the Harvard economics department decided to publish it as a book. I was pleased that it received several extremely favorable reviews but I don't think Harvard University Press paid much attention to it. Thanks to William N. Parker, the Johnson Reprint Corporation re-issued it around 1960.

Incidentally, the key determinant of the results that I found was that settlement preceded transportation there. When transportation and settlement go together, or transportation is ahead of settlement, which was true for a great deal of the West, you don't get the effect that I saw.

Do you think of your work on San Francisco as a natural extension of your Cincinnati work?

It appeared that hardly anybody had ever sized up the California price situation while I worked on the Ohio Valley, so I kept an eye on it. Cole seemed uninterested; I could never figure why. Anyway, I proceeded with small research grants to collect microfilms of San Francisco price sources, which were rather more plentiful than I expected. Winifred Gregory's Union List of Newspapers expedited the work, mostly at the Library of Congress. It proved possible to tabulate monthly quotations for about 200 commodities, which could be classified in order to make comparison feasible with index numbers for New York and Philadelphia. There was one small price-current for March 1847, four lists for the spring of 1848, and continuous series following July 1849. Eventually these were fashioned into 17 monthly index numbers stretching through 1900. Ethel Hoover, who was then in charge of the CPI at the Bureau of Labor Statistics, had urged me to extend the work to 1900.

One interesting point is the variation in US gold production, annually from 1847 to 1900, which showed a definite association with variations in several US economic time series, particularly the banking series. I was reminded of Keynes' remark in one of his books that it was silly to allow changes in gold production to exert such a strong effect on our economic system.

Have you always been interested in quantitative studies?

Well, here's a funny thing. Cole happened to be my freshman advisor at Harvard in September 1923. I can still see him there in Holyoke House. He asked about my career preference and I told him statistics. He remarked that Walter Gifford, the new president of AT&T, was a statistician. Economic statistics, and psychology, were then just coming over the academic horizon. I took a semester course in 1924 in statistics. There were no texts then, and Professor W. L. Crum fashioned a booklet for us. I saw very little of Cole until nine years later. He, along with Usher and Harold Williamson, served on my dissertation committee.

Harvard in the late '20s and early '30s must have been a very interesting place to study. Which teachers had the greatest influence on you?

Looking back, it seems that Gay and Cole had emphasized quantities in economic history, which fitted very nicely with my own interests, so Gay obviously played a key role in my graduate study. Frank W. Taussig was unquestionably the *primus inter pares* in the Department. A large man physically, quite bald, with the leading text in principles from Macmillan, he assumed the role of judging students worthy of the doctor's degree. We actually started off rather badly. My first exam with Taussig came back with a B+. I had taken an undergraduate theory class with John Williams, and doubts had been raised about value and distribution theory. As usual, I probably had too much to say in class. A year or two later I cornered Taussig and we had a long chat. He urged me to go into statistics and stay away from economic history. We parted very good friends.

Abbott Payton Usher and I enjoyed a rather special relationship. I guess we both took it for granted that we would work together after Gay retired and I left for Duke, where Joseph Spengler had gotten me a job. Nobody ever notified me as to my new major professor. Anyway I sent Usher a paper I had written on the Kanawha salt industry and he liked it. I simply plodded along on the dissertation in Durham, and sent nothing until it was finished. Usher made no comments and never offered to change a word. As a matter of fact nobody else did either. Naturally, I was very happy about that.

Gottfried Haberler probably did me more good intellectually than any other Harvard teacher. He introduced me to the periodical literature, and greatly enlarged my views on economic theory, which had been dominated by British thought rather than Continental. I took two semester courses from him, theory and international trade. The trade course involved a discussion of Bertil Ohlin's book, for which he had galley proofs from the University Press.

Schumpeter arrived too late for me to have a course with him. In my opinion, he should be ranked with Adam Smith and nobody else. No question that every boom, every expansion, is a historic thing, and new thing. Has to be. Right now it's computers. Schumpeter had quite a reputation. He was quite witty, and gave an A to every student regardless of performance. I had this impossible friend and he showed me what Schumpeter had written on his paper: 'Assumptions poor. Reasoning bad. Conclusions impossible. A.' I thoroughly digested Schumpeter's two-volume work on business cycles. He accepted Kondratieff's long wave, which never impressed me. But I have always thought that his historical approach to the business cycle makes a lot of sense.

John Henry Williams was another important influence. He taught money and banking, a field in which I had a deep interest. In his graduate course in money, much of the time was spent on Keynes' *Treatise on Money*. Along with faculty, I met a lot of fine students at Harvard. At the graduate level we had Robert A. Gordon, Alan Sweezy, Mary Jean Bowman, and Albert G. Hart.

You attended the famous Williamstown conference in 1957. What are your recollections of that meeting?

The first thing that happened to me at that conference was that somebody in a discussion quoted my western prices book. This, after 14 years, was the first intimation that anybody had paid attention to the book, and it really turned my head. I saw Kuznets for the first time, and admired the way he handled the program. I had been working on the 20-year cycle seen before 1861 in the west. I called it a "tide", which had an expansion of around 15 years and a contraction lasting four or five years. The variations Kuznets noted were symmetrical – 10 years up and 10 down. Furthermore, he expressed real doubt about whether they amounted to self-generated cycles or were historical phenomena. At that time I had no idea of doing anything at all about GNP.

How did you get interested in the project of estimating early national income?

The history of discoveries and inventions contains quite a number of instances when important innovations occurred as byproducts, things that appeared while the researcher was looking for something else. This happened to me around 1965 when I was studying 20-year business cycles. In constructing a consensus economic pattern (Edwin Frickey's concept), I noticed a practical duplication between a pattern for 1910-56 and the Commerce Department GNP series at current prices. The Pearsonian r was +.99, so I figured I could estimate US GNP back beyond 1909, the earliest date I had. I soon found that Simon Kuznets had used regression in some of his estimates of GNP.

At that time I was working with deviations from trend only, and in the first series of estimates back to 1789 it was necessary to set a hypothetical trend, a second-degree affair. I published these estimates in 1968 as *Bostwick Paper No. 1*. At that time there had been a sharp controversy about the real US income *per capita* between 1800 and 1840. Practically all GNP and national income work then rested on census data. Figures published by Robert F. Martin for the National Industrial Conference Board showed a moderate decline in real income *per capita*. George Taylor and Douglass North appeared to support Martin, whereas Simon Kuznets took exception, and Paul David's conjectures showed an increase of some 24%, which coincided with my 1968 estimate.

I continued to work on the matter from time to time, and have taken into account a refined price deflator and better population estimates. Lately I have been comparing the national accounts of the US and the UK since 1830. It appears that the current price GNPs have been in close agreement except in 1862-79, 1914-16, and 1939-41, but the deflated GNPs fail to show such agreement except in one 25-year period. My US estimates have been criticized on grounds that they represent an insufficient number of time series. This criticism, which should have been answered long ago, led me to a reexamination of consensus patterns with respect to their coverage of time series. Work is centered on percentages of annual data to their ordinates of trend during 1911-60, with emphasis on correlations between GNP and various consensus patterns representing different assortments of time series. It soon came out that the addition of time series to a consensus pattern did not raise the correlation between the pattern and accepted GNP figures. On the contrary, such additions served to disrupt the correlation simply because the later time series were apt to vary quite independently of each other. I think this lends considerable reliability to the estimates for the years between 1789 and 1820. I've written that up, but I'm not sure what I want to do now – maybe put it out as *Bostwick Paper No. 7*.

Thank you very much for talking with me today.

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The 21st Canadian Economic History Conference

by Livio Di Matteo, Lakehead University; J.C. Herb Emery, University of Calgary; Francesco Galassi, Leicester University; Bill Marr, Wilfrid Laurier University; and Cherie Metcalf, University of British Columbia.

(Niagara-on-the-Lake, Ontario) On the weekend of May 4-6, 1997, over 70 participants gathered at historic Niagara-on-the-Lake for the 21st Canadian Economic History Conference. More than 50 papers in 21 concurrent sessions offered a stimulating variety of topics. The sessions were characterized by vibrant and mutually beneficial exchanges. The conference was held at the handsome Victorian-era Prince of Wales Hotel with the local arrangements and program organized by Kris Inwood (Guelph), Tony Ward (Brock), Karen Clay (Toronto), Bill Marr and Cathy Wilson (Guelph).

At the opening session Sunday afternoon, "The Growth of Settler Economies," Morris Altman (Saskatchewan) presented new estimates of hours worked and real income in Canada from the 1880s to 1930. Altman exploits data from *The Labour Gazette* and *The Canada Year Book* to construct an hours of work series for manufacturing and construction workers. Hours worked per week fell about 15% from 1900 to the mid-1920s, with most of the decline occurring after 1918. By the 1920s, this decrease was accompanied by a significant increase in weekly real income. Tony Ward wondered why hours of work did not rise during World War I. Mary MacKinnon (McGill) thought the data from trade union statements of typical work hours per week may not have risen in World War I, but hours of work actually rose. Chris Lloyd (New England) then examined settler capitalism and Australia's industrialization experience in comparison with regions whose experiences were similar to Australia's. He develops a concept of the settler capitalist route to an industrial structure that takes account of liberal-protectionist, labourist, and imperially-dependent modernizing socio-political forces and institutions in Australia's economic development. Richard Pomfret (Adelaide) commented that the role of the Australian government seems to have been socially beneficial, but economically costly. Leonard Dudley (Montréal) asked about the role of wars in promoting Australian manufacturing through greater effective rates of protection. Lloyd felt that both world wars were crucial for Australia's achievement of industrial maturity. Finally, Richard Pomfret examined the links between investment, domestic savings and economic growth in Canada and other settler economies. Pomfret uses Feldstein-Horioka tests to determine the degrees to which Canada, Australia and Argentina were integrated with world capital markets, finding that the relative growth experiences before 1930 can be explained by investment rates and the productivity of capital, unconstrained by the availability of domestic savings. Di Matteo asked how much of observed investment was due to government. Frank Lewis (Queen's) commented that most investment in Canada over this period was in prairie railways, indicating large capital flows into narrow sectors. While railways can borrow in world capital markets, individual farmers cannot, so high domestic savings might be necessary to stimulate investment in agriculture.

"Economic Transitions During the 1930s" began with Sean Rogers (McGill) arguing that Canada in the 1940s witnessed significant industrial structural change that has been ignored. He estimates translog cost functions for 10 industrial sectors for the period 1927 to 1943 and finds increasing returns to scale that were not exhausted by the 1940s. World War II fundamentally changed Canada's industrial structure by encouraging some sectors to develop rapidly. Altman noted potential problems estimating economies of scale when the effects of technical change are omitted. Lloyd stated that Rogers should not characterize Australia as a "middle income country or worse," since it has had a relatively high *per capita* income from the 19th century. Stephen Salmon (National Archives) pointed out that new products (*e.g.*, synthetic rubber) appeared in the 1940s and may have had an impact on industrial structure. Almos Tassonyi (Toronto) delivered the next paper on shared tax bases and local public sector expenditure decisions, which examines whether school mill rates crowded out municipalities from the property tax base in the 1980s and 1930s. The hypothesis that crowding out took place is supported. Altman noted that the direction of causation between the school boards and the municipalities could run in either direction. Salmon observed that municipalities could impose income taxes in the 1930s, and should be considered in the crowding-out hypothesis. Lastly, Tim Rooth (Portsmouth) discussed external adjustment by Canada and Australia in the British market during the 1930s. He argues that the British market played a major role in the balance of payments adjustment for Canada and Australia by providing an outlet for exports, thereby reducing the depression's effect. Lloyd remarked that debt servicing and access to the British market for primary sector exports were linked, especially for Australia during the 1930s, while Rogers noted that trade in mineral products became important for Canada in the 1930s. Salmon thought that the Ottawa Preferential Agreements might have affected the service sector in Canada and Australia.

The first paper in the session on "Labour and Credit in the 18th Century" was on the Anglo-French rivalry in the Acadian fishing grounds between 1710 and 1763. Geoffrey Plank (Cincinnati) examines the various interests in the British Empire's expansion during the first half of the 18th century. He argues that, while fish supplies were considered unlimited at the time, market opportunities were not. Britain's attempts to monopolize the North Atlantic fishery were related to desire for a larger market share. The fishermen preferred peace in the fishing areas. Galassi suggested that an additional argument for the British fishery monopoly was the desire to control the trade routes with Caribbean colonies. Ken Norrie (Alberta) questioned the focus on Acadia as the contestable fishery; the Newfoundland fishery represented a much bigger prize. Second, David Richardson (Hull) and Paul Lovejoy (York) examined credit, transactions costs, and slaving in pre-colonial West Africa. They describe the extensive use of credit from ship masters to slave dealers in the Old Calabar slave trade; they also examine the extent to which credit markets were governed by social and institutional relationships. While social relationships were important, formal institutions were vital in facilitating credit availability. Clay suggested that the pawning arrangement in the Old Calabar, where people were used as collateral, seemed costly relative to using commodities like gold, since gold was used at other African ports. Norrie asked about attempts to introduce more efficient institutions in Calabar. Lovejoy responded that there were many efforts to take over, control, and change the institutions. Galassi suggested that, perhaps because of moral hazard and policing problems, a pawning arrangement was the most efficient arrangement at particular ports.

"Productivity Analysis in an Historical Setting" opened with John Treble (Wales-Bangor) on productivity in British coal mining. In late 1891, the piece rates miners received were revised in the absence of a cavil (a random quarterly reassignment to different work locations in the mine), producing microdata which allow estimation of the miners' elasticity of effort with respect to wage rates. Treble finds workers' effort did increase in response to higher wages, contradicting patterns in the data set overall. Animated discussion revolved around exploiting the data to investigate the behaviour of productivity over the full sample. Mary MacKinnon, Tim Hatton (Essex), and Lou Cain (Loyola-Northwestern) suggested variants on the idea that following workers across re-assignments might provide a way to control for the effects of site quality on productivity. Treble argued that this was not possible since the set of seams worked across changes in the sliding scale was essentially empty. Lewis raised the point that efficiency and equity considerations might have been a factor in the cavil system. Ian Keay (UBC) then discussed the productivity of 20th century Canadian and American firms, using firm level data and index number techniques to compare growth rates of total factor productivity (TFP). His results for the steel, cotton, silk, cement, and sugar industries suggest that Canadian and American firms' TFP measures are highly correlated within industries. Contrary to the general view, the results suggest Canadian firms were not less efficient. Questions focused on the sample selection process, and its effect on the results. Inwood wondered whether firms chosen survived the whole period, while Doug Owram (Alberta) asked if the exit of low productivity firms through bankruptcy increased measured productivity. Keay responded that the panel was unbalanced, but all firms survived at least 20 years and most firms disappeared *via* merger.

In the opening paper of "Technological Change in French Wine Making," Étienne Montaigne (ENSA de Mon) looked at the transformation of viticulture in the Languedoc over two centuries and demonstrated how viticulture was changed by market evolution, with a shift in consumption towards high quality wines, and the biological crisis of phylloxera in the 19th century. With the move to better quality wines, viticulture became more capital intensive. Montaigne also highlights the role of regulation to stabilize producer incomes and to structure economic development. Galassi noted that, in Italy, there were remarkable productivity increases in the post-phylloxera period as more efficient pruning and planting systems were adopted. Montaigne responded that mechanization improved the quality of grapes and vines as well as improving productivity in the Languedoc. In his paper on winegrowers and wine factories in post-phylloxera France, Harvey Smith (Northern Illinois) attempts to determine why phylloxera did not eliminate small producers, since the flooding of vineyards and the use of chemical insecticides were very expensive solutions. Smith argues that these solutions were risky; grafting phylloxera-resistant US vines onto French stock was a cheap, labour-intensive, and effective solution which enabled smaller producers to survive. In the ensuing discussion, Pierre-Cyrille Hautcoeur (Rutgers-DELTA) was surprised that both papers in the session emphasized non-price factors. Montaigne responded that producers' incomes were more important than relative prices; those affected by phylloxera later were able to benefit from the price increases.

"The Economy of Pre-Confederation Canada" began with Beatrice Craig (Ottawa) speaking on French and English agriculture in Montréal's hinterland from 1800 to 1850. Using farm-level data for the Lac Des Deux Montagnes district for 1831-1851, she finds few differences between the two ethnic groups; soil quality and age of settlements are the most important determinants of any differences. Altman and Robert MacKinnon (Cariboo) both noted that the results may be due to proximity of these farms to the Montréal market; ethnic origin might be important elsewhere. Lewis suggested that the indices be combined into a TFP measure. Wilson remarked that a farm's surplus value could also be calculated, allowing comparisons with other studies. Next, Gillian Hamilton (Toronto) discussed changes in apprenticeship patterns in Montréal between 1791 and 1842. The decline in apprenticeship contracts over the period is explained in terms of a reduction in the demand for apprentices and of supply shocks. The nature of apprenticeship (and the contracts) changed during this time period, thereby altering the relationship between masters and apprentices. Questions from Altman, Owram, Doug McCalla (Trent) and others centered on differences in contractual arrangements by ethnic groups, the need to look at the production process in the trades and its changes over time, and on changing market conditions for output. Frank Lewis then presented a paper on migration with imperfect capital, focusing on settlement and migration to Upper Canada from 1826 to 1851. The parameters influencing the decision to migrate, settle, and clear land were the discount rate, the rate of time preference, risk aversion, life expectancy, initial capital costs, and supplementary income (*e.g.*, timber sales associated with land clearing). Hatton noted that migrants often move more than once, and that a multi-stage migration analysis seems appropriate. Owram remarked that children of first generation immigrants may act differently from their parents because of bequests and other transfers. Peter Baskerville (Victoria) said that perhaps Lewis's simulations should control for farm production. Tassonyi noted that there may have been other sources of work off the farm which would enter the calculation about when to settle. In the final paper Catharine Wilson examined farm rentals in 19th-century Ontario. Tenancy, she argues, was a family planning strategy that eased the life course transitions for children leaving home and for parents retiring; tenancy was a way to keep wealth within the family and to transfer it from one generation to another. Tassonyi inquired about differences of renting among ethnic groups and about the many types of rental contracts that existed.

In the first paper of the session on "Financial Markets and Institutions," Kieran Furlong (Toronto) argued that specific institutional differences related to management structures and reserve banking provide a convincing explanation of the interest rate spread between the Montréal, London and New York money markets in the late 19th century. He observes spreads smaller than would be justified given exchange risks. Rates on call money and overnight loans were extremely volatile, but this was usually the result of contingent factors such as liquidity positions of particular institutions, with Montréal usually being the least liquid. Discussion focused on issues of possible misspecification of the gold points, control of reserves, and on the possible use of monthly rather than daily data to track arbitrage. Pierre-Cyrille Hautcoeur then presented a paper on the financing of French firms on the Paris Stock Exchange from 1890 to 1936. He points out that few firms were publicly quoted, most issues being subscribed by a small number of individuals or banks, although, in time, there was an increase in the number of public issues. He argues that asymmetrical agency costs on different issues in an unregulated market affected the willingness of investors to subscribe. Discussion raised the problem of the availability of alternative assets and of the relationship with London's equity markets. Galassi argued that informational asymmetries discouraged formal lenders from being active in the poorer segments of the markets, leaving space for alternative financing arrangements, such as co-ops. Finally, Roberto Di Quirico (European University Institute) discussed the foreign activities of Italy's major banks from 1900 into the 1930s. He finds that foreign expansion, although encouraged by the Italian government as a means of establishing commercial and political influence abroad, was limited by the banks' small domestic capital base. Italian banks opened offices in areas with weak financial structures, such as the Balkans and the Ottoman Empire, and their few ventures outside these areas were confined to places of large Italian immigration (*e.g.*, certain North American cities). The activities of these banks were mostly trade-sustaining, and seldom involved direct financing of industrial enterprises outside Italy.

"Monetary Regulation in North America" began with Pierre Siklos (Wilfrid Laurier). He examines the importance of central bank CEOs in Canada and the US, the institutions' statutory structures, the role of government policy in their evolution, and the banks' influence. Despite significant structural and historical differences, Canada and the US share similar macroeconomic performance. The econometric evidence fails to support the hypothesis that personalities or politics matter generally, although political factors do seem to have been important in times of crisis. In the discussion, it was suggested that the macro-similarities between Canada and the US could be the result of US domination of the smaller Canadian economy, and that comparison between the US and other countries might be interesting. Cain suggested that the greater similarity between the central banks after 1951 might allow more consistent comparisons and easier identification of the influence of personality. Angela Redish (UBC) continued the session with her paper, written with Michael Bordo (Rutgers), on the legacy of French and English fiscal and monetary institutions in Canada. Three main periods are considered: French (1713-63), British (1763-1867), and early post-colonial (1867-1913). Very few of the fiscal or monetary institutions from the era of New France survived (*e.g.*, tax-farming, fiat currency issue), while the British influence shows considerable persistence. With the exception of debt-financed infrastructure, the fiscal principles reflect British orthodoxy. The monetary institutions of Britain, especially branch banking based on the real bills doctrine, and the gold standard, also left a lasting legacy. The debate suggested that the "British" influence was more properly Scottish!, and that, when comparing Canada's record with the former South American colonies, the timing of independence might not be a good guide to maturity. Comparisons with the US brought up the role of war. The development of US fiscal and monetary institutions diverged sharply from the British model after 1776, while continuity in Canada may reflect the absence of a war of independence. Canada's "chronic dependency" on British transfers, and the absence of rents meant that Britain was happy to see us go!

"Black Markets during and after World War Two" opened with Lynne Taylor (Waterloo) on occupied Northern France. She argues that the black market must be set within the Germans' goals, including such aims as controlling inflation. Black market activity was significant because it challenged German control and the state's authority (although it may not constitute resistance), and was a crime, although evasion was substantial. The market's operation provides insights into the distribution of power in that part of France. Craig noted that farmers raised food for their own unregulated use. Barter was extensive, and smuggling from Belgium was a part of these markets. Benoit-Mario Papillon (Québec à Trois-Rivières) remarked that a black market functions to reallocate goods towards peoples' preferences. Lloyd wondered if the black market had consequences for longer term economic activity and administrative structures of northern France. Ina Zweiniger-Bargielowska (Wales) continued the examination of black markets with a study of Britain between 1939 and 1950. Using records from the Public Record Office, she presents case studies of food, cloth and clothing coupons, toilet preparations, petrol and petrol coupons. Mary MacKinnon noted that it would be much easier to control trade in tea than in eggs, and wondered why there was a black market in cosmetics. Treble remarked that changes in the rationing scheme, during the war or after, might have affected the number of violations reported and, thus, the data. Joy Parr (Simon Fraser) pointed out the differences after 1946 compared to the actual war years and asked about the different feeling this might have caused among the British populace.

The "Political Economy of Regulation" started with Ruth Dupré (HEC, Montréal) and her paper on the fight to ban cigarette smoking in Canada at the turn of the 20th century. Over the years 1903 to 1914 there were four attempts to prohibit cigarettes entirely, and two attempts to prohibit minors from smoking. Dupré examines the determinants of voting behaviour in the 1903 House of Commons vote on cigarette prohibition and finds that differences across cultural lines are the most striking results – Protestants favoring prohibition; Francophones opposing. Treble inquired into the rationale for banning cigarettes. Dupré responded that the main concerns over

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The Microeconomic Analysis of the Household and the Labour Market, 1880-1939

by Susannah Morris, Nuffield College, University of Oxford, and Mary MacKinnon, McGill University

Interactions between individuals, households and the labour market were examined at a colloquium held at the Fondation des Treilles in Provence, April 23-29, 1997. Paul Johnson (LSE) and Tim Guinnane (Yale) organised this pre-conference for a "B" session to be held at the Twelfth International Economic History Congress in Seville, 1998. The 12 papers share the approach of using microdata sets to address questions which cannot be answered adequately using aggregate data. These questions fall within three broad areas of inquiry: income levels and the distribution of resources within and between households, links between reproductive behaviour and household circumstances, and employment in the labour market as opposed to the internal household economy.

Field trip to Tourtour. (L. to r.) Front: Jenny Wood, Enriqueta Camps Back: Theo Englen, Tim Hatton, Alan Green, Ann Green, Paul Klep

Sara Horrell (Cambridge) and Debbie Oxley (New South Wales) use British household budgets (taken from the US Bureau of Labor survey of 1890/1) to investigate the distribution of resources and the adequacy of male earnings to support family dependents. Overall, husbands earned 75% of household income, but this percentage varied according to the industry in which the head of household was employed and by household characteristics such as the number and ages of children. In many cases men's earnings were inadequate as a sole source of family income and would have placed households below contemporary poverty lines. Horrell and Oxley present a picture of dynamic adaptation to circumstances within the household, with income from lodgers, female earnings and in particular children's employment providing important and varying additional sources of income according to need. In industries where there were few opportunities for local employment, an alternative strategy was for older children to leave home. They conclude that, far from being a rational and utility-maximizing choice brought about by higher earnings for men, reliance upon a sole male earner often resulted from a lack of job opportunities for other household members, imposing a welfare cost on the remainder of the household.

The interface between male worker and household was explored further in a paper by Valerie Burton (Memorial University of Newfoundland). Using data taken from the Board of Trade's crew agreements for merchant seafarers, coupled with nominal linkage to household census enumerations, Burton examines the pattern of employment of merchant seafarers in late 19th-century English ports, their on-shore household circumstances, and their ability to contribute resources to these households. Burton found that the majority of seafarers were married household heads, whilst a sizable minority were sons in the households in which they were enumerated. These men did not provide the sole source of household income, in part because they were at sea for long periods and could not send wages home.

Acting as discussant for both these papers, Peter Wardley (University of the West of England) suggested Burton should gather further information about the strategies of seafaring households from records of other local institutions such as voluntary societies and poor law authorities to see how and when members of seafaring households sought extra-familial help. In his discussion of Horrell's and Oxley's paper, Wardley mentioned the dangers of inferring region from industry in the Bureau of Labor survey, since workers in different industries did not necessarily come from geographically distinct localities with different labour market conditions.

Discussions of how data had been collected and should be interpreted again came to the fore with the papers by Tim Hatton and Roy Bailey (both of Essex) and Dudley Baines and Paul Johnson (both of LSE). Both papers use the newly computerised interwar "New Survey of London Life and Labour". Much was made of the strengths of the source relative to several comparators: as a poverty survey the NSLLL includes those with zero earnings, unlike earnings surveys; it includes income and expenditure data, unlike the English Census; and it is a much larger survey, conducted within a more careful sampling frame than other poverty surveys.

Hatton and Bailey use evidence on the living standards of 28,000 metropolitan households to compare levels of poverty determined according to different poverty lines and to consider the effects of the interwar social security system in relieving poverty. They also compare interwar outcomes to the levels of poverty that would have prevailed had the post-Beveridge social security system existed by 1930. They demonstrate that the interwar social security system played a substantially greater role in alleviating poverty than previously thought, and that its impact was greatest for older households.

Baines and Johnson examine whether the withdrawal of older workers from the labour force was the result of voluntary retirement or enforced consignment to "the industrial scrap-heap". They found that whilst employed male household heads aged over 60 were producing 58% of household income, when non-earning heads over 60 are included the share falls to 39% and for all older males to 36%. They conclude that consideration solely of household heads overestimates the income of older men and hence their ability to finance retirement. Those older men with reasonable incomes who could have chosen to retire were those who remained employed, thereby demonstrating little evidence to substantiate the hypothesis of voluntary retirement. Bill Sundstrom (Santa Clara) questioned whether Baines and Johnson could identify retirement in terms of permanent withdrawal from the labour force as opposed to temporary involuntary unemployment.

The second major area of enquiry concerned fertility and the household. Tim Guinnane and John C. Brown (Clark) use district and individual level data to examine the demographic, social and economic correlates of the fertility transition in Bavaria between 1850 and 1914. By using more social and economic data, and using it in a less aggregated form than the Princeton European Fertility Project, Guinnane and Brown challenge the previously accepted timing and causes of the fertility transition. They find no evidence to support an innovation-diffusion interpretation of the fertility transition but rather point to the importance of urbanization and the structure of the rural economy in influencing changes in fertility. Being Roman Catholic, belonging to a lower occupational class or being born in a rural area, even if followed by migration to an urban area, were all found to influence fertility positively.

Unlike Guinnane and Brown, Theo Engelen and Paul Klep (both of Nijmegen) begin with the premise of an overtly economic explanation of fertility transition. Their paper examines fertility in various agricultural communities in the Netherlands using fertility decline as a direct proxy for the declining economic utility of children. They argue that it was not simply economic circumstances themselves which influenced fertility but the structure of local social and economic conditions, and the extent to which these enabled parents to control their children and extract economic benefit from them.

Enriqueta Camps (Pompeu Fabra), discussant, challenged Engelen and Klep's use of changes in fertility as a measure of changes in the economic utility of children. She argued that their model implies, implausibly, that parents' control of household labor resources was based on ability to make long-run predictions about their children's future economic circumstances. Sara Horrell suggested that the authors should analyse the actual costs and benefits of children, alternative labour sources in the household such as servants, and the nature of local labour contracts, before they could conclude that the economic utility of children declined.

Methodological considerations about the use of micro data were the substantive topics of two papers. In a paper presented by Jenny Wood (Hull), arising from joint work

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Report on the All-UC Conference

by Daniel Siegel, University of California-Santa Barbara

(Santa Barbara, California) The All-UC Group in Economic History convened April 11-13 at the Interdisciplinary Humanities Center, UC-Santa Barbara, for its annual spring conference. John Majewski (UC-Santa Barbara), Kenneth Mouré (UC-Santa Barbara), and Roger Ransom (UC-Riverside) organized the program around the theme "Economic Transitions Between Peace and War, War and Peace." Among the participants were some 50 historians, economists, and political scientists representing 20 institutions in North America and Europe.

The conference opened with a Friday afternoon session looking at transitions from war in Africa and Asia. Jonathan Haughton (Wellesley) presented the first paper, an analysis of the reconstruction of war-torn economies in those regions. What policies can return devastated areas to the path of sustainable recovery? Haughton argued that post-war relief efforts should go beyond humanitarian aid and reconstruction of physical infrastructure to encompass institutional reconstruction as well. Macroeconomic stability must be achieved as quickly as possible through fiscal restraint and tight credit. At the same time, the nation's currency should be allowed to find its own level in international exchange; trade should be liberalized; and the government's payment system should be restored. Haughton's paper stressed that such measures were inextricably tied to recovery; peace often depended on the restoration of economic stability.

Kenneth Sokoloff (UCLA) took issue with Haughton's conclusions, noting that most of his cases had been, and continue to be, "economic basket cases" experiencing no real growth. Further, there was little likelihood new governments would implement pro-growth policies. Specifically, Sokoloff doubted the ability of war-torn nations to provide certain public goods, chief among them security of property rights and security from aggression. Alan Olmstead (UC-Davis) suggested that new governments should support vigorous land reform and privatization to broaden their bases of support. Eugene White (Rutgers) stressed the need to examine factors excluded from Haughton's analysis: the actual exchange rate, fiscal policies, physical infrastructure, and human capital.

The second paper presented examines China's Guangdong province from the end of the Second World War to the establishment of the People's Republic. Jae-Dong Han (Western Ontario) and Emily Hill (Stanford), looking at food supplies, industrial production, and finance, find that South China enjoyed a substantial economic recovery during this period. Their findings run counter to the generally accepted view that a severe economic crisis, marked by hyperinflation, precipitated the fall of Nationalist China. The authors conclude that the province's current boom may owe more to the recovery of 1945-1949 than to post-Mao economic reform.

Majewski served as proxy for discussant Ken Pomeranz (UC-Irvine), whose comments drew attention to three strengths in the Han-Hill paper: its demonstration of the economic vitality of Guangdong, the rapidity of the province's recovery during this period, and its insightful interpretation of rising grain imports as a sign of prosperity rather than crisis. However, Pomeranz warned that the authors tend to caricature the arguments they claim to revise. Moreover, he questioned the validity of extrapolating from Guangdong's experience: its prosperity and distance from the civil war seemed to make it an exception to, rather than a contradiction of, the generally accepted view. Finally, Pomeranz suggested that the authors look more closely at events in Guangdong under Mao and pay closer attention to factors that had always made the province unique.

Discussion centered on identifying and evaluating the economic policies of the Nationalist government in the post-war years. Peter Lindert (UC-Davis) doubted that it had played a significant role in fostering whatever recovery took place, given its "kleptocratic" character and inability to control its own personnel. Rebecca Menes (UCLA) countered that recovery and kleptocracy are not necessarily mutually exclusive.

Saturday morning's session continued the theme of post-war economic transition with Roger Ransom's reexamination of the Beard-Hacker thesis – that the American Civil War allowed Northern capitalists to create the framework for an industrial society. Ransom asserts that the cliometricians who rejected this view employed the wrong counterfactual: to posit that the Civil War had never occurred was not plausible. He argues that positing a victory by the South tests the thesis more directly and involves fewer assumptions. Ransom's analysis indicates that a "capitalist revolution . . . was well underway in the United States . . . [by] 1860 [but it] might have been considerably curtailed had the South won the war"; that is, there was a "second American Revolution."

Discussant Frank Lewis (Queen's) pointed out that it was unclear why postulating a Southern victory was any less problematic than positing no war at all. He suggested that the counterfactual needs merely to be "reasonable," not "plausible," and contended that Ransom's analysis mixes the direct costs of war with other effects, such as increased trade barriers, a higher cost of labor, and a higher cost of government. Taking this into account, it is less clear that a Southern victory *per se* would have curtailed growth.

Participants saw additional reasons why a Southern victory would have led to an economic downturn, implying that Ransom's pessimistic scenario was not pessimistic enough. Elliot Brownlee (UC-Santa Barbara) and Lindert noted that the Confederate States would have had a hard time dealing with the war debt, given their limited ability to raise tax revenues. Menes evoked the specter of a militarized North American economy. Building on this, Majewski suggested that a hostile North could have served as a haven for runaways, thus raising the cost of enforcing slavery and eroding support for it among non-slaveholding southern whites. Martha Olney (UC-Berkeley) saw the same outcome arising from increased resistance among the slaves who remained in the South. Ransom responded that winning the Civil War had strengthened the Federal government; there was no reason to believe victory would not have strengthened the Confederate government as well.

Next, Laura Lee Downs (Michigan/EHESS) presented a paper examining women's employment in French and British metal industries during and after the First World War. She focuses on how employers came to see discrimination against women as economically rational. During the war, public discourse justified the entry of women into positions previously held by men by citing women's "innate" abilities – the nimbleness of their fingers, for example. With the Armistice came a reassertion of men's claims to these positions and a static conception of femininity, in disregard of the wartime claims. Downs concludes that pre-existing structures of gender had shaped perceptions of what was rational.

Elinor Accampo (USC) commended Downs for demonstrating an intersection of capitalism, patriarchy, and gender by showing how ideas of social difference became integral aspects of economic rationality. This, Accampo argued, raises the question of whether economic growth can ever occur without discrimination. Accampo then urged the author to bring more of what was happening outside the factory into her account, pointing to the pro-natalist movement active in France at the time.

Several participants suggested additional factors that might have shaped decision-making. Menes raised the possibility that employers seized upon gender as one maneuver in a wider effort to divide labor in the interests of mass production. Mouré asked to what degree male-female wage differentials explain the interests of parties in the gendered discourse. White pointed out that employers might have used women to weaken union monopolies on labor. Lastly, Scott Gartner (UC-Davis) suggested that "total mobilization" was a straw man, since no society could bring 100% of its resources into play. Naomi Lamoreaux (UCLA), Olney, and Menes concluded the discussion with questions pertaining to the gendering of skill and the manufacture of new products.

John Douglass (UC-Santa Barbara) delivered the final paper on post-war transitions, an examination of higher education in California following the Second World War. Douglass argues that the state's plans for education had been part of a vision of California's postwar economy shared by Governor Earl Warren and other policy makers in Sacramento. This vision, in turn, had been shaped largely by California's wartime expansion. Thus, the war years "set the stage for an active state government intent on shaping the transition to a peacetime economy."

Gerald Nash (New Mexico) described this paper as "a real contribution" because it begins a detailed analysis of American demobilization. Nash noted that the National Archives had nearly 1,000 unexamined boxes on the topic and urged Douglass to give more attention to four concerns: the motivations of Governor Warren and other state officials, the national context in which the Warren administration operated (particularly the role of federal spending), the broader framework of

Warren's policies, and California's history of state government activism.

Lewis wondered to what extent the increase in spending on higher education was due to population growth. Mouré pursued this point by asking how exceptional California was in this respect, and whether population growth, rather than state spending, was the distinctive factor. Douglass indicated that data had yet to be assembled to show the state's college enrollment per 1,000 members of the population, whereupon Brownlee suggested that outside funding agencies might be interested in the development of a model for estimating participation rates in higher education.

The afternoon's session looked at economic mobilization and the Second World War. "Preparing for War", by Kerry Ellen Pannell (Stanford), is an analysis of Soviet central planning in the 1930s. According to her model, Stalin's decision to implement branch planning, to divide responsibility for the economy along industrial lines, was rational if either of two conditions had held: one, managers faced more uncertainty within their industry than within their region, and two, the leadership was committed to uneven development (heavy industry over consumer goods). Pannell presents evidence demonstrating that both conditions were met in the 1930s. In addition, she contends that inter-enterprise contests, a form of "socialist competition," gave managers the incentive to fulfill their portions of the plan.

Discussant Gregory Grossman (UC-Berkeley) doubted "the effective and beneficent nature of 'socialist competition'." Conceding that the stratagem had had a high rhetorical profile, he nonetheless insisted that coercion had been more significant in securing managerial compliance. Moreover, factory party secretaries oversaw the competition, not managers, who generally resented the contests for disrupting the normal rhythm of production. With respect to Pannell's larger point, Grossman agreed that the stress on heavy industry was key to branch planning – so much so, he argued, that no additional explanation is necessary. Finally, Grossman called attention to the title of the paper, reminding the conferees that Stalin was preparing for war, yet he engaged in a variety of acts – notably the purges – that undermined his own efforts.

Menes suggested an alternative explanation for Stalin's choice of branch planning: it conformed to the desires of a paranoid dictator who wished to minimize potential rivalry while entrenching himself as a central clearing house for information. Hill, responding to Pannell, Grossman, and Menes, advised that evolution and accident be given priority over choice: for example, at one point Chinese central planners partitioned their plan by territory simply because they could not otherwise have handled the enormous scale of the undertaking.

Mark Harrison (Warwick) presented a comparison of the wartime mobilization of industry in Germany and the Soviet Union. Harrison characterizes German production as having grown in a "building wave" over the course of the war, following a World War I pattern. In contrast, Soviet production achieved a "vertical take-off," approaching its war-time high early on and remaining at that plateau through 1945, similar to the US and Britain. Harrison argues the disparity was due to differences in wartime economic management. Whereas the Germans produced a wide variety of high quality, innovative weapons in relatively limited quantities, the Soviets focused on mass production of a narrow range of rough-and-ready items.

David Holloway (Stanford) recommended that Harrison consider certain pre-war factors to supplement his explanation. Versailles Treaty restrictions might have fostered a preference for quality over quantity in Germany, while Tukachevsky's military doctrine might have had the opposite effect in the Soviet Union. Holloway also suggested that the Soviet planned economy had a number of inherent incentives for mass production: supply uncertainties favored ministerial autarky and a reliance on standardized parts. He raised the possibility that Germany's early victories and expectation of quick success in the USSR contributed to its slower start in producing at high volume.

Sokoloff offered an explanation for the antagonists' different production strategies: countries with large populations do not have to wring as much out of each unit of capacity as less populous nations. Harold James (Princeton) reminded the conferees of a critical supply constraint: Germany was virtually isolated from the world economy. White asked whether there are any data on Soviet armament failures, and how the two nations' incentives for production compared. Harrison replied that failure data exist, but he had not yet collected them. He did know, however, that more than half of Soviet aircraft losses occurred outside of combat. With regard to incentives, German industry operated on a cost-plus basis, which fostered production of more expensive weapons, while the Soviets relied on coercion.

After a break, Hugh Rockoff (Rutgers) presented an evaluation of American price and production controls during the Second World War. Rockoff argues against the prevalent view that such government interventions were crucial to mobilization. Roosevelt's "Hold the line" order of 1943 may have succeeded in keeping prices down, but it played only a marginal role in conversion to war production. Instead, the conversion was achieved in a market-driven "gold rush" from 1941 to 1943. Similarly, the Controlled Materials Plan came into effect after the supply of the metals it regulated had reached its wartime peak. In sum, "the market" was responsible for the success of American mobilization.

Richard Sutch (UC-Berkeley), while finding much of the paper well-documented and persuasive, questioned the aptness of the "gold rush" analogy. The retraining and relocation of workers, particularly minority workers, was sometimes the result of coercion rather than an expression of the workers' desire for personal gain. Moreover, unemployment in the 1930s certainly contributed to wartime labor mobility. War production took place on such a vast scale that it dwarfed the power of a gold rush to draw labor. Finally, Sutch proposed that Rockoff consider why policymakers believed a command economy was necessary. Rather than facilitating mobilization, controls were intended to foster a sense of national purpose, provide equity, control inflation, and prevent the chaos characteristic of a gold rush.

Grossman agreed that controls played an important role, asserting their significance went beyond questions of morale. Without controls, the only way to guarantee the flow of resources to the military sector would have been to outbid the civilian sector, thereby opening the door to rampant inflation. Olmstead reminded participants that deferment of military service made the real wages of war workers much higher than their salaries would indicate, a circumstance which might have put a damper on inflation. This prompted Ransom to remind the conferees that the largest shift of labor during the war, conscription of 12 million men into the armed forces, does not conform to a gold rush model of mobilization.

Paul Rhode (North Carolina) presented Saturday's last paper, an analysis of World War II defense spending in California. Employing statistical methods other scholars have applied to New Deal spending, Rhode finds that political favoritism was not a significant factor in the disproportionate allocation of government contracts to California. Instead, the state's labor pool and pre-existing manufacturing capacity were the main determinants. Before the war, California had not only been a center of aircraft production, but also had shown itself capable of drawing large numbers of migrants from the midwest. These factors gave the state a competitive advantage and contributed to what contemporary observers described as the Second California Gold Rush.

Brownlee observed that Rhode's paper advanced a discussion that had largely been conducted through generalizations, urging Rhode to extend the analysis in two ways. First, by using statistics from the 1930s, he could assess the degree to which political favoritism in the decade before the war explains the pre-existing capacity that gave California competitive advantages in obtaining wartime contracts. Second, Rhode could "bring us inside the state" by revealing the actual decision-making process. Addressing Rhode's conclusion, Brownlee questioned whether personal relationships could have had so little impact on the distribution of contracts, given the connections businessmen like Henry J. Kaiser had cultivated with the Roosevelt administration.

In reply to Brownlee, Rhode conceded that many people had special relationships with government officials (acknowledging Kaiser was a special case), but he emphasized that his regressions show no significant correlation between Congressional chairmanships and the allocation of contracts. Sokoloff raised the possibility that favoritism had come into play at a level Rhode's statistics did not test: the selection of specific sites within a given state that would receive contracts. Olney then asked whether the government had put contracts out for bids. Rhode said that it had done so before June 1940, but that after German advances in Western Europe, Washington switched to cost-plus contracting.

Sunday's presentations examined relationships between capital markets and war. First was a paper by Philip T. Hoffman (Caltech), Gilles Postel-Vinay (EHESS/INRA), and Jean-Laurent Rosenthal (UCLA) that examines the Paris credit market in the aftermath of Louis XIV's military adventures. The authors focus on the Law Affair, during which the crown experimented with paper money and created a state bank in an attempt to pay its war debts. Despite resulting hyperinflation, the Affair paradoxically prepared the way for a vast expansion of the

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Call for Papers and Participation

Twelfth International Economic History Association Congress
Seville, Spain
August 24-28, 1998

The Cliometric Society will sponsor an E session at the IEHA Congress in Seville, Spain, in August 1998. This session will be in roundtable format, in two sets of three hours each.

PART I. "Uses of the Internet for Economic Historians" will be a panel discussion about electronic resources for research and teaching in the field, with on-line demonstrations.

Session topics will include, but not be limited to, locating useful web sites, communicating *via* e-mail lists, and creating on-line bibliographies. Since the internet is continually changing, topics are likely to change until the presentation date.

Both providers of services and users of internet resources are invited to participate as panel discussants. Participants who would discuss future uses of the internet for scholarship and teaching are especially welcome.

If you would like to be included on the panel, please send a letter of interest to session organizer Sam Williamson at the address below.

PART II. "Multi-disciplinary Applications of Cliometrics" will be a panel discussion among a group of cliometricians with extensive experience with inter- and multi-disciplinary projects and researchers new to the field. Both groups of panel members will discuss their research experiences and the papers selected for presentation.

Senior scholars whose recent work involves a discipline other than economics, history, or economic history are invited to join cliometricians Deirdre McCloskey (literature and philosophy), Joel Mokyr (biology), and Richard Steckel (anthropology) in the roundtable. In addition, others, especially younger researchers, are invited to submit proposals for papers that combine techniques of quantitative economic history and other disciplines. Papers should be work-in-progress, not yet accepted for publication. Please send three copies of a two-to-five page proposal to session organizer Lou Cain at the Society's office, *via* snail-mail, fax, or e-mail. Summaries of papers will be published as an insert to the July 1998 issue of *The Newsletter of The Cliometric Society.*

Relevant dates:

Proposals and Participant Letters of Interest Due	**September 22, 1997**
Invitations Mailed to Participants and Paper Presenters	**October 22, 1997**
Paper Summaries Due	**May 15, 1998**

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What about the long run, eh?

As the annual meeting of the Clioms approached, the Mullah was struck once again with disbelief that this was the start of the second decade of an apparently never-ending quest for either the finest of pithiness or an aphorism to match that which started the search. This year the Mullah, and perhaps others as well, were torn between attending the first domestic conference to be held outside the United States or the third international conference that would take place near mad Ludwig's lair. The latter had seemed the more inviting for any number of reasons: the fond memories of sangria, tapas, and the strains of music from West Side Story that he held from the last international conference were like a siren call; the prospects of consuming endless quantities of German beer and Bavarian sausages, the former quaffed in an effort to replicate the accuracy of the beer guide produced by the bow-tied scholar from the wolfpack tribe, the latter eaten in a belated effort to gain stature in the profession, held great appeal as well. The *gemütlichkeit* went without saying. He also suspected that at the international meeting he would find fewer members of the wildcat tribe that had dared to win the annual roundball tournament and had added insult to injury by eliminating the rightful owners of that title. As they used to say in Brooklyn – and of course in the Southwest for some years now – "wait till next year."

In the end, the Mullah opted to attend the non-international, non-domestic, domestic meeting that would take place in the city with the largest number of restaurants whose names were but a singular, non-possessive word. Instead of Chez Bateau, there was Canoe; rather than Il Centrale, it was just Centro; Lotus instead of The Dream House; Boba rather than Bob's, and so on. Indeed, this phenomenon could start a new cliometric agenda to measure both the number of such single-named restaurants in all central places and their output, then perform cross-sectional and time series analyses of the nutritional content of their menus *versus* those of dining establishments with more than one name. The results would, of course, shed much light on whatever important issues the Clioms were wrestling with at the time. The local tribespersons, the blues or torontonians, facilitated the start of such a long-term research project by making sure the Clioms had plenty of opportunities to sample the cuisine at these trendy purveyors of *nouvelle Canadienne cuisine* (or Cal-Ital as some would call it).

As is his custom on the great silver bird that brings the Mullah to these gatherings, he perused the list of attendees in order to form some expectation as to how much pith might be spewed. He was dismayed to see that any number of the most fecund aphorists would not be present. The most serious void was that caused by the absence of the scholar from the desert of the Great Southwest, to date the most aphoristic of all Clioms. And so brilliantly has she spoken that she has been responsible for a goodly portion of the banality contained in the little book of wisdom. In recognition of her work, she was only last year elevated to the newly-established Pithy Wisdom Hall of Fame for Clioms and others of their ilk. In her place, the wildcat tribe had sent two substitutes: one who has a long history of inane remarks; the other, a promising rookie. Still, the prospects of any wisdom emanating from the desert sands were not good.

The Mullah also noticed that among the other absent aphorizers were he who has studied the potato at great depth, the hawkeye rhetoricienne who long led the charge to distinguish small from large, and the garrulous gourmet from the Bay. Furthermore, the Oxfordian lion of proverb-listening and she from the tribe by the riverside were absent, thereby reducing the chance that all wisdom would even be noticed. Could the boater from the Big Apple and the leading general equilibrating gap analyst fill the breach on the supply side? Could he who knows sewers compensate on the data-gathering side?

As it turned out, it was not a bumper crop of pithiness, but there were some worthy words. None of course were up to the original, and perhaps none quite so good as those of the great vintages. Still, wisdom must be reaped wherever it is spilled.

As always, the Mullah had to disqualify several potential winners because they were not uttered in the heat of battle. The Welsh musical symbol had composed a great tautology, "labor markets are interesting whenever they were." The elder member of the Davis tribe said "the art of teaching is taking students to the frontiers of knowledge in a covered wagon, and leaving them there," while the boater from the Big Apple offered that "the best of clio papers are like fireside chats with regression equations." As wise as these sound, they were elaborate, prefatory remarks (perhaps even prepared in advance), and so were not eligible.

Other sayings were pithy and true, but questions remain about the universality of the truth. The Welsh musical symbol thought "welding was real good fun," but the Mullah wonders whether flash dancing isn't more so. The boater gave us a glimpse into his autobiography with "This paper was so good, I wished I had written it – and on further thought realized I had!" Ah, that his *vita* were available on the internet for all to see which of our other articles he has appropriated. One of the Mullah's servants even fell prey to the proceedings with, "This may be the tip of the iceberg, but is there any more?" This is, of course, inherently false, and, moreover, the Mullah's servants, like employees of Publishers' Clearinghouse, are not eligible to win prizes.

The Mullah enjoyed especially the wisdom borrowed from his old friend Domenico Muldugno, or perhaps Dean Martin: "Nel blu di Pinto di blu." Whatever it means, it was relished by the faithful in attendance at the banquet who saw fit to reward one of the Torontonian chauffeuses for having endured an evening at one of the single-named eating establishments listening to extensive monologues and debate about the meaning and merit of Volare, perhaps the greatest of Domenico's works. Fortunately for all present no one could remember but a small fraction of Domenico's famous words. Although many people think Volare means a late '60s cruise-mobile, surpassed in style only by the Chrysler Cordoba with its seats of "r-r-r-rich Corinthian leather", the Mullah knows better. And so, "to end all confusion", leaving all disillusion behind, he moves on to the pithy business at hand.

As usual there were many methodological offerings, which is not surprising as this is the manner of wisdom that naturally – and all too often – flows from the mouths of the Климs. None of those present needed to be told that "most of us are not the average worker," but one Cliom felt the need to make the point. The Clioms' prized possession, the counterfactual, was given much play, especially as regards the impact of Alexander Hamilton. What if he had died at an early age? What if he had never been born? What if he had lived in Barbados rather than Nevis? And it seems as though two of the Clioms explored one of these grand hypothetical alternatives and concluded that Pearl Harbor was due to Jefferson, while Hamilton won World War II.

One methodological notion received serious consideration by the Mullah and his minions. He who has known sewers told the hushed audience that EVIAN spelled backwards is NAIVE! How true, how true – but what is the point? What simple nugget of wisdom is contained therein that might reveal itself on further reflection? What truth and wisdom might come from exploring what other words said backwards? If "cliometrics" were spelled backwards, would it have anything more or less to say? In the end, the Mullah decided that, if any wisdom were ever discovered in the saying, it would be too unsophisticated and of interest only to the gullible.

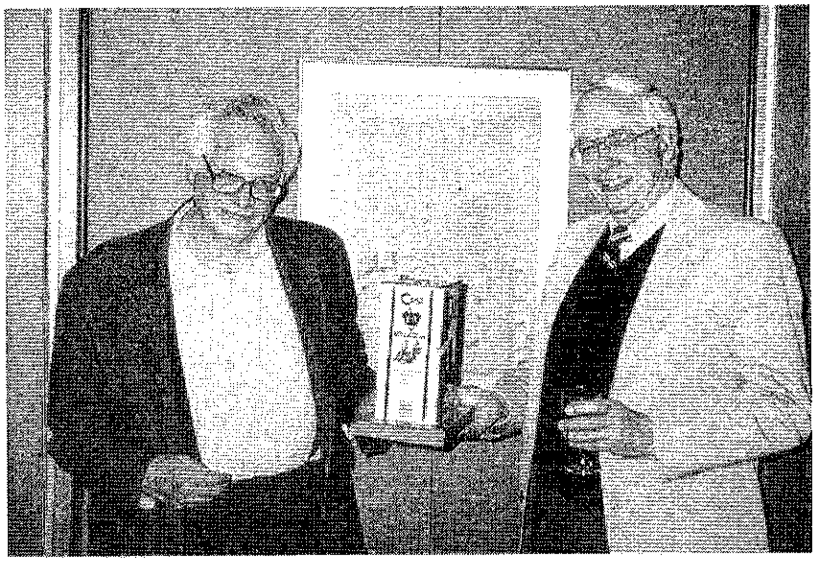
Nevertheless, he saw the offering as an opportunity to suggest a project that has been near to his heart for some time, namely the establishment of a postmodern field of study – palindrometrics – the science of measuring the incidence and length of palindromes. Research could be carried out to identify which years would qualify as a palindrome and a database could be published. All census data could be benchmarked to palindromic dates so that trends would be the same going forward in time or backward. Eventually, prizes could be awarded to the longest palindrome offered each year.

There was near wisdom in a few phrases. One of the apprentices from the Cambridge tribe asserted that "gender doesn't make any difference." As appealing as that may be in an era of performativity, it was contradicted by an equally appealing assertion by the fill-in for the great orator from the desert sands that "the key to health reform is getting everyone to join the Girl Scouts." Would that we could, but alas even the Mullah would not be able to comply. And what would then happen to the famous French saying, "vive la différence!"

The winner of the Edvard Munch prize for the most obsequious performance to suppress a scream proffered that "society would go to hell in a handbasket, if it didn't make stuff." But of course, if it didn't, then where would it get the handbasket? Recourse to the theory of free trade would not suffice, unless handbaskets were made in the service sector, and even then the price of the intermediate good would likely rise to make handbaskets a nontradable item.

Unlike the great roundball rite of Spring, there were only three finalists. One was thrown up by the disciple of the Queen of Aphorism – "all blank space should be offered for sale." She was, of course, referring to that rare commodity, the space in the cliometric annual volume, but surely it has more general applicability. It would be a valuable strategy, improving the quality of the meetings, albeit in unmeasurable ways – something not always appreciated by the Clioms. As an extension, those with no comments could auction off their time – their spots in the queue. One can only imagine what those with no paper could do. The drawback to the proverb is that it may not be true for long, as free term papers on the web raise fundamental questions about space, price, auctions, and anything else you care to ask the professor.

The second finalist was a team effort, not by design, but purely by accident, thus demonstrating one of the key characteristics of these aphorisms: the odds of spewing out award-winning wisdom are small, but cumulate exponentially. The joint effort of he of the high heart and he from somewhere left of Frankfurter was "Probabilities above one contain information, but we don't know what they mean." This is an alarming and, at the same time, exhilarating thought. As wise and useful as it might seem, there are quite likely too many unanswered questions for it to win the grand prize. If true, what of probabilities above two? Does the unknown content increase linearly or log linearly? Does the meaning of the content increase as the probability goes up? Is there some limit to the increase? How quickly is it reached? Perhaps the practical limit on the meaning of the content is reached as the probability approaches one, which might explain why few people have ventured into the higher realms of probability.



The "Engerman" awards the Can to Robert Gallman

The winning saying is clever, especially in a methodological way, which makes it all the more appropriate for the Clioms' gatherings each year. "Facts should be simplified to fit short periods of time." Uttered by he from the tribe not named after either Jefferson or Hamilton, it clearly seems true, and perhaps universally so. How appealing! A conundrum to be savored over and over, continually offering additional insights and truths, albeit in yet smaller and smaller doses. It raises the sorts of issues that can lead to even lesser and lesser amounts of knowledge. It raises fundamental questions about time in a deconstructive society: does it apply to historical time, to the time to give a paper, or the time allotted to questions and answers, to the ever popular short run or long run? Is the corollary true? If you have simplified facts, are you supposed to be brief?

Carrying on with tradition, the final event of the night's proceedings was the passing of the can. He who had been canned the year before risked all manner of trouble with the relatives in order to deliver the can in person. And he did so with his usual polish and grace, and – we daresay – with a minimum of singing and dancing. The Mullah was perhaps more pleased than usual as the winner was the venerable tar heel who has already made plans to contract with a poet – or perhaps Shoeless Joe from Hannibal Mo. – to prepare for next year's delivery. Whatever else may be true, when the Clioms return to their homes next year, they will have come a long way from St. Louis.

– Submitted humbly by the
faithful and obsequious servant of the Mullah

Clio Conference Report *(continued from page 1)*

service sector until 1970. Since then, low productivity has been the primary factor. Jeffrey Williamson (Harvard) thought that a comparative open economy model is required, since a sample of one is too small to give meaningful results. Fishback and Grantham noted that using wages as the measure of output makes productivity measurement in the service sector difficult. Di Matteo commented that since the service sector measure includes government activity, the increasing role of government since 1900 may contribute to "cost disease." Werner Troesken (Pittsburgh) said that capital goods such as computers may have widened the wedge between the value of output and the cost of labour. According to John Wallis (Maryland-College Park), decomposing the service sector may illuminate the shifts from home production to market production by manufacturing firms, then to production within the service sector. Also, tracing the rise of the service sector by occupation, not by industry, may help capture the trend. Martha Olney (UC-Berkeley) commented that a shift from agriculture and into services had also occurred, and suggested that input-output tables might help with decomposition and also capture both "de-agriculturalization" as well as de-industrialization. Lou Cain (Loyola and Northwestern) said that use of two-digit SIC codes might accommodate decomposition of the service sector. Grantham thought decomposition would help capture productivity changes, since, for example, spreadsheets have probably increased productivity in the financial sector, but productivity may not have grown in the health and educational sector. Mechner and Erik Craft (Richmond) were both concerned that policy measures designed to ensure growth in the service sector keep pace with growth in industrial productivity are misplaced, and that total productivity, not relative productivity between sectors, is what matters.

In Friday's final paper, Melissa Thomasson (Arizona) examined the impact of the 1954 tax subsidy for health insurance premium contributions on the expansion of the US health insurance market in the 1950s. Thomasson uses the 1953 and 1958 Nationwide Family Surveys conducted by the National Opinion Research Center to estimate probit equations of whether or not an individual had health insurance coverage. Thomasson finds that the tax subsidy had a relatively minor effect on health insurance demand. However, while the direct effect may be small, the real effect may be larger if the impact on access to group insurance is taken into account. Sokoloff felt that the extent of coverage could have been used as a variable, rather than the probit specification. Anand Swamy (Maryland-College Park) said that the wealth restriction that was used was too restrictive, while Troesken was surprised to see the family size variable having a negative effect. Olney asked whether it had been the employee or the employer who really made the decision with respect to health insurance and whether employees could go outside their companies to get insurance. Thomasson replied that employees could buy health insurance independently of their employers. Robert Whaples (Wake Forest) commented that the 1953 and 1958 samples were quite different in terms of their variable means; Thomasson responded that her paper utilized only sub-samples and that many of the differences went away when the full samples were examined. John Treble (Wales-Bangor) and Wallis both expressed concerns about the price of insurance variable, with Wallis saying that more people holding the cheaper group insurance could lead to a demand shift and a consequent price effect. Richard Sylla (NYU) thought it odd that there were more policies than households, but Thomasson replied that there were often supplementary policies and many households had more than one policy. Hatton suggested income per equivalent adult would be a more appropriate income variable.

Saturday sessions began with a paper by Robert Weiner (George Washington), who applies tests of efficiency to 19th-century petroleum derivatives markets. Analysis of daily price behaviour shows little evidence of weak-form market inefficiency, but this highly liquid market declined as the Standard Oil Trust came to dominance. During the ensuing discussion, John Munro (Toronto) asked about the impact on the derivatives markets of foreign oil production, since Russian production at Baku was quite important at this time, and the US was an oil exporter. Weiner responded that Baku had begun production in the 1880s, but that it did not provide serious competition until the late 1890s. American oil was competitive with Russian oil because of the cost of transporting Russian oil and differences in quality. Zorina Khan (Bowdoin) commented that one should not look at absolute tests of efficiency but at the next best institutional alternative, a forward market. Could the decline of a futures market for oil be due to the rise of a forward market? Harrison asserted that financial economists do not find the randomness of results to be interesting anymore; volatility is the key question. Does the introduction of futures reduce volatility? Weiner responded that hedging took place, although the term was not used, and that volatility fell as the market developed. Jim Gerber (San Diego State) asked why the trade in certificates had not reappeared after Standard Oil was broken up in 1911, and was told that oligopoly worked well, and there was little price competition. Karen Clay wanted to know why the futures markets were so liquid, especially when compared to today. Weiner responded that many producers today do not trade on an open market.

Richard Sylla and Robert Wright (Temple) then presented a paper, written with Jack Wilson (North Carolina State), on the emergence and development of the American securities market from 1790 to 1830. The authors argue that a burst of financial innovation during the first Federalist administration, that is, the development of a banking system and regular securities markets, marked a fundamental break with previous institutions and set the US economy on a new and faster-paced growth trajectory. They find evidence of market integration and arbitrage in securities trading across Boston, New York and Philadelphia. In the ensuing debate, the themes of market efficiency and economic growth were prominent. Paul Rhode (North Carolina-Chapel Hill) wanted to know where the South fit into the securities markets. Wright and Sylla replied that securities prices were not regularly published in Southern newspapers and that it was probably more efficient for Southerners to participate in specialized Northern financial markets. Tom Weiss (Kansas) mentioned that US capital markets after 1870 were not as integrated as during the period of the paper, asking whether this early period was an anomaly. Sylla responded that the problems of financial market integration in the 1870s and later were not that bad, and the problems were likely due to populist Jacksonian influences after the 1830s. Peter Lindert (UC-Davis) felt that the important issue was not so much when the capital market became integrated, but when capital became cheap; the importance of a capital market is in its impact on growth. Mark Toma (Kentucky) commented that a government securities market requires backing from a credible tax authority, and asked if future taxes had been well specified. Wright replied the taxes were clearly specified and that a sinking fund had been established for government debt.

After morning refreshments, Pierre-Cyrille Hautcoeur (Rutgers) presented a paper, written with Pierre Sicsic (Banque de France), on the threat of a capital levy, expected devaluation and interest rates in interwar France. The authors find that the increase of interest rates after 1924 is best explained by expectations of a capital levy. Although high inflation had been anticipated, hyperinflation was not. Low interest rates from 1928 to 1931 reflected expectations of appreciation of the franc against the pound, while high interest rates after 1931 reflected expectations of depreciation. Hatton opened discussion, suggesting the relationship of events in France to events in Britain needs clarification, since France's periods of crisis corresponded with Britain's during the 1920s and 1930s. Munro echoed this point and asked whether Britain's policy of cheap money had been factored into the models. Harrison asked about the assumptions underlying the medium-term interest rate calculations, and expressed concern that one of the graphs showed the probability of bond redemption was sometimes greater than one. Sylla said attention should be paid to the spread between government and utility bonds because there are differing rates of increase, and, therefore, the spread might be a good indicator of fears of government default. Hautcoeur observed that spreads did not rise from 1925 to 1926, but he does not know how to explain their behaviour at other times. Frank Lewis (Queen's) asked if the government manipulated inflation to redistribute income. Hautcoeur replied that inflation was a method of managing the debt by substantially reducing the ratio of debt to GDP. Weiner said the reference to a speculative bubble indicated a failure to eliminate a psychological explanation, while Stephen Ziliak (Bowling Green) observed that elimination of the probability concepts used in the estimation of medium term interest rates might help reveal a psychological story of irrationality.

After lunch, the focus moved from Europe back to the Americas with Emily Mechner's account of the transition to sugar production in Barbados, 1638-1674. Using quantitative evidence from property deeds, Mechner argues that the pattern of property transactions supports the notion that the introduction of sugar in Barbados was followed by a wave of land consolidation, probably in response to the large scale that sugar production required. A hedonic regression suggests increasing returns to land on larger tracts after 1645. People who built sugar plantations did so, not because they initially possessed extensive land holdings, but because they had access to the capital needed to produce sugar. The discussion featured many questions regarding the nature of the data, and the markets and institutions of sugar production. Clay inquired about the collection and compilation of the data source, and Mechner responded that the deeds were a recopied deeds series and that she had sampled about 10%

of them. Wright suggested examining other sources such as probate and tax lists, since deeds alone may have missed many conveyances. Maristella Botticini (Northwestern) wanted to know if the deeds were mainly mortgages or sales; Mechner answered that they were mainly sales. Hautcoeur ventured that it might be important to provide information on European sugar prices, and Munro suggested using prices from Amsterdam, the largest sugar market. Sokoloff suggested that changes in organization of the sugar market and in transport costs could have had an impact on the transition to sugar. Swamy said it was important to be careful with the economies of scale argument because, in India, sugar was grown on very small plots but processed in large-scale centralized mills. Matthew Magura (Northwestern) mentioned that farming units might shrink in size because of labour shortage, but that an increase in farm size would occur once slaves became plentiful. Ziliak thought that there would be value in examining the lives of the individuals in the study and reducing the emphasis on the binary classification of data.

Attending a Cliometrics Conference for the first time: (L. to r.) Front: Jim Gerber, Garland Brinkley, Robert Wright, Erik Craft Back: Matthew Magura, Maristella Botticini, Pierre-Cyrille Hautcoeur, Zorina Khan, Livio DiMatteo, Melissa Thomasson, Almos Tassonyi, John Munro, Paul Harrison, Marilyn Gerriets, Gary Richardson

The conference then migrated from rural to urban matters with Werner Troesken and his paper on the public acquisition of private waterworks from 1880 to 1920 and the incidence of typhoid fever. To his surprise, he had found that public ownership of water works produced lower typhoid rates than private ownership. However, it is possible that typhoid rates had declined before ownership changed because of improvements in individual hygiene, which may also have been encouraged by government. Jeffrey Williamson kicked off the discussion by suggesting that reference to the literature on Britain's earlier innovation in water works in response to epidemics would strengthen the paper. Toma asked how private companies were selected and the terms of their contracts with municipalities. Whaples inquired about the investment strategy employed by private water works in order to avoid capital losses when municipal governments bought out their plants. Fishback asked whether private companies could be sued for negligence by victims of typhoid. Troesken replied that private companies were certainly vulnerable to exploitation by those municipal governments which did not pay a fair market price on takeover. Investors were hard to attract, and rational fears of expropriation may have prevented adequate investment for disease control by private companies. Often companies earned very large monopoly rents in the early years of operation in order to offset fears of expropriation. Individuals did not normally succeed in liability suits against private companies unless the company had been very reckless. The impact of the limited understanding of the germ theory of disease on attitudes to improvement of water quality was mentioned by Cain, as well as potential demonstration effects between cities. Di Matteo noted that the inclusion of a lagged dependent variable meant that a partial adjustment model had been specified and that its coefficient also captured the adjustment process. Wallis added that the lagged dependent variable employed in the regression analysis likely underestimates the benefits of public ownership. The specification of the equation fails to capture the non-local public good impact of improvements in disease control in one city on other cities. Magura maintained that using the data to predict the switch from private to public ownership may solve some technical problems. Troesken noted that considerable time lags between epidemics and the switch to public ownership created difficulties. Closer examination of measures to encourage better private hygiene were encouraged by Olney, while Almos Tassonyi (Toronto) observed that general administration expenditures may be a poor indicator of spending on health care.

Cliometric time travelers take a short break between sessions.

The final paper on Saturday was an examination by John Wallis of early American federalism and its impact on economic development between 1830 and 1902. Throughout the 19th century, governments continued to finance internal improvements, but the locus of investment shifted from state to local governments because of the growing importance of local property taxes as a source of revenue. Fishback commenced discussion by asking why Wallis's story did not relate the battles between interest groups and levels of government. Sylla dryly commented that the paper seemed to him like a "Roosevelt fireside chat plus a regression." Lewis felt that another approach would be to get a list of government investment projects and work out their returns, to see which were successful and which were not. Cain thought that the demand side needed to be looked at, since local demand for public goods could have caused the move to property taxes. Meanwhile, Lindert asked about the exact nature of local government expenditures in the 19th century. Toma asked Wallis to clarify the model underlying his paper. Wallis responded with a general framework in which politicians want to maximize public expenditures and minimize taxes. Hautcoeur mentioned that paying property taxes had qualified people to vote in France, and it might be possible that the shift in financing could be due to alliances between voters seeking to minimize their taxes. Hatton thought, given the focus on federalism, that Wallis might benefit from a comparative examination with other federal countries. Marilyn Gerriets mentioned that in the Canadian case, the government involved itself in projects that the private sector would not undertake.

Bright and early Sunday morning, conference participants were transported to 14th century England as Gary Richardson (UC-Berkeley) presented his work on craft guilds, reputations, and insurance. He finds that guilds bundled quality controls with insurance, so that artisans were forced to accept regulation of quality in order to receive attractive insurance. An important theme of the resulting discussion was that, while guilds established quality standards, they retained a strong interest in securing monopoly rents for their members. The monopoly issue was brought up by Hatton, Hamilton, and Mechner. Richardson replied that manufacturing guilds relied on export markets, where they encountered considerable competition and were not protected against imports to their local markets. Fishback wondered if the payment of a license fee allowed city governments to extract monopoly rents, while Hautcoeur suggested that monopoly power may have increased competition and had a positive impact on growth. Gerriets and Munro both suggested that the use of lead seals certified the quality of goods and would have been equivalent to a brand name. Richardson replied that widespread counterfeiting and difficulty in enforcing rights to seals in courts reduced the benefits of these measures. Turning to guild insurance, Rhode inquired if the distribution of benefits through time created difficulties in retaining members, while Olney asked why adverse selection would be a problem in a small community where people knew each other well. Magura inquired about the frequency of expulsion and its credibility as a threat. Was it too severe a penalty to use frequently? Botticini and Whaples asked whether insurance co-operatives and charities were attractive alternatives to guilds. Lindert thought that modern insurance evolved too late to influence the decline of guilds, and that the poor laws introduced in 1647 were a poor substitute for guild insurance. Richardson indicated that insurance collectives were poor substitutes for guilds because they suffered from problems of adverse selection. The family and charities broke down after the disruptions of the Black Death, requiring more reliance on guild insurance. Because people entered the guild when young, their risks were not well known.

Then it was back to the 19th century as Ken Sokoloff and Zorina Khan examined the role of patent institutions and industrial organization in early technological change. Their comparative paper finds that the British patent system favoured highly capital-intensive technologies and the wealthy in awarding patents, while the American system extended property rights in invention to a broader range of technologies and to the entire population. The different features of these patent systems influenced the weight and the direction of opportunities and, therefore, economic growth. Olney, however, asked, if patented inventions do not represent all inventions, how can patents supply a force for growth? It is tricky to decide whether inventions are capital intensive or not if you cannot observe them all. Wallis noted that a key difference between the two countries was in the fiscal implications of the patent systems, since the British system used patents as a source of revenue. Gerriets stressed that one must take into account differences in factor endowments since, for example, labour was cheaper in England, influencing both innovation and economic growth. Hamilton suggested comparing the US system with other "new" countries to see what, if any, differences emerged. Jeffrey Williamson thought the analysis would be enriched if it were linked to the endogenous growth literature.

In the final paper, Sukkoo Kim (Washington U-St. Louis) examined American urban development over the period 1790 to 1990. Cross-sectional industrial data from 1880 to 1940 indicate that regional comparative advantage and economies of scale in provision of local public goods, rather than Marshallian external economies, are likely to explain patterns of city specialization and city formation. Large cities are more specialized in providing transactions services through wholesale trade or financial and other business services rather than through manufacturing. Jeffrey Williamson noted that there is an extensive literature on urbanization and city growth which is not reflected in this paper. Yet again, a sample of one is too small to give meaningful results. Johnston was pleased to see that little support was found for externalities, noting, however, that Krugman argues that very small externalities can create large differences. Kim said he finds little clustering of manufacturing industries; he had expected manufacturing to drive city size, but provision of transactions services seems to be far more important. Grantham suggested that more evidence of clustering of industries might be found if industry were subdivided more finely, for example, by using two-digit or higher-order SIC codes. Gerriets suggested that the proportion of an industry located within one city is a much better measure of the tendency of manufacturing to cluster than is the proportion of a city's manufacturing within one industry. Munro observed that many people work in a city but live elsewhere, and as a result the extent of employment in an industry may not be measured appropriately. Weiss declared that the use of manufacturing employment rather than occupations of residents reduces this problem, although he was concerned about the attribution to each industry to a particular classes of employees. He also felt that the importance of amenities to increasing the size of a city could be measured by the labour force participation rate. Lindert, Whaples, Tassonyi and Grantham also mentioned that amenities and disamenities of cities can have a significant impact on the size of their populations; amenities might draw a labour force to a location and manufacturing would then follow the labour force. Kim responded that if agglomeration were important, cities would grow steadily larger, but the size of cities has not been increasing.

At Saturday evening's reception and banquet, Robert Gallman accepted the Clio Can with characteristic modesty from last year's winner, Stan Engerman. While the conference did take place over the Victoria Day weekend, its proceedings were not marked by Victorian rectitude and formality; many entertaining statements were spawned in the heat of debate, as the accompanying story reports. Even Queen Victoria herself would have been amused by such wit, and we are certain she would have been thrilled to witness the rousing post-dinner rendition of "Volare" by the assembled diners. Until we convene again in St. Louis, we bid you farewell.

Canadian Conference *(continued from page 10)*

cigarettes were moral: things that give pleasure weaken morals and family values. Hautcoeur wondered why there would be a ban only on cigarettes and not other tobacco products. Lewis asked whether producers of substitute products supported prohibition efforts, and Hamilton pointed out that the same cigarette companies produced the other products as well. In a paper on economics, politics and the US Endangered Species Act, Lou Cain and Brooks Kaiser (Vassar) examine whether economic concerns mattered in the 1978 Congressional vote to exempt the Tellico Dam project from the Act's requirements. Their econometric analysis of whether a Congressional representative voted in favor of preserving the Snail Darter (voting against the exemption from the ESA) indicate that economic factors (*e.g.*, income) were important. More generally, the results of the paper imply that "the ESA has successfully given weight to non-quantifiable and dispersed economic and social benefits in the face of concentrated and visible economic costs." Lewis wondered how Cain and Kaiser would reconcile the apparent contradiction that an individual with higher income is more likely to support species preservation, but is also more likely to be Republican and thus against protecting species. Cain replied that Democrats also represent wealthy districts; after controlling for political party effects, higher income people appear to be willing to pay a little more to protect species. Don Paterson (UBC) suggested that an additional problem with the ESA, when one wants to evaluate the Act's social efficiency, is that biologists have identified an increasing number of endangered sub-species, and thus an increasing number of animals to protect.

"International Business Activity in Canada" began with Hugh Grant (Winnipeg) on industrial concentration and the formation of a monopoly with Standard Oil's takeover of the Canadian oil industry in the early 1890s. He shows that the Canadian oil industry consisted of many small producers with a dominant firm, Imperial Oil. After tariffs were reduced in the early 1890s, Standard Oil (which controlled 85% of the US market) was able to squeeze out fringe Canadian producers and create a duopoly by reducing the mark-up on crude. Imperial was able to retain its market, but it ultimately reached a point where further expansion required issuing equity. It was clear that Imperial did not wish to collide with Standard Oil. The role of scale economies and transactions costs in giving Standard Oil a pricing advantage were raised during the discussion. Charles Jones (Warwick) then examined the direct investment by Grouts (an East Anglian silk weaving firm) in Southern Ontario in the late 19th century. He emphasizes the problems Grouts experienced in exporting to the Canadian market. Proximity to the market was more important in the decision to invest in Canada than the desire to avoid tariffs. Conflicts erupted several times between the mother company and the Canadian operation over vertical integration in the finishing process. An important part of the discussion was devoted to the control of agency problems in the subsidiary. The late switch to artificial silks was explained a result of a form of technological lock-in.

Monday afternoon's "Research in Progress" session began with Carl Beal (Regina) presenting work on the economic development of Saskatchewan Indian reserves (1900-30). Using data from Sessional Papers, he constructs *per capita* real income estimates for a number of reserves. Agriculture provided most reserve income before 1930. Real incomes rose during the 1920s, with cyclical fluctuations matching those of the Canadian economy. After 1930, reserve economies delinked from the rest of economy, and incomes fell as transfer payments became the primary source of income. Mary Dylke (Calgary) presented a study of the relationship between the business cycle and income distribution, building on earlier work by Mendershausen, who suggested that changes in income distribution associated with recessionary periods could be used as an indicator of their severity. Her examination of Canada's Gini coefficient over the period 1971-93 finds that inequality is procyclical. Contrary to Krugman's work on the US, Dylke finds the rate of income growth was higher for low income groups in Canada. Post-war transfers significantly reduced inequality in Canada, evidence that Canada's more comprehensive social programs explain the less severe inequality response to recessionary periods in Canada than in the US.

Belinda Roman (LSE) presented her work on trans-border entrepreneurial activity in El Paso and Ciudad Juárez from 1848-1920. While Mexican-US integration is considered a 20th century phenomenon, Roman's work illustrates that this is a longer term process, with 19th-century roots. She finds evidence of cross-border resource mobility and a border-spanning regional labour market. Anastasia Lintner (Memorial) next presented work she is doing with Kris Inwood on the survival of handweaving in Canada. Looking at a sample of

Ontario households *circa* 1861, they are attempting to identify the factors explaining who produced hand-woven cloth and why. Possible influences on the decision to produce cloth include (among others) the presence of a labour force, the availability of capital, and ethnicity. Regression results for the sample indicated that the presence of women and girls positively influenced the decision to weave, while young children had a negative effect. The local market wage had the expected negative effect on home production. Household income was found to make a positive contribution to the decision to weave; this was attributed to the ability to procure the necessary capital. Finally, Rick Szostak (Alberta) talked briefly about the CD-ROM project he is helping to edit on "A Post-Confederation History of Canada". While the CD is targeted primarily at students at lower levels, there is room for more economic history content (*e.g.*, documents, archival material, and data) than other nonspecialized media. (Invitations for submission will be sent out in the near future.)

Monday's last session was a panel moderated by Peter George (McMaster) which featured lively discussion on the writing of Canadian economic history. Bill Marr opened the panel by stating that he wanted to relate the writing of economic history to teaching and wished to make the distinction between "surface learning" which emphasizes knowledge and comprehension and "deep learning" which emphasizes analysis and evaluation. Marr argued that we write economic history not only to provide a historical data book but also to teach economic history. Doug McCalla felt that a key difficulty with existing accounts of Canadian economic history is their emphasis on the "staples approach", which had its theoretical roots planted in the 1920s and should not be the basis for teaching economic history in the 1990s. McCalla invited scholars to "rip up the roots and plant a new vineyard" by putting together an economic history of Canada which would challenge the staples view. Such an interpretation would include the social and economic themes of agency, inclusion of non-market activities, quantitative economic history, variations within and across groups and regions, international dimensions, culture and knowledge systems and the environment.

Doug Owram followed by describing some of the difficulties he and Ken Norrie had faced in putting together their Canadian economic history text. Since the 1930s, Owram argued, economic history has been displaced from the center of historical analysis in Canada, and the tradition has not been replaced. Moreover, in organizing a text, historians usually prefer a chronological approach, while economists prefer a more problem-solving approach in telling the story. Owram concluded with comments on the future direction of writing economic history in Canada, and thought it was important to tie in the role of institutional structures in shaping growth and the ability of the Canadian economy to absorb institutional change. Ken Norrie expressed surprise that their text was cast as being in the staples tradition. He felt it was based on Canada being a small open economy with a given set of endowments which over time have changed along with the institutional structure, and it is important to be explicit about institutions. Norrie concluded by saying that, given the concerns about the future of the Canadian federation, teaching Canadian economic history often seems like a "eulogy," but he stated that there is much to celebrate in the way the Canadian system has grown and in the innovations and flexibility of our institutions.

The ensuing discussion was quite spirited. Salmon lamented the state of archival funding which will severely restrict the availability of new material for future historical writing. Tassonyi pointed out that Easterbrook's last book had indeed tried to tie institutions explicitly to the performance of the economy. Lloyd argued that the "national question" and the existence of the nation state were fundamental to the study of Canadian economic history. He also said it was important in writing economic history to overcome the confusion between methodology and theory, economic history and historical economics, and statistical correlation and explanation. Mary MacKinnon felt that economic history teaching was useful because many different fields can be integrated together into an explanation of the past. Parr thought that a simple single historical story line for a text was comforting for students, but that they should be challenged with a text where there is no "closure" to the story.

At Monday night's banquet, the address, "France, England and the Economic Growth of Colonial North America," was given by the distinguished Stan Engerman (Rochester) who was ably introduced by Frank Lewis. Engerman concluded that in the long run, there was convergence in *per capita* incomes across the North American colonies despite differences in climate, resources and institutions. The question for the long run is why.

Tuesday morning's "Patterns of Migration in the 19th Century" commenced with Jack Blocker (Huron) on African-American migration and urbanization in the Lower Midwest. His paper studies African-American migration to Ohio, Indiana, and Illinois between 1860 and 1930, with special reference to Muncie, Indiana, and Washington Court House, Ohio. Migration from small to larger urban centers is explained in terms of relative economic opportunity and white racism. Hautcoeur noted that many racial incidents may remain unreported, and it would be interesting to compare this migration with Southerners to the North. Cain pointed out that a town's race relations background would affect its tolerance towards the migrants studied here. Inwood referred to the literature on violence and internal migration in Central and South America as a source of comparable evidence. Next, Mary MacKinnon, with Alan Green (Queen's), compared earnings of immigrant and native-born male employees in Toronto by constructing earnings profiles for a sample of Canadian-born and immigrant groups from the 1901 Canadian Census. The Canadian-born did better, although immigrants who entered Canada as children did about as well, while immigrants who came as adults remained at a disadvantage. Inwood remarked that the results could be influenced by selective out-migration; and that work experience in Canada and before immigration are also important. Hatton encouraged the researchers to look at migration to Canada in the wider context of migration to North America. Cain noted that a migrant's occupation was as of 1901 when the Census was taken and not when the person entered Canada or even over a working life.

In the third paper, Tim Hatton presented estimated wage equations for US employees in 1909 that allow for different effects of birthplace. He uses them to examine the relationship between immigrants' wage rates and the characteristics of different nationalities upon arrival to see if there was a decline in immigrant quality. Immigrant quality, measured in terms of earnings, did decline by about 5% in the late 19th century as a result of shifts in nationality composition. Bill Hutchinson (Miami) noted that the self-employed may have had a very different experience to the immigrants studied here. Altman remarked that the US occupational structure has changed, which makes it hard to compare this period with the present. Finally, Bill Hutchinson, with James Dunlevy (Miami), examined patterns of import trade and immigration in the late 19th century United States. They find the immigrant stock had an effect on the imports of several commodities. The US imported proportionately more from trading partners whose *per capita* incomes were similar. Rogers noted that some specification bias may be present and suggested trying a logit model. Hatton suggested that economic conditions in Europe be more directly included in the analysis.

Stephen Russell (Connecticut) began the "Technological Transition" session with an account of how technology was transmitted in 19th-century rural French society. Russell describes how the agricultural elites tried to encourage emulation of efficient English farming practices. Information disseminated *via* agricultural publications, however, was not well received by the peasantry, who placed little value on learning about farming from non-farmers. As well, the elites favoured rationalization of land into large parcels, but the dispersed parcels of land favoured by the peasantry did help spread the risks of poor soil and climate. In the ensuing discussion, Szostak pointed out that peasants were usually subsistence farmers – very risk averse and resistant to change. George Emery (Western Ontario) inquired whether there were ethnic and linguistic barriers to the diffusion of new agricultural techniques. Russell replied that these did exist, but their impact has been exaggerated. Joy Parr then discussed the market for appliances in post-World War II Canada, in which the interaction between price and non-price inputs and the development of the commodity culture was chronicled. The economic controls of the late 1940s favored producer goods and led to pent-up consumer demand. By the late 1950s there was excess supply because of high saturation levels in the Canadian appliance market. This led to a push to engineer appliances for "style" rather than technical performance, but Canadian consumers seemed to prefer usefulness to appearance. The possibility of planned obsolescence faded in the 1970s as the energy shortage led to longer planned product lives. The subsequent debate sparked a number of interesting reminiscences about appliances. There was a discussion as to why electric kettles were a feature of homes in Canada but not in the USA. Swedish communal clothes-drying technology (multi-tiered wooden apartment closets) was mentioned. Herb Emery suggested that the move towards mainly white appliances was because consumers wanted something neutral for resale purposes.

Leonard Dudley presented a paper, written with Edda Claus (Montréal), which argues that information needs to be codified in a retrievable way. This codification can have an economic impact as it did during the period between 800 and 1300 in Europe. Dudley argued that when the Carolingian minuscule replaced the diversity of scripts after 800 A.D., it became the basis for more efficient communication and, consistent with the argument of Harold Innis, accelerated European economic growth. Their model shows how, when information storage costs are high and transmission costs are low, a centralized information system is favored. Carolingian minuscule reduced the transmission costs of information and led to technological diffusion through monasteries. Szostak asked how much evidence there was of monastic exchange of information technology. Di Matteo suggested that, in fiscal federalism, decentralization is a normal good, and that one needs to know whether the income increase or the political decentralization came first. Dudley said there was evidence of monks' transmission of information about agricultural techniques *via* letters, and that political decentralization had definitely preceded economic growth in the European case.

Livio Di Matteo presented a joint paper, with Herb Emery, on the demand for life insurance over the life cycle in late 19th-century Ontario. Life insurance demand is estimated using data for a set of census-linked probated decedents. The resulting significant concave insurance-age profile leads the authors to conclude that demand for life insurance exhibited a pronounced life-cycle pattern. Given the rising life insurance-wealth profile, self-insurance *via* wealth accumulation did not appear to be a viable substitute. Treble felt that there were other motives for holding insurance (*e.g.*, saving) and that there could be a non-linearity in the data which would cause problems in using probit. Hautcoeur mentioned that life insurance ownership could also have a collateral use, and therefore one should see if it was correlated with real estate. Maristella Botticini (Northwestern) commented that differences in household structure could also affect life insurance holding. Lewis thought that the positive relationship between wealth and life insurance holding was not a big surprise because people were insuring against a potential loss of earnings. Herb and George Emery then presented a paper on the demand for sickness insurance in the Independent Order of Odd Fellows. Their paper seeks to determine what killed off the fraternal orders' sickness insurance. As the membership aged, the sickness benefit was not increased, but dismantled. Their explanation is that, as the members aged, they relied more on family. This result is consistent with the sickness insurance being a young man's benefit. Lewis commented that the premiums to join a lodge were not related to risk, and, therefore, the young were subsidizing the old; it is odd that the old would drop out. Treble mentioned that the Odd Fellows' voting mechanism needed to be considered, while Salmon thought it might be a good idea to trace individuals in city directories for additional information.

"Transportation in Pre-Confederation New Brunswick" began with a paper by Ruth Bleasdale (Dalhousie) and Gail Campbell (UNB), applying cost-benefit analysis to the St. Andrews and Québec railway, which was only partially completed. The initial revenue and construction cost estimates were optimistic. The railway did bring benefits to the community in terms of additional employment and income for residents and attracted skilled railway workers to the community. The human cost of the St. Andrews railway fell most heavily on unskilled Irish immigrants, who came hoping to escape the famine, but these "workers" and their families were too ill and malnourished to work effectively on the railway. As the project began to have financial difficulties, fewer Irish were employed. The discussion suggested that the analysis was not a cost-benefit analysis in a conventional sense, particularly as it dealt only with the construction phase. In addition, it was noted that the railway's failure should be seen as a symptom of depressed economic conditions generally, not just regionally. Robert MacKinnon then presented his paper on intergovernmental cooperation, inland transportation, and the economy of 19th-century Eastern Canada. He takes advantage of an 1848 travel census to study the nature and extent of overland travel in the pre-railroad era. Most travel information for this period consists of qualitative personal accounts, but the travel survey enumerated road traffic at a number of locations. MacKinnon concludes that there was significant movement of goods and individuals over local roads, but that most of this travel was limited to short return journeys. He suggests the lack of integration in the intercolonial economy meant that the network of local roads was adequate. Questions were raised as to what proportion of goods were moved by road, since water transportation was an important alternative. Inwood suggested that it might be useful to divide some of the travel figures by population for a sense of scale. MacKinnon was asked what "adequate" meant in terms of overland travel. His reply stressed that, in spite of descriptions of "dismal" roads, the survey showed they did successfully move people and goods within local regions.

"Women and Their Property" began with Maristella Botticini on the dowry system in Cortona, 1415-1436. Using a sample of marriage contracts and data from a census and property survey of 1427, she examines the double role of dowry, as a marriage payment and as an intergenerational transfer. An estimated dowry function indicates that, although parents did care about their own gains, they also showed altruistic behaviour, which took the form of providing higher dowries when the bride's parents had more wealth or better access to credit markets. Hamilton raised a potential selection issue in the interpretation of the bride's age variable, wondering whether women marrying older had always been "duds", thus requiring higher dowries regardless of any decline in their net present value because of aging. Treble questioned using only the wealth of the groom's family to determine if the bride had "married up" and wondered whether a relative measure would help. Botticini responded that the use of the single measure was necessary to distinguish between the selfish and altruistic views; social characteristics could be considered to reflect the relative comparison. Sue Bamber (Guelph) next presented a research report on property ownership by women in late 19th-century Canada after the Married Women's Property Act gave women greater control over their property. Using data from the manuscript census and tax assessment rolls, she is constructing a sample of women and their property in Guelph in 1871 and 1891. This will allow her to investigate the nature of female property ownership and how it changed. Peter Baskerville closed the session with his paper on "Gendered Investors" in Hamilton and Victoria. Over the period 1881-1901, women's participation rates increased, although more dramatically in Victoria as the percentage of assessed wealth owned by men declined. Probate data are used to compare women's investment patterns. Land was more important in the "frontier" city of Victoria, but differences remain even over the broader range of assets (*e.g.*, married women were dominant in the Victoria market, widows in Hamilton). It was suggested that land may have been a safe alternative for women lacking information. The possible role of intermediaries was raised; a study of investment companies is in progress. Both banks and trust and loan companies lent to married women only with their husband's signature.

"Transitions from War to Peace" opened with Paul Strong (LSE) on the long-run economic costs of the partition of Cyprus, assessing the economic impact of the 1963 division on economic performance. Growth rates for total Cypriot income are examined over the period 1964-1980 and 1981-1990, with the estimates compared to previous performance and the performance of similar-sized economies in the same period. His results suggest that the division did not affect economic growth. Norrie asked whether there was a differential impact of the oil crisis and whether British military expenditures had influenced growth. Dudley felt that a computable general equilibrium model might be an alternative approach. In the next paper, Michael Hennesy (Royal Military College) examined the Hyde Park Agreement, which allowed Canada access to US markets during World War II. By 1946-47, however, there was resentment in the US Midwest over Canadian access to US markets. As it turned out, only when the US requested that Canada increase its military spending as the Cold War intensified did the US accede to continuing the Hyde Park arrangements. Dudley saw this as a public goods problem: the US was encouraging Canada to refrain from free riding and to pay its share of North American defense. The last paper was by Rebecca Taylor on Canada-UK trade relations in the immediate post-World War II era. Taylor states that Britain had been Canada's second largest trade partner since the 19th century. Britain's dependence on Canadian imports peaked in the early 1940s. Her paper attempts to study the trade relationship more closely by decomposing trade into 21 groups to see the apparent competitive and structural changes. Canadian import penetration declined each year from 1946 to 1950, but there was no stability in import composition. Norrie commented that it would be important to have some knowledge about the performance of the exchange rate between the Canadian dollar and the pound. Dudley felt that, given the structural change occurring in the Canadian economy during the war, it would be important to examine the pattern of British imports from Canada both before and after the war.

Canada's preoccupation with climate and natural resources came to the fore in the session "Climate, Resources and the Canadian Economy." Tony Ward examines the history of temperature change in Canada from 1890 to 1992, developing a characterization of temperature changes (the sine wave) intended to capture a perspective on the annual cycle of temperatures and to act as a basis for analyzing changes over time. He then uses behavioural analysis to evaluate the effects of changes in temperature and precipitation on grain farming in Western Canada. While there has been no change in sowing dates because of climatic changes, the harvest period has lengthened. Redish and Treble asked if other models had been tried and suggested alternative specifications. Paterson thought, given Ward's objectives, that the annual winter observations could be omitted. Salmon remarked that the study's time period could be pushed back by using data from the archives of the Hudson Bay Company or military records. In her paper, Cherie Metcalf addresses two questions for the British Columbia economy from 1906 to 1991: what were the size and pattern of rents in the forest sector, and to what extent were those rents captured by the firms, labour, and government? She finds that rents varied (low before the 1940s, rising through the 1950s, falling and volatile thereafter) as did who captured those rents (government before the 1940s, firms through the 1950s, labour and government after that). Paterson thought it would be useful to calculate capitalized rents. Keay asked why rents rose dramatically during the 1950s and declined thereafter. Redish noted that settlement in British Columbia took place before the 1940s, even though rents in the forest sector had been negligible.

The session on "Big Business in Early 20th Century America" opened with Karen Clay's and Gillian Hamilton's examination of the history of the American Tobacco Company during the merger movement of 1894-1905. American Tobacco's consolidations occurred before any significant antitrust enforcement existed in the US. Clay and Hamilton attempt to determine whether American Tobacco's successful consolidations were the result of economies of scale or the creation of effective entry barriers. Using data from the 1906 Bureau of Corporations investigation of American Tobacco, they conclude that American Tobacco had exhausted scale economies by the turn of the century, and that later consolidations resulted from entry barriers generated by price wars and advertising. Furlong wondered about the role of tariff protection in promoting mergers. Cain encouraged Clay and Hamilton to discuss the Bonsack cigarette machine and the industry prior to the merger movement. Ken Cruikshank (McMaster) wondered what role economies of scope played in the American Tobacco consolidations. Cain followed up with the example that national marketing is a large source of scale economies in the beer industry. Andre Millard (Alabama) next presented a paper on the record industry, describing how the "Big Three" firms, Edison, Columbia and Victor, which dominated the industry before 1914, crumbled after World War I when many new competitors entered the industry. Millard argues that the dramatic decline of the Big Three resulted from their failure to follow changes in culture (*e.g.*, the emergence of the African-American market after 1914). George Emery asked what effect the rise of radio had on the record industry; was it a substitute or complement? Cain suggested that Edison's experience in the record industry could be explained by the emergence of a dominant standard (*e.g.*, VHS *vs.* Beta). Szostak pointed out that Edison's moving pictures also failed when he lost out to companies with different movie content.

The next conference will be held in Western Canada, with Banff as the tentative location, and with Ken Norrie, Herb Emery, Rick Szostak and Morris Altman involved in its organization.

Pre-Conference Report *(continued from page 12)*

with Geurt Collenteur (Groningen), detailed consideration is given to defining "the household" and its nature as an economic unit, asking particularly which family members should be included, and how servants and lodgers should be classified. In their research Collenteur and Wood compare household structures in five villages in Groningen province in the Netherlands. As with Engelen and Klep, they find substantial variation in the number and ages of children present in households in different areas.

Patricia Van den Eeckhout and Peter Scholliers (both of Free University, Brussels) presented a paper which went to the heart of the methodological problems of historians' practise of using microdata collected for one purpose in the past to investigate issues of concern to us today. By examining a number of household surveys including information on women's paid labour force participation in Belgium in the 19th century, they argue that their findings may tell us more about the underlying ideology of the survey takers than about any empirical "reality". For example, some survey takers selected their households to represent an ideal family type. Van den Eeckhout and Scholliers suggest that historians should consider these valuable microdata sources in light of the social and political circumstances in which they were constructed rather than rushing headlong for the "facts" recorded in the surveys. Camps, as discussant for this paper, asked whether the large number of surveys, each demonstrating a similar relationship between women's participation and household income, could all suffer from a consistent bias. In a lively and extensive debate much consideration was given to whether the biases of data gatherers could be redressed with the use of statistical techniques.

The next group of papers analysed labour market questions using microdata. Alan Green (Queen's) and Mary MacKinnon use the 1901 Census manuscripts for Toronto to consider how well British-born migrants assimilated into the Canadian labour market and whether they fared better than migrants from continental Europe. They find no assimilation effects for adult migrants, although the earnings profiles of young migrants approximated those of the native born. Unlike Hatton's work on the US (Hatton's and Horrell's publications were most often cited by other colloquium participants), Green and MacKinnon concluded that as long as migrants were white and literate their earnings profiles were not affected by where outside North America they originated. It is illiteracy, not ethnicity, which explains the lower earnings of some migrants. Giovanni Federico (Pisa), who acted as discussant for all the labour market papers,. suggested that Green and MacKinnon should reframe their research to consider all non-native born workers in comparison with Canadians as, unlike the United States, very few migrants to Canada were not British. Mark Thomas (Virginia) suggested that migrants were more likely to move to the US than the native-born. If the most successful immigrants had moved south of the border they would not have been picked up in the census.

The position of particular groups within the labour market was also the issue for Bill Sundstrom, who tries to explain why, in the US during the 1930s, the labour force participation of black married women declined whilst for white women it increased. Using microdata drawn from the 1940 Census he tested two hypotheses: the discouraged worker effect and the relief program incentive effect. Sundstrom argues that the discouraged worker effect explains the divergent changes in participation experienced by black and white married women during the depression, with unemployment rates in local urban markets having a dramatic effect on black women's participation probabilities in 1940. Hatton suggested that regional variation in industrial structure should be included in the analysis. Susannah Morris considered that it was also necessary to include the proportion of black and white workers in each industry, since black and white workers may have had very different skill levels and distributions across industries, thereby facing very different local unemployment rates to their white counterparts. Several participants suggested that wage levels should also be included.

John James (Virginia) and Mark Thomas considered another issue relating to the US labour market. They ask whether US manufacturing firms practised labour hoarding at the end of the 19th century. If so, which types of workers were kept on, and why? Their data are taken from labour surveys compiled by various State Bureaus of Labor Statistics. Analysing the data in both cross sectional form and as a pooled time series they conclude that there was labour hoarding – if output changed 1% employment changed by 0.5% – with hoarding concentrated in the higher end of the wage distribution. Federico considered the causes of labour hoarding to be a need for firm-specific skills or because firms sought to minimise the transaction costs of hiring and firing. He suggested that both of these factors would have changed over time.

John Treble (Wales, Bangor) turned attention away from the US to consider the productivity of British coal mines in the 1890s, using microdata from County Durham. This data set, known as the Victorian Household Panel Study, has been compiled by Treble using wages books, census material, and a large amount of other company-specific information, including detailed data about worker productivity and earnings under different wage rate and employment regimes. He concludes that there were significant positive wage effects on productivity, but that these wage effects were not closely associated with time series variations in productivity; the latter were due to simultaneous changes in manning levels and workforce deployment. Federico suggested that Treble could more fully exploit the data and analyse worker effort in relation to workers' household characteristics – a task which, we were informed by Treble, he had already done, but elsewhere.

When reflecting on what they had learned from the conference, all participants expressed gratitude for intellectual and physical benefits (although not necessarily in that order of priority). Intellectual thanks were given for the advancements in computer hardware and software that enable us to make detailed use of historical microdata, and also that the data have survived. Much concern was expressed about policies under consideration by national record offices which threaten the preservation of microdata, and everyone was urged to inform archivists and civil servants of the value of such sources. Participants were overwhelmed by the sumptuous beauty of the surroundings provided by the ever-hospitable Fondation des Treilles. The opportunity to think about and discuss shared intellectual interests in the tranquillity of its estate was a most welcome change from our usual hectic lives, and we greatly enjoyed this taste of the "good life" that cannot be sustained on academic salaries!

All UC Report *(continued from page 16)*

Paris credit market during the remainder of the 18th century. Creditor losses during the Law Affair were so great that for decades after the French government did not dare use devaluation to reduce its debts, thus creating a favorable environment for the expansion of credit.

Olivier Jeanne (UC-Berkeley/CERAS) commended the authors for revising certain clichés about this era, inferring that political uncertainty and expectations of high inflation had encouraged borrowing after the Law Affair, but what, he asked, had prompted lending? He proposed that the Mississippi Bubble had played a crucial role by generating speculative behavior. In fact, portfolio reallocation related to the Mississippi Bubble could by itself have accounted for the rise in both private lending and borrowing.

Hoffman acknowledged Jeanne's point, saying they would have to re-examine the chronology of events more closely to assess the role of the Mississippi Bubble. Marc Flandreau (OFCE) raised two objections. First, the authors had blurred the distinction between private bilateral lending and transactions on the open market. Second, their analysis had treated purported interest rate ceilings too literally, overlooking use of foreign bills to circumvent domestic regulations. Toward the end of the discussion, White noted that the pattern of bears lending to bulls had resurfaced in the options markets of 1929 and 1987, and concurred that the Mississippi Bubble deserved more attention.

Eugene White then presented his paper, an investigation of the reparations paid by France after the Napoleonic wars. How large was the indemnity compared to the reparations imposed on Germany after the First World War? How did France manage to pay? White found that post-Napoleonic France and Weimar Germany faced reparations of roughly the same order of magnitude, given the lower growth and higher interest rates with which the former had to contend. France was able to pay these reparations in full because the victors of 1815 supported the credit-worthiness of the restored monarch through a combination of coercion, loan guarantees, and high yields.

Lindert began by situating White's work in the debate over German war reparations. On the one hand, after the Great War Keynes had warned that the assessment was so huge that Germany would not be able to pay. On the other, Étienne Mantoux asserted in 1944 that Germany's launching of the Second World War (at far greater expense) demonstrated that the indemnity was not only payable, but should have been higher. By arguing that the Napoleonic reparations were comparable to those assessed after Versailles, White had weighed in on Mantoux's side of the argument. Lindert then posited that

White's calculation of the reparation demands on Germany significantly underestimates the real burden of reparation payments, which might have been as high as 15% of German GNP.

White countered that it all depended on whether one used the "soft" or "hard" reparation figures. Of the 132 billion gold marks assessed against Germany in 1919, only 50 billion were ever scheduled for repayment. James then pointed out that Weimar Germany, as a democracy, might have had a more difficult time raising the money from its citizens. Mouré suggested that the willingness to pay of governments and citizenry might have been tied to what they were being asked to pay for; *i.e.*, an indemnity might have been more acceptable than an assessment of war damages. Finally, James suggested an intriguing counterfactual: What if Hitler had come to power while reparations were still being paid? If he had defaulted unilaterally, the Allies might have invaded; if he had made payments, he would have lost credibility.

Following a break, two papers on Germany brought the conference to a close. Harold James presented the first, a comparison between German monetary and fiscal unification in the 19th century and the current efforts of the European Union. James argues that the structure and ethos of the European Central Bank envisioned by the Maastricht Treaty owe much to the experience of the German (Empire's) Reichsbank. That being the case, he draws lessons for the EMU from Germany's experience. The Reich embarked upon monetary unification only after it had achieved political integration. The European Union, on the other hand, is proceeding in the opposite direction, which raises doubts about its ultimate success.

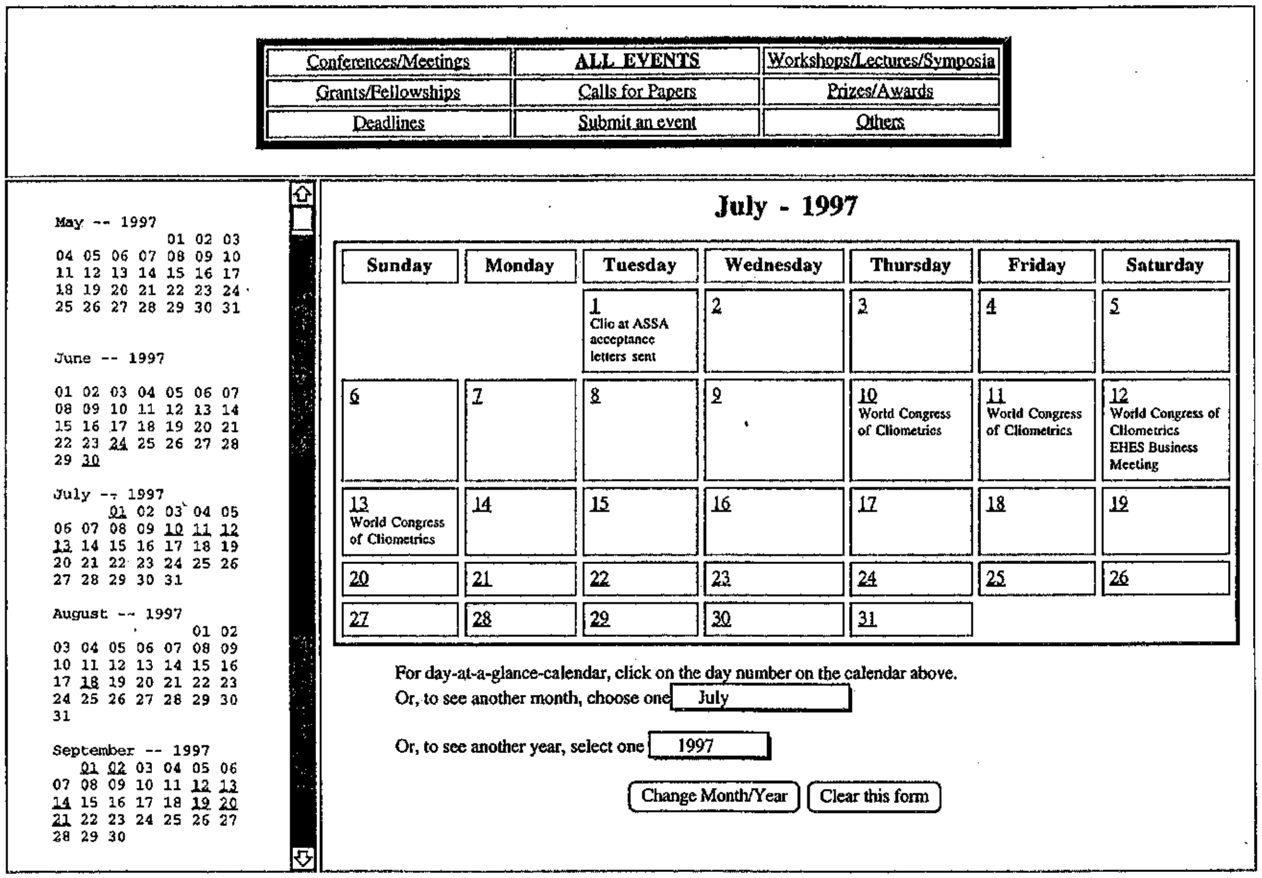
Flandreau began by commenting that for a French reader, James's title, "From Bismarck to Kohl", clarified current European affairs to a disturbing degree! He noted that the various currencies of the German states were already tied by silver at the time of unification in the 1870s, calling into question whether political unification actually preceded monetary. He also urged James to explore further the motivation behind German fiscal unification. James had hinted that it grew out of a desire to create a lender of last resort. Flandreau saw merit in this proposition, but suggested that James also consider Germany's wish to wrest control of its credit market from London. James responded that private banks could have achieved the same result, making it more likely that the founding of a central bank had been more strictly a question of creating a lender of last resort. Haughton found the parallels James drew compelling, and suggested he examine the mobility of labor and capital in the two emerging economies.

George Bittlingmayer (UC-Davis) presented the conference's final paper, an examination of the relationship between political uncertainty, stock volatility, and output fluctuations. Using Germany's transition from Empire to Weimar Republic as a natural experiment, Bittlingmayer finds that stock price volatility mirrored political uncertainty and that their combined effect was to reduce output.

Caroline Fohlin (Caltech) viewed Bittlingmayer's paper as "wanting to see" the connection between politics and stock volatility. The difficulty was, she insisted, that political actions often had direct economic consequences, such as a rise or fall in interest rates. How, therefore, could one separate political uncertainty from economic uncertainty? In addition, she observed that other factors were more statistically significant than volatility in accounting for output fluctuations. Finally, she raised the possibility that in many of the instances Bittlingmayer examines it was not "uncertainty" that had moved the market but the rapid succession of good and bad news.

White agreed with Fohlin's point: positing uncertainty imposes an intermediate variable. James was not so quick to dismiss uncertainty as a factor, but he proposed treating it as two separate phenomena, uncertainty about the general environment, as during the 1920s, and uncertainty about the way a specific event or policy would play out. Haughton suggested that one way of isolating uncertainty would be to look at the volatility of trading volume rather than of prices, since people tend to put transactions on hold when they are uncertain. In response to all of these qualms, Bittlingmayer acknowledged that by tracking stock prices he was "looking at the shadow on the wall," but insisted that they were nonetheless the best proxy he had examined to date.

The next All-UC Conference will take place November 14-16, 1997 at the University of California at Davis. Peter Lindert and Gregory Clark (UC-Davis) will organize the meeting around the theme "Rethinking the History of Wages, Prices, and Living Standards."



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37th Annual Cliometrics Conference Abstracts
May 16 - 18, 1997 University of Toronto

How Much Did Immigrant "Quality" Decline in Late 19th Century America?

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This paper examines the parallels in the debates on the decline in immigrant quality (so-called) between the late 19th and the late 20th centuries. Late 19th century observers argued that the recent immigrants were inferior, and in particular, less skilled, than the old. I estimate wage equations for 1909, allowing for different effects by nationality. I then examine the relationship between the immigrant wage rates and the characteristics of the different nationalities on arrival in the US. I apply the estimated wage differentials to the immigrant composition to measure the effect of changing composition on immigrant earnings. Finally I ask how immigrant earning power changed relative to that of native Americans. I conclude that immigrant quality in terms of earnings did decline by about 5% and that this was almost entirely due to shifts in the nationality composition. But these effects are only a fifth of the size of those reported in studies of the post second World War period.

Threat of a Capital Levy, Expected Devaluation and Interest Rates in Interwar France

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The interwar period has been one of great political and economic unrest, especially in continental Europe. In the case of France, much debate exists among scholars about its mainly political or economic origins and solutions (politically motivated redistribution of income *versus* stabilization policy). At the very center of these debates, the long process toward the stabilization of the franc as well as the long reluctance before the abandon of the gold standard have been interpreted in political or in purely economic terms. In this paper we try to isolate and measure the respective importance of political and economic aspects in these two critical episodes by separating expectations of taxation and devaluation implicitly measured in the market interest rates.

Since there is in France no recorded medium term (say five years) rates, which would be the most useful to look at the troubled times we are interested in, the first step in the paper is to compute implied medium term interest rates from the prices of the perpetual rentes (or consols), assuming that the expected long term interest rate on the rentes was close to its 19th century level. This assumption is checked by looking at rentes which could be redeemed after 1931. Thereafter, the paper first presents a description of the political and economic situation of the period, focusing on some frequently overlooked episodes of critical interest for our experience such as the taxation debate of 1925.

Second, we present comparisons of the yields on various kinds of bonds in order to evaluate the respective importance of the different reasons explaining their variations, which means the different policies at work or anticipated. The variations of the difference between the returns on French public and private bonds gives us an evaluation of the existence of expectations of government default. More importantly, the existence after 1925 of a French government debt quasi-denominated in pounds (thanks to an exchange rate guarantee) allows us to separate the effects of taxation and devaluation (or inflation, which on our five-year horizon is supposed to be the same) which can both explain differences between French and British government bonds: the difference between the British and the exchange-rate guaranteed French bonds can only be explained by the taxation differential between the two countries, and the difference between the normal rentes and the exchange-rate guaranteed ones results only of exchange rate changes (both actual and expected). These comparisons allow us to synthesize previous interpretations of the period. About the 1924-26 crisis, we show first that there was no expectation of a government default; second, that a substantial part of the high level of interest rate in 1925 can be explained by expectations of a capital levy or other taxation devices; third, that hyperinflation was not expected even at the moment of maximum price rise since expected exchange rate was much below the actual one. This shows that the political turmoil was taken seriously by the markets, but also that they never considered these political episodes to represent a challenge to the existing economic order. For the Great Depression period, we show first that the actual rise in taxation by Laval in 1935 explains part of the rise of interest rates that occur during the period ; second, that expectations of a depreciation of the franc explain all of the remaining rise and even slightly more, so that no independent effect of the government budget's deficit and related expectations of tax struggle shall be considered as influencing the interest rate.

The Growth of the Service Sector in Historical Perspective: Explaining Trends in US Sectoral Output and Employment, 1840-1990

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Employment in the service sector expanded from approximately 50% of the work force in 1950 to over 70% in 1990. This has lead many observers to argue that the US is deindustrializing. Other scholars have responded that deindustrialization is a myth. Both sides in this debate have focused on the post war US, with occasional forays into data from Japan and Europe.

It is unfortunate that analysts and policy-makers have chosen to focus on postwar America; economic history is in great part the story of just such shifts in output and employment. This paper is part of a larger project which attempts to correct this oversight. Here I assemble data on output, employment, and productivity in the United States from 1840 to 1990 to show that employment in the service sector has exceeded employment in the industrial sector since 1840, while output in the service sector surpassed industrial output beginning in 1910. Thus the growth of the service sector is not a recent phenomenon, and its implications must be examined in careful historical perspective. I then estimate the contribution of various factors to the movement of labor across sectors from 1840 to 1990. I find that increased demand for services was the driving factor in increased service sector employment until 1970, and that low productivity growth in the production of services has been the primary factor since 1970.

U.S. Urban Development 1790 to 1990

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The study of the long-run trends in the economies of cities suggests that there were three distinct periods of city development in the United States. The colonial mercantile cities were located near ports and navigable rivers and specialized in providing middlemen and market functions for an economy based on foreign trade. Since the export products from the extractive industries were produced in a spatially dispersed manner and since internal transportation was costly, market sizes of most cities were limited. As the U.S. became industrialized during the years between the late 18th and the early 20th centuries, the number and size of cities increased dramatically. The growth of industrial cities occurred in the emerging manufacturing belt and away from the coast and navigable waters of the New England, Middle Atlantic and South Atlantic regions. As the importance of manufacturing activities in cities peaked during the first quarter of the 20th century, the rates of urbanization also peaked and stabilized and the size of the largest cities began to decrease. These developments were also accompanied by significant regional redistribution of large cities from the manufacturing belt to the Pacific, Mountain, and Southern regions.

Regional comparative advantage and the economies of scale in the provision of local public goods, rather than external economies, are likely to explain the patterns of city specialization and city formation. The city manufacturing structure was specialized between 1880 and 1940 and, in general, reflected the overall manufacturing structure of its region. However, while differences in regional comparative advantage and differences in land qualities are likely to generate different sized cities, these differences do not seem sufficient to explain the existence of rank-size relationship of cities.

Despite some stability in the rank-size relationship among cities in the United States, the hierarchical system of cities at any given point in time depends upon the level of interregional and international trade, transportation and communication technologies, and economies in market transactions. As the scale of economic activities increased during the mercantile-port city era, specialized merchants who coordinated the supply and demand of international and domestic goods emerged in cities. The wholesale market transactions were also facilitated by other ancillary services, such as insurance, banking, merchant's exchanges, and by newspapers and trade papers, which were perhaps misclassified as manufacturing activities, which provided information services. City governments and the legal profession also lowered costs of transaction in cities as they provided institutions which protected property rights and enforced contracts.

As the U.S. became industrialized between the late 19th and the early 20th centuries, industrial cities emerged. Unlike the mercantile port-city era, cities were no longer simply centers of wholesale markets. However, the large cities did not distinguish themselves as centers of manufacturing. In fact, manufacturing activities as a percentage of population remained constant across city sizes. As in the previous era, the larger cities during the industrial era distinguished themselves as centers of wholesale markets rather than of manufacturing. As the size of the domestic market increased, and as interregional trade increased, the wholesale market functions of large cities also became more important. In addition, business services such as investment banking, legal, accounting, management consulting and advertising also seemed to have contributed to sustaining the economies of the largest cities.

Paupers and Planters: The Transition to Sugar in Barbados, 1638-1674

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Barbados was the first (and, for decades, the only) Northern European settlement in the Caribbean to produce a significant amount of sugar. Until the end of the 17th century, it remained the leading producer of sugar in the region. But until the early 1640s, no sugar was grown there at all. Barbados was an island of petty planters who grew mostly cotton, tobacco, and food crops. Original evidence from a sample of Barbados' deed records from 1638 to 1674 helps pinpoint the timing of its transition to sugar and illuminate the new crop's effect on the scale of agriculture and on the fortunes of the island's planters during the transition. The observed changes in the pattern of land holdings are consistent with efforts to achieve a larger scale of production following sugar's introduction, starting around 1645. Before 1645, Barbados landowners engaged in widespread subdivision and little consolidation. Thereafter, consolidations exceeded subdivisions. Changes in the size distribution of deeds reflect the same trends. A disproportionately large share of the consolidators had high occupational class. By the early 1650s, sugar was used as a unit of account and medium of exchange in around 80% of deeds that mention the kind of payment used. I use information about the value of deeded property to estimate changes in the value of agricultural land in Barbados during the period that spans the time before and after sugar cultivation was first becoming widespread on the island. The evidence examined confirms some aspects of the standard view of Barbados' transition to sugar, but challenges others. Land prices exhibited large fluctuations but only gradual long-term increase. Hedonic regression suggests increasing returns to acres on larger tracts of land after 1645. There was a substantial premium paid for consolidations over 20 acres in the early 1650s. The reversal in consolidation/subdivision trends, a shift in mediums of payment from cotton or tobacco to sugar, and a boom in land prices (especially for large properties) all coincide chronologically. The transition to sugar is also visible in a boom in urban property that occurred around the same time, and the increasing population of deed participants who were merchants or artisans, a sign of the island's growing commercial prosperity.

Brand Names Before the Industrial Revolution: Craft Guilds, Reputations, and Insurance in Fourteenth-Century England

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Craft guilds controlled urban manufacturing before the Industrial Revolution. Historians believe these self-interested associations discouraged commerce by monopolizing markets and reputations for quality, reputations known as brand names today. Brand names mitigated adverse selection in markets for manufactures. I also show that craft guilds insured their members against the risks of everyday life: poverty, post-mortem expense, and litigation. I argue craft guilds bundled brand names and insurance together because bundling the two together allowed them to use one to solve the incentive problem that inhibited the creation of the other. Evidence of brand names, insurance, and the severity of adverse selection substantiates my arguments. A game-theoretic model explores the relationship between reputations and insurance. The model suggests that the disruption of risk-sharing and religions after the Black Death and the restructuring of those institutions during the 15th and 16th centuries influenced economic growth by influencing the value of guilds, to establish reputations for quality.

Patent Institutions, Industrial Organization, and Early Technological Change: Britain and the United States, 1790-1850

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As economic historians are now rediscovering, our understanding of the processes of growth can be much improved by examining the variation in experience across nations. This essay employs such a comparative approach by examining two salient institutional differences between the first two industrial nations, which may have substantially affected their paths of technological development and helped account for why Britain had slower and less balanced manufacturing productivity growth than the United States during early industrialization. First, we contrast the British and U.S. patent systems, which differed significantly in ways that influenced the nature and direction of inventive activity. Second, we suggest how alternative forms of manufacturing organization in the two countries provide a potentially important source of divergence in their paths of technological change.

Although the framers of the U.S. Constitution and statutes were certainly familiar with, and influenced by, the British patent system, they chose to make important departures in the ways in which property rights in technology were defined and awarded. More specifically, they sought to make such property rights available to a much broader class of the population, to ensure that details of new discoveries diffused more rapidly, and to develop trade and commercialization of technology to a greater extent than did the British system. If the design of the patent system was of much consequence during early industrialization – as both theory and recent evidence that inventors were responsive to prospects for material gain suggest – then the substantial systemic differences could have had a discernible impact on the course of technological change in the two countries.

We argue that the British system reflected its origin in royal privilege and effectually limited access to a select class of patentees. In contrast, the U.S. established the world's first modern patent institution, one that was consciously designed to stimulate participation in invention across a wide spectrum of the population, and to promote invention and the diffusion of technological information. These ends were achieved through innovations such as reserving patent rights to the first and true inventor, the administrative processing of applications, and fees that were set at a low level. The public had ready access to patent specifications, which promoted the diffusion of inventions, and the system also facilitated extensive trade in patented technologies. These provisions led to a broader extension of property rights in new technological information, across both inventors and inventions, than did the British system, and had implications for the rate and direction of technical change.

The predicted effects of the differences between the two patent systems are empirically manifest. First, the background of U.S. patentees was much more diverse than in Britain. Second, patenting was more concentrated (unequally distributed) across individuals in Britain than in the U.S. Third, when the patent law in Britain was revised in the direction of the U.S. law, the levels of patenting activity increased significantly. Finally, patenting in Britain appears to have been more directed at capital-intensive industries than was the case in the U.S. This pattern parallels the contrast between the two countries in the degree of balance across manufacturing industries in productivity growth.

Our second focus is on alternative organizations of manufacturing in Britain and the U.S. The basic point we make is that, relative to the U.S., cottage manufacture was much more common in Britain than manufactories operating with centralized production. If cottage manufacturing was less conducive to invention than manufacturing in centralized plants, as we contend, this contrast could help to explain why productivity growth in labor-intensive industries was slower in Britain than in the U.S. Our analysis draws on the findings by Sokoloff and Dollar that the greater prevalence of cottage manufacture in Britain during early industrialization was due to differences in labour market seasonality and factor endowments, but our emphasis here is on the question of whether the difference in the organization of manufacturing production affected the paths of technological development.

America's First Securities Markets, 1790-1830: Emergence, Development, and Integration

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Historians customarily praise the Federalist financial program of 1789-1793 for raising to a high level, at home and overseas, the credit of the new government under the Constitution. It did so by providing revenue sources and means of collection; by funding federal and state debts from the War of Independence into U.S. government securities payable, interest and principal, in specie; by establishing a Bank of the United States to assist governmental finances; and by creating the U.S. dollar and defining a monetary base of precious metals. Less noted and appreciated by historians is that these measures at the same time created a U.S. capital market.

Active trading markets for U.S. debt and equity issues of the Bank quickly emerged in U.S.

cities. These were the "national market" securities of the day, but each city market also featured an expanding list of "local market" issues that were regularly quoted: bank, insurance, turnpike, bridge and manufacturing company stocks, as well as state and local governmental debt issues. These markets gave American capital a new liquidity, and they were instrumental in making U.S. securities attractive to overseas investors. By 1803, nearly half of all U.S. securities, public and private, were held by Europeans, who thereby had transferred long-term capital to the United States.

The paper focuses on the market for the new U.S. securities of 1790, the "Hamilton" 6s, 3s, and deferred 6s. For the period 1790-1830, we gathered end-of-month price quotations from New York, Philadelphia, and Boston newspapers, supplemented by manuscript sources. We use the data set to explore several issues of pricing efficiency and market integration.

First, we show that, from the beginning, prices were about the same in the three cities, and that month-to-month movements were also about the same. This suggests efficient intermarket arbitrage, a finding confirmed by contemporary manuscript sources. Second, we find that 1790s markets priced the deferred 6s, a type of "zero-coupon" security, with reasonable efficiency. The implicit return on this security ranged from five to 10% over the decade, consistent with returns on issues that paid interest. Third, we find that the markets efficiently adjusted prices during the War of 1812, when New York and Philadelphia suspended specie payments but Boston did not. Intermarket price differences tend to disappear when adjusted for specie premia and intercity exchange rates. Fourth, we find evidence of market integration between London and U.S. markets.

We conclude that the early U.S. securities markets, which have been relatively neglected by economic and financial historians, were part of a financial revolution of the 1790s that laid the groundwork for later U.S. growth and development.

Tax Policy, Group Insurance, and Health Insurance Demand: New Evidence on How the 1954 Tax Subsidy Encouraged Market Expansion

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Researchers believe that a key tax change in 1954 significantly affected the development of the health insurance market in the United States. Under the 1954 Internal Revenue Code, the IRS stipulated that employer contributions to the health plans of their employees were excludable from employee taxable income. Today, it is believed that this tax subsidy may be a major factor in rising health care costs since it encourages people to overinsure. Until now, all of the studies investigating the impact of the 1954 tax subsidy have had to rely upon data collected *ex post*, in the 1960s or later. As a result, while the studies may be able to gauge how altering modern tax policy may affect health insurance demand, none of them is able to address one of the primary questions in the history of U.S. health insurance: How has the implementation of the tax subsidy fundamentally shaped the development of the health insurance market?

This paper uses previously unexamined data from the 1953 and 1958 Nationwide Family Expenditure Surveys to present new evidence on the role of the tax subsidy in encouraging the expansion of the health insurance market in the 1950s. Preliminary results suggest that the initial, direct price effect of the tax subsidy on health insurance demand was relatively minor. However, there is evidence that the implementation of the tax subsidy significantly encouraged the growth of group insurance, and may have thus had broader consequences over time, given its impact on the institutional development of the market.

Typhoid Rates and the Public Acquisition of Private Waterworks, 1880-1920

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During the late 19th and early 20th centuries, many cities and towns socialized their water systems. At the same time, typhoid rates fell. Progressive era reformers suggested a causal link between the rise of public ownership and the decline of typhoid. Private water companies, the argument went, had little incentive to invest in the filtration systems necessary to prevent typhoid. Publicly-owned companies, in contrast, were not obligated to turn a profit and were more willing to undertake unprofitable, but socially beneficial, capital investments. In this paper, I test the claim that the public acquisition of private water companies reduced typhoid rates. Constructing a panel of cities, I estimate a two-way fixed-effects model. This model controls for the unobservable, city-specific effects that would otherwise confound such an analysis. This estimating procedure identifies the effects of changes in ownership: did typhoid rates fall faster after a city switched from private to public provision of water?

American Federalism and Economic Development, 1840-1900

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By the 1830s, state governments dominated public investment in internal improvements: banks, canals, and railroads for the most part. After the default crisis in the early 1840s, state governments played a smaller role in investment, and their investments were steadily replaced by local government investment in transportation, water and sewage, and other public utilities. One view of the 19th century is that, after 1840, governments played only a small role in promoting economic development. Others have argued that governments remain active promoters throughout the century.

This paper supports the view of the "American System" writers who viewed public investment in economic development as a continuous, but changing process throughout the 1800s. It provides preliminary evidence on the size of state and local investments throughout the century, explains why some authors have believed (inaccurately) that government promotion ended after 1840, and provides an explanation for the shift from state to local investment as the century progressed. The explanation hinges on the changing revenue structure of state governments, particularly the declining – then rising – importance of property taxes in state revenues before and after 1840.

Rediscovery of a "Lost" Natural-Resource Market: Petroleum Derivatives in the 19th Century

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This paper presents a statistical investigation of a derivatives market whose very existence has been forgotten by economists, notwithstanding its importance at the time – exchange trading of oil spot, futures, and options contracts in the late 19th century. The very different time period and institutions provide a laboratory for comparison of empirical results from modern futures markets.

While the origin and development of modern futures markets in agricultural commodities is reasonably well known, and financial derivatives are of recent provenance, the first modern futures trading in an industrial commodity, crude oil, had disappeared before economists became interested in derivatives markets, and thus does not appear on the long list of commodities traded at one time or another on futures exchanges. When futures trading in petroleum again became big business in the 1980s, it was described in both the academic and trade press as something new, made possible for the first time.

Had the early oil exchanges been unsuccessful, or of minor importance, their disappearance without a trace would be understandable. Such is not the case, however; the exchanges were among the largest early cases of centralized trading in the United States. Contemporary accounts claimed that the volume of business transacted was exceeded only by the New York and San Francisco Stock Exchanges. Petroleum was big business in late-19th century America, ranking only behind wheat and cotton among exports. The United States produced virtually all of the world's oil, and about two-thirds of production was exported (chiefly to Europe), but most of it was refined in the United States.

The exchanges started trading in the early 1870s, and reached their height in the early 1880s. By the late 1880s, trading had declined precipitously as refining (the downstream industry) was monopolized by the Standard Oil Trust. By the mid-1890s, the spot and futures markets had dried up, and had been replaced in part by vertical integration, and in part by "posted prices", representing what the Standard was willing to pay producers in each field.

The paper is in two parts. The first describes very briefly the institutions of the crude oil mar ket in the late 19th century, arguing that it was a futures market in the modern sense, rather than merely a marketplace where merchants gathered to trade the physical commodity, a description of many exchanges that have come and gone. The second presents an empirical investigation of daily price behavior on one of the exchanges, employing techniques that have been applied to modern financial markets.

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