

The Cliometric Society

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2012 Cliometrics Conference

Reported by Jose-Antonio Espin-Sanchez, Daniel Fetter, Scott Lowe, Andrea Matranga, Eric Monnet, Nonso Obilili, Mary Tone Rodgers, Laura Salisbury, Marlous van Waijenberg, and Ben Zamzow; Edited by Mary Eschelbach Hansen

The 51st gathering of the Cliometrics Conference met at the ever-lovely Westward Look Resort in Tuscon, Arizona, from May 18 to 20, 2012. The Conference was sponsored by the National Science Foundation (SES award numbers 0751065 and 1061697), and University of Arizona's Eller College of Management and Department of Economics. Jonathan Page and Lily Welch provided helpful administrative support. The program and arrangements committee (Ann Carlos, Price Fishback, Michael Hauptert, Murat Iyigun, Sumner La Croix, and Carol Shiue) provided an outstanding weekend of excellent accomodations and stimulating discussions. Twelve papers—on topics as diverse as the causes of the Neolithic Revolution and home ownership in the US—were discussed by a lively group of attendees.

In the paper presented at the opening session, **Tim Guinnane** (Yale), **Thomas A. Mroz** (Clemson), and **Howard Bodenhorn** (Clemson) analyze issues relating to the use of anthropometric data from samples of dubious randomness, such as soldiers' height records. Researchers have long been aware of issues with army records, particularly as minimum height standards were often enforced. The authors show that the current methodology adequately corrects for truncation but fails to account for the problems of potential self-selection. If the decision to join the military was influenced by the opportunity cost from civilian employment, and if opportunity cost was correlated with height, then potentially significant and unpredictable biases can be introduced. The authors substantiate these claims by showing that (a) in the UK, the same birth cohort produced enlistees of varying height depending on the year they joined, and (b) in France, where conscription was prevalent, these patterns were not present.

Session chair **Joseph Ferrie** (Northwestern) pointed out that the decrease in height during the rapid productivity growth in the Industrial Revolution (referred to in the paper as an example of a result

brought into question by the author's analysis) has been confirmed based on ostensibly random samples as well. **Liam Brunt** (Norwegian School of Economics) noted that the sample selection might be less of a problem in years of large-scale warfare, as a higher fraction of the population might be included. **Price Fishback** (Arizona) noted that during the Civil War draftees could buy their way out, so that war also furnishes a choice-selected sample. **Eric Shneider** (Oxford) worried that there may not be a lot of variation in the price series. In an intervention declared by Guinnane to be "worth the trip to Tucson alone," **Jose-Antonio Espin-Sanchez** (Northwestern) convincingly argued that a non-parametric approach could help the econometric argument.

Next, **Eric Monnet** (Paris School of Economics and Rutgers) presented "Monetary policy without interest rates: An evaluation of quantitative controls during France's Golden Age, 1948-1973." French monetary policy during this period consisted of an array of heterogeneous measures that aimed to stimulate or constrain credit. The author uses the transcriptions of the minutes of the meetings of the board of monetary policy-makers to construct an index of whether the policy was "restrictive." Then he uses an IS-LM model and a VAR estimation method to calibrate the impact of the policies on real variables such as industrial production or unemployment.

Sumner La Croix (Hawaii) began the discussion by

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asking about the relationship between the quantity of credit and low interest rates. Price Fishback was concerned with the way the index was constructed. **Aldo Musacchio** (Harvard Business School) and Liam Brunt wanted more on the effectiveness of policies. **Jean-Laurent Rosenthal** (CalTech) asked for a measure of efficiency: one thing is that the monetary policy affected the outcome and another is that affected the outcome in an efficient way. Joe Ferrie asked whether they learned about the policy instruments that did *not* work.

Received tradition considers Lyndon Johnson's War on Poverty a failure. The paper presented by **Martha J. Bailey** and **Nicolas J. Duquette** (both Michigan) examines the motivations of the Johnson administration in the context of the state-level discretionary spending in the Community Action Program. The authors develop five hypotheses based on historical accounts and quotes of Johnson Administration officials. They conclude that the anti-poverty efforts may have been shortchanged by the allocation of discretionary funds supporting goals in addition to poverty reduction. They find funds flow to states with higher Vietnam mobilization rates, states with both more low-income *and* high-income households, states which were narrowly won by Goldwater, and states with more children. They find that this distribution of spending did not affect the next presidential election. Noting that the research is in a preliminary stage, the authors indicated that the next step will be to look at county-level rather than state-level correlates.

With ten participants joining the comment queue before Duquette finished his opening summary, chair Liam Brunt remarked that the paper seemed to have sparked great heat, light, and wattage. The discussion centered around three main themes: the meaning of the Vietnam mobilization variable, the economic significance of the results, and the impact of the the northward migration of African Americans on the data. **Ian Keay** (Queens University), **Ann Carlos** (Colorado), **Warren Whatley** (Michigan) and Eric Schneider wondered whether the Vietnam variable was an instrument for some as-yet-unidentified underlying poverty variable rather than proxying for a political variable as the authors intended. The discussion between Price Fishback and Jean Laurent Rosenthal regarding whether the Office of Economic Opportunity's (OEO) discretionary spending program rose to the level of economic significance lit up the room. Rosenthal suggested the paper may be better viewed as an exercise in forensic economic history paper rather than an exercise in policy effectiveness. Fishback countered that the OEO spending policy should be viewed in context of many other anti-poverty programs, thus indeed rising to the level of economic significance and meriting identification as a policy paper. Joe Ferrie, **Lee Aslton** (Colorado), and Timothy Guinnane commented that the backdrop of African American emigration from the South should be considered a primary element: allocating money to stop poverty in northern states would encourage more emigration of blacks out of Southern states.



Price Fishback makes a straight and narrow point.

Marlous van Waijenburg (Northwestern) was Saturday's first presenter. Her paper, which is co-authored with Ewout Frankema (Utrecht), reconstructs real wage series from British colonial records for major cities in nine African countries from 1880 to 1965. They find no evidence for structural backwardness in Africa in the Colonial period: Wages were high enough to sustain a nuclear family everywhere. Moreover,

West African wages were substantially higher than East African wages and also higher than wages in East Asia.

There was considerable discussion of the data and of the applicability of Robert Allen's welfare ratio approach in the African context. Could cultural differences in household structure or agricultural systems between West and East Africa invalidate the findings? Similarly, many participants searched for a way to explain the surprising result that exports of slaves seems to have had no impact during the period.

Petra Moser (Stanford) and **Ryan Lampe** (De Paul) presented their paper, which examines the effects of patent pools in 20 industries between 1930 and 1938, a period of weakened anti-trust policy. The authors collect patents from all observable patent pools to determine technologies affected by each pool and to compare changes in U.S. patent applications. Compared to other closely related technologies, patenting activity declined by 16 percent after the creation of a pool. The authors examine the mechanism by which the pool may discourage innovation, noting that results were driven by those technologies where members had competed to improve substitutes prior to formation of the pool. Findings are consistent with patent pools resulting in reduced strategic patenting.

In one part of the discussion **Guillaume Daudin** (Universite Lille-I & OFCE) and Yannay Spitzer focused on clarifying the treatment selection mechanism and the resulting relationship between the patent pool and cross-reference subclass; Spitzer worried that the author's method introduced endogeneity. Jean-Laurent Rosenthal recommended measuring innovation directly. **Laura Salisbury** (Boston Univ.) and Jose-Antonio Espin-Sanchez wondered how pools came to be formed. Lee Alston asked if the authors had considered including additional circumstantial evidence to better address some of the concerns; he and Price Fishback then observed a *Cisco* water bottle in front of Moser, who clarified that there had been no conflict of interest with the research.

Andrea Matranga (Universitat Pompeu Fabra) presented "Seasonality, Storage, and Farming: Explaining the Neolithic Revolution as a Global



Aldo Musacchio and Warren Whatley talk business during a break.

Phenomenon." In the paper he shows that a nomadic population faced with increasing seasonality may prefer to switch to primitive agriculture and accept fewer calories in return for smoothed consumption. The theoretical model predicts the adoption of agriculture should be associated with a reduction in seasonal consumption patterns, occur at latitudes with seasons and clear incentives to storing food over the winter, and appear shortly after a global increase in exposure to seasonal climactic conditions. Evidence in the paper includes an analysis of global weather conditions and of the bones of Neolithic peoples, in particular through the examination of Harris lines.

Discussants encouraged Matranga to more clearly distinguish his argument from alternative explanations that are also consistent with seasonality. Warren Whatley noted the seasonality story affects the supply side because moving further from the equator led to reduced storage costs. Lee Alston and **Jeremy Attack** (Vanderbilt) pointed out that sedentary and hunter-gatherer lifestyles were not mutually exclusive and mentioned populations thriving on salmon runs in the Pacific Northwest. Sumner La Croix observed that archeologists are now favoring gradual shifts over "revolutions" in light of new views from the excavation record. Price Fishback wondered about the time necessary for Harris lines to form and **Tom Weiss** (Kansas) wondered if people actually realize they are

worse off when generations are getting shorter. **Dan Bogart** (UC—Irvine) and Laura Salisbury wondered about implications for endogenous technological change leading to agriculture and the diffusion of storage technology, respectively.

Dan Bogart then presented “A Small Price to Pay: Regulation and Rates of Return in British Infrastructure during Industrialization.” The paper explores the issue of how turnpikes and toll roads were financed, and why they generated only modest profits despite the monopoly power that they enjoyed. The explanation is that, although the Parliament granted turnpike trusts with a promise of not granting new competing roads, it also established price caps. The price caps were binding and had to be renegotiated after 21 years, hence there was not much room for monopoly pricing.

Price Fishback began the discussion with a gem of editorial advice: in the paper, give variables a meaningful name, not the name you assigned them in STATA. Shawn Kantor asked whether Parliament was trying to solve a collective-action problem. Dan responded that they were trying to solve the double (multi) mark-up problem. Several participants including **Theresa Gutberlet** (Arizona), Aldo Musacchio, Lee Alston and Jean-Laurent Rosenthal, pointed out that the way the tolls were set is a “black box.” Finally, Joe Ferrie mentioned that coastal transportation was an important substitute for roads at this time.

Saturday’s final paper, by Shawn Kantor and **Alexander Whalley** (both UC—Merced) explores whether university research on local agriculture had long-term positive spillover effects on regional agricultural development. They exploit county-level data from the agricultural censuses of 1870 through 1930 to establish whether the agricultural experiment stations led to long-term local gain in agricultural productivity. The main findings are that distance to agricultural experiment stations had a persistent positive effect on regional agricultural economic development and that the effect grew stronger over time.

Martha Bailey pointed out that there is an alternative story to tell: there may be immigration effects for these university areas. Tom Weiss wanted to know more about why they treated the spread of university research as if it were a homogenous product. Yannay Spitzer suggested that they authors needed falsification tests to verify that the effects are coming from the presence of the experiments station, and not from other correlates, such as proximity to any college, or



Sumner LaCroix, Marlous van Waijenberg, and Sebastien Fleitas Perla toast the end of a terrific day of discussions.

proximity to the capital city or the main city of the states. Dan Bogart wanted to know why distance from the university mattered: Is it because information is costly to disseminate? or because the type of agricultural research that is done is only useful for the particular area? **Jared Rubin** (Chapman University) pointed out that the authors do not control for university quality.

A full day of presentations on Saturday concluded with the annual reception and banquet. Two new *Fellows* of the Cliometrics Society were inducted: **J. Frederick Bateman** (Georgia) and **Thomas Weiss**. Jeremy Atack accepted the award in honor of Fred Bateman, who passed away in January of this year (see the memorial in this *Newsletter*). The *Clio Can* was passed to Lee Alston.

Several awards were given to conference participants for noteworthy contributions of writing, presentation, and commenting. Eric Monnet received the *Jane Austen Action Figure Award* for writing for his “insistence on putting his footnotes before the period.” For his aggressive commenting Yannay Spitzer received a stick puppet of a rhinoceros with a

snapping head. Andrew Matranga received the *Etch-a-Sketch Award* for the best graphics in a paper. The toy should serve as a reminder to him that most publications are in black and white, not color. Nicolas Duquette received the *Magic 8 Ball Award* for his approach to answering questions during his presentation. And, finally, the *Race to the Bottom Hot Wheel Award* was a five-way tie: it went to Lee Alston, Tom Weiss, Shawn Kantor, **Pamela Nickless** (UNC-Asheville), and Jean-Laurent Rosenthal for their admissions of “not knowing anything about macroeconomics.” The Wisconsin Warbler (reporting elsewhere in this *Newsletter*) presented the award for the most true, universal and profound statement of the conference.

Bright and early on Sunday, **Daniel Fetter** (Wellesley College) revved up the participants with a presentation of “The Home Front: Understanding the Rapid Wartime Increase in Home Ownership.” The paper introduces and analyzes newly digitized data from mid- and post-WWII housing surveys. Fetter indicates that in many parts of the United States, rent control severely constrained the rents available to landlords. He notes that, of the 24 million residential units that were owner-occupied in 1950, at least three million had been rental units in 1940. He concludes that rent control played an important role in the increase in home ownership in urban areas over his study period, but that a number of other factors influenced the national scene.

The discussion of the paper had two main themes: a theoretical discussion of whether the major influence was demand-side driven or supply-side driven and a discussion of additional data that can be utilized in the project to control for some of the non-rent control factors that may have influenced the increase in home ownership. Ian Keay and Jean-Laurent Rosenthal stressed that, given the relative dearth of investment opportunities during the war, demand side pressures could not be ignored. Numerous recommendations were made regarding the inclusion of additional data. Aldo Musacchio wanted to see the inclusion of pre-trend data from earlier census periods. **Mary Hansen**

(American Univ.) recommended including narrative information from city council meetings. Finally, Price Fishback indicated that there is a wealth of data that can be used to identify the different “tricks” that people used to avoid rent control.

Katherine Shester (Washington and Lee) examined the effect of public housing projects built in the post-war period on outcomes in nearby areas. Construction of public housing was widespread until the 1970s, when a determined opposition began to form. While there have been no new projects since, most of those constructed are still in use today. The paper fills a gap in the empirical literature on the topic, which has thoroughly examined these housing projects and their inhabitants in the 1990s, while largely ignoring their history. Shester finds strong negative externalities from living close to projects in the 1970s, but not in previous decades. This is consistent with reports of good quality public housing in the 1940s, with gradual decreases in both building standards and maintenance of existing public housing stock as time wore on.

Joe Ferrie asked whether the earlier success of housing projects might be due to the more favorable labor market, which made recourse to public housing a temporary solution. Perhaps in the tighter 1970s, projects attracted people with worse prospects? Shawn Kantor suggested that endogeneity concerns might be assuaged by using the political history of public housing as an instrument. Lee Alston argued that a major factor in reducing public housing quality might have been the requirement to finish on deadline, even if unforeseen circumstances arose. Andrea Matranga suggested unseasonal frost in the year of construction as a possible determinant of such unforeseen circumstances. Laura Salisbury asked whether the effects were similar across cities and urban areas.

Tom Nicholas (Harvard Business School) suggested using spatial regressions. In the context of white flight, the public housing projects could be considered as a way to anchor the poor in the city centers while the affluent demographic relocates to the suburbs. Pamela



No detail is too small for a Ciometrician. Photo by Andrea Matranga.

Nickless said that in the context of the large literature on the comparative architecture of housing projects, she was surprised that there were not different results in urban (“island”) projects and lower density rural projects. **Mark Koyama** (George Mason) asked whether the projects were making people poorer, or whether instead the poor were simply gravitating towards those areas?

The final paper presented at the Conference was by **Zeynep K. Hansen** (Boise State), Gary D. Libecap (UC—Santa Barbara), and **Scott E. Lowe** (Boise State). Titled “The Political Economy of Major Water Infrastructure Investments in the Western United States: An Historical Analysis,” the paper is motivated by a need to inform our discourse about policy response to climate change. The authors try to identify factors that influenced the decisions to construct our existing water supply infrastructure from 1880 through 2010. The questions they ask: How are dam sites chosen? Do major players in the process have congressional committee assignments? Are the Army Corps of Engineers (flood control) or the Bureau of Reclamation (dams for irrigation) subject to urban lobbying or agricultural lobbying? The authors construct a data set of major water supply and water infrastructure in the US and link it to political variables, topographical variables, climate data and agricultural data on a state level. They find that House committee representation during democratic majority congresses has a positive impact on the number of dams constructed in a state. Topography and

population pressures also influence dam location.

Joe Ferrie (*Editors’s Note: How many times was Joe first in the queue?*) commented that the authors might redefine the variables to reflect different kinds of dams because each type might different political constituencies. For example, dams that benefit power companies serving urban areas might be supported by different congressmen than dams that provide only irrigation benefits to farmers. Lee Alston urged the authors not to treat Congressional committees as static political institutions, noting committees only gained power after WWII. Shawn Kantor also questioned the study’s exclusive focus on committees and suggested a regional clustering of representatives would allow for congressmen working across committees to support a proposal benefiting a region. Dan Bogart suggested using geographical techniques to cluster pertinent congressmen for a more informative political variable. Jared Rubin had further suggestions for political variables: a dummy to note sessions with split party control of the Senate and House and to capture political power, a congressman’s tenure or how many total bills the congressman sponsored. Ann Carlos brought up the need to include water infrastructure projects built on Indian reservations.

At the close of the conference the Clioms were encouraged to attend the World Cliometrics Conference in summer 2013 in Hawai’i. Details appear in this *Newsletter*. ■



The Westward Look Resort shortly after the eclipse on Sunday. Photo by Andrea Matranga.

7th World Congress of Cliometrics

Honolulu, Hawai'i, USA

June 18-21, 2013

The 7th World Congress of Cliometrics will be held in Honolulu, Hawai'i, USA from June 18-21, 2013. The Congress will be hosted by the University of Hawai'i-Mānoa. All sessions will be held at the Imin Conference Center on the campus of the East-West Center (adjacent to the University of Hawai'i-Mānoa campus). Funding to help support the conference is provided by the National Science Foundation and the University of Hawai'i-Mānoa.

The World Congress is designed to provide extensive discussion of new and innovative research in economic history. We expect 80 to 90 papers to be selected for presentation and discussion. These are sent out to all conference participants 6 weeks in advance. Each paper is devoted a session, in which authors have 5 minutes to make an opening statement and the rest of the session is devoted to discussion among all conference participants. Conference participants are expected to read the papers for the sessions that they attend.

We will be opening the World Congress website for paper submissions, hotel reservations, and conference registration on Thursday, November 15, 2012. We will accept paper submissions through January 23, 2013. Those wishing to present a paper should provide an abstract and a 3-5 page summary of the proposed paper.

We particularly encourage paper proposals from graduate students conducting research in economic history. A grant from the National Science Foundation provides support for travel and accommodations for graduate students who present a paper at the World Congress.

Conference Registration, Hotel Reservations, and Paper Submission

Available on the Cliometric Society website (<http://www.cliometrics.org>)

On November 15, 2012

World Congress Headquarters Hotel

The New Otani Kaimana Beach Hotel (Waikiki in Kapiolani Park)

Questions? Please contact Professor Sumner La Croix at the University of Hawai'i at clioconf@hawaii.edu.



(Image on left) Jeremy Atack accepts the honor of Clio Fellow on behalf of Fred Bateman.



*(Image on right) Most everyone else thought the sombreros were for decoration! Olay, Jean- Laurant Rosenthal!!
Photo by Carl Kitchens.*

The Warbler in the Desert

After the thin mountain air of last year, the Warbler was looking forward to the thicker, and somewhat warmer, air of the desert. He was not quite prepared for the warmth, however. Only ovens get that hot in Wisconsin, from whence the Warbler hails. Given the utterances of his fellow Clioms, the Warbler appears not to have been the only one affected by the heat.

In fact, the number of Clioms adversely affected by the weather approached record levels. The Warbler counted 17 people who claimed they could not see, 29 who claimed they could not hear (though 25 of those times were by the same person), and a large number of people who complained about short people. Physical limitations, it turns out, were the overriding theme of this conference.

For example, the Warbler is fairly certain that he heard The Wise and Ancient Jayhawk wonder if, as people got shorter, they realized that they were becoming worse off. From practical experience, the Warbler is fairly certain the answer is yes. And he knows for sure that he heard someone ask, “Where is it written that only the short and the sickly join the army?” He thinks it may have been the Melliflous Monsieur, but he couldn’t see quite that far.

On the related topic of mental limitations, the Warbler recounts the competition between prominent Clioms to see which knew the least about monetary history.

Le Editor told us: “I’m not a monetary historian, and I don’t play one on TV.” At this point the Warbler must confess that he quit paying attention to anything le Editor said. He did, however, perk up when he heard the Wise and Ancient Jayhawk say, “Like le Editor, I know nothing about monetary history. Unlike him, however, I also know nothing about French history.” This was followed quickly by the Mountain Man, who, not wanting to be left out, announced that he was “going to join the race to see who knows less about monetary history with my comments about the topic.” After hearing said comments, a close vote was held among those who neither heard nor saw the exchange, and it was determined that the Mountain Man won the race.

Warbler was impressed at the volume of sage advice for young scholars. This might fall under the category of “How to Win Friends and Influence Editors.” The Mountain Man, the very same who won the earlier race, extolled one young scholar to beef up his work in preparation for submission to a good journal. The youth was counseled: “Instead of running a bunch of regressions, you need to find some circumstantial evidence to use.” The Warbler glanced around the room and saw several editors, past and present, nodding. Were they in agreement or was it nap time? The Warbler didn’t have a good enough view to tell.

The Harvard Don did not give advice, but instead led by example. He told the assemblage: “We know nobody would believe our results, so we made them shorter.” And if popular approval is what you seek, then perhaps you want to focus on your F-stats. That certainly impressed the Rutgers Visitor, who gushed, “I think it’s totally awesome how you said your F-stats aren’t overly small.”

But enough of all that. As a gentle reminder, the Warbler is here not to pass judgment, but to record history. He is here to chronicle those indispensable utterances of the gathered throng. He is here to



Cacti outside of Tucson. This landscape changes rather abruptly to conifers as the road gains altitude. Photo by Andrea Matranga

chronicle those bits of wisdom that may have gone unnoticed in the heat of discussion, but which, upon reflection, prove to be profound and universal truths. The Warbler listens carefully, records faithfully, and recognizes brilliance. He is in search only of those things said spontaneously. The Warbler is not interested in anything premeditated, carefully considered, or brilliantly reasoned. Now, on to the finalists.

Each year on the occasion of the Clio banquet the lights are dimmed and attendees assume a reverent air while reciting the inaugural winner: “Never open a can of worms larger than the universe.” Homage is then paid to the winner, She-who-won-three-times-and-is-now-no-longer-eligible-to-win-again. This year the Warbler hoped to find a winner who could proudly take his or her place next to last year’s honoree, King Midas, who told us with the utmost confidence that “the sum of the one equation is 0.92.” It was obvious immediately that this was both universal and profound, but only after the requisite fact checking did the Warbler determine that it was also true, and therefore a worthy of joining the lexicon of past winners.

This year the Warbler identified three worthy nominees. The first, a frequent finalist who once admitted

that he liked doing it backwards, admitted during his presentation that “I’m just wasting time.” Immediately the Warbler knew this was true, and a quick count of those in the audience who were sleeping at the moment affirmed that it was universal. However, after careful consideration, the Warbler determined that it was not up to the level of profundity of past winners.

The Bulldog joined the elite finalist group with “I don’t want to repeat the mistake of taking my own work too seriously.” While universal and true, like the previous finalist, it too lacks the profundity necessary to be crowned a winner.

There was one such observation. It came early in the conference, before the heat had its most damaging effects. It is profound. It is universal. It is absolutely true. There was little doubt in the mind of the Warbler that he heard a winner when The Headcounter pacified a worried scholar by reminding him that his seemingly insurmountable problem could be addressed. Because, he said, “You can fix it with women.”

And now, his work finished, The Warbler can look forward to warm beach breezes and hula dancers in 2013.

■



First timers (not listed in order): Nicolas Duquette, Jose-Antonio Espin-Sanchez, Daniel Fetter, Antonio Fidalgo, Mark Koyama, Scott Lowe, Andrea Matranga, Eric Monnet, Thomas Mroz, Tom Nicholas, Nonso Obikili, Haelim Park, Mary Tone Rodgers, Laura Salisbury, eric Schneider, Katharine Shester, Yannay Spitzer, Marlous van Waienburg, Ludovico Zaraga, Ekaterina Khaustova, Patrick Cizek, Briggs Depew, Sebastien Fleitas Perla, Keoka Grayson, Theresa Gutberlet, Charles He, Alex Hollingsworth, Valentina Kachanovskaya, Cong Liu, Michael Matheis, Rodrigo Parral Duran, Ivan Rudik, Galiya Sagyndykova, Ben Zamzow

An Interview with Tony Wrigley (Part 2)

Edward Anthony Wrigley was born in 1931 in Manchester, England. He did his bachelor's and Ph.D. at the University of Cambridge, and spent his academic career at that university as well as at Oxford and the London School of Economics. Among numerous honors, he was president of the British Academy, has received honorary doctorates from seven universities, and was knighted (Knight Bachelor) for service to historical demography. Wrigley has published widely in economic history and demography journals, and he has written or edited more than a dozen books.

Following is the conclusion of the transcript of an interview with Professor Tony Wrigley, conducted by Timothy Guinnane, in Cambridge, England, on May 25, 2011. The interview was videotaped and is available in its entirety at <http://pantheon.yale.edu/~guinnane>. The first part of the transcript was published in Issue 2 of the 2011 Volume of this *Newsletter*. This transcript has been edited for brevity and clarity, and citations have been added to identify some scholars and their works. Thanks to Leigh Shaw-Taylor for making the video and for helping in numerous other ways.

I want to shift to an interest which is both earlier and more recent, and then we'll come back to the connection to population. In your doctoral dissertation,[1] you stress the physical location of coal seams as an important part of the logic or the causal forces in the economic development in continental Europe. And at the same time, there is a strong theme about the work of national units not being terribly interesting, or not necessarily the right way to think about economic development, because this one coal seam straddles Germany, France and Belgium. How did you come upon that as sort of a research topic and general idea?

It was an overambitious exercise, but the background to it was a belief that I'd acquired, I think, as an undergraduate—that the fact that economic history is an offshoot historically of political and constitutional history, had been carried over into the assumption that the explanation of economic change links naturally to national units in the same way that political history clearly does. And I was looking for an opportunity to test whether ignoring national units in some ways produces a more coherent picture. The belt of coal

fields you have mentioned stretches through three countries. The traditional economic histories of each of those countries tended to explain the success of industry by the banking system or the excellence of technical education or some feature of national government activity. What I wanted to test was whether in fact what was similar about developments in these three coal field areas was more striking than the differences between them, and this was a convenient test bed. In fact, it was overambitious in all sorts of ways, but what it brought out very early to me was how difficult it is to do international work of that sort in that period, if only because the economic series that exist are extremely difficult to compare because they are compiled on a different basis. For example, I was very frustrated that coal price data – I've forgotten which is which – but in one of the countries that I was interested in there were pit-head prices and another there were market prices. The same sort of problems occurred when you were looking at occupational structure and so on. Two of the things, however, which you can measure with a fairly clear degree of close similarity as to measurement, are the production of coal itself – a lump of coal is a lump of coal – and the population – a head is a head is a head. In going into the work I certainly didn't expect to make as much use of population data as I ended up doing, but it was *faute de mieux* in a sense, and then you begin to see that it has great interest of its own. What I'd originally intended to do and what came out of it were fairly strongly dissimilar, but you're right that what lay behind it was the conviction that at least some things are better understood if you don't stick with the national unit than if you do.

Just a small follow-up question: Sidney Pollard pushed this idea fairly hard.[2] You must have talked to him. Do you think he over-stressed it or did he stress it in a different way, do you think?

He stressed it in a different way, I think. He was interested in the international aspect of it, but I think he was even more interested in the intra-national aspect of it. He was apt to stress how rapid industrial growth, for example, is localized within countries. But there is a strong similarity between our viewpoints, and I think he made fairly frequent cross-references to my work and vice versa. We were hammering at the same theme.

You've just suggested that one of your reasons for your early interest in population was just that the data were more obvious in some way. This takes us to a slim book that you wrote: *Continuity, Chance and Change*. [3] To my knowledge, this is the most well-known exposition of your idea of the difference between an organic economy and a mineral economy. So could you briefly explain the difference and then tell us a bit about how this came about?



Tom Weiss accepts his Clio Fellows Certificate from Mike Haupert

It's convenient, I think, to go back to a distinction that medieval philosophers made between the *fungible* and *consumptible*. A fungible is something like a field, the use of which in one year leaves it perfectly possible for you to return to it the next year. A consumptible is something like a slice of cake, which if you eat it, is gone. My idea about organic economies stems from that. They are essentially fungible. They are dependable in the sense that, year after year, you have access to the same resources, but they are limited by the nature of those resources, and the nature that limits them is the process of photosynthesis. Everything, all material production, involves using energy; in pre-industrial economies—organic economies—the limit is set by the process of photosynthesis since that is the basis of everything that the economy did. In the form of food and fodder, it provided mechanical energy. Plowing a field involves using oxen or horses who are fed by vegetation. Smelting iron or lead involves heat energy which you get from burning wood, and so on. Elementary physics shows that the theoretical possible total amount of energy that a pre-industrial economy

could make use was very limited. It means that the kind of world in which we live today was, literally, physically impossible (as David Ricardo pointed out in his work). He ends a paragraph in which he summarizes the way in which agricultural limitations make prolonged exponential growth impossible by saying—and this is a physical fact—it's not to do with human institutions. What happens in the industrial revolution is you switch to being a consumptible-based economy. You can gain access to the products of photosynthesis accumulated over many hundreds of millions of years in the form of coal or oil or natural gas, and that blows the top off the limits that had previously affected economies: but at a price. You are using something of which, it is true to say, every ton you dig out of the earth means that there is a ton less left. So, post-industrial economies have the possibility of exponential growth and degrees of wealth that were previously unthinkable and were unthinkable to all the classical economists. But you do this at a price. Unless you can find some other way of gaining access to energy, you will eventually run out of cake and be forced back to where organic economies always were placed. This is why nuclear power, for example, is such an important but

also such a tendentious issue. Despite the best efforts of the large companies that depend upon coal and oil, they can't go on sustaining economies indefinitely, and the more rapidly growth takes place, the more rapidly consumptibles disappear. If an economy like China is making 500 million tons of steel a year as they now are, you are approaching that point much more rapidly than would have been the case if you'd stuck with the relatively small amounts of steel that used once to be produced. In any case, it is simply physically impossible for every family to have a car or to build 100,000 ton ships and so on, if you are limited in the way that organic economies were limited. And the fundamental idea in *Continuity, Chance and Change*, though I didn't quite express it in that way at the time, was this idea.

Now in your most recent book, there are very striking calculations I have quite enjoyed about how much land you would have to have to grow all the matter to create the energy to replace the products of the English coal fields. And, as you point out, it would

be simply impossible. What strikes me about this is that Robert Allen has recently published a book stressing the unusual features of British coal fields as an explanation for the industrial revolution.[4] In your more recent book you couch what your efforts are slightly differently, but maybe it's worth just ruminating on how your argument about coal and the British Industrial Revolution differs from Allen's, if it does.

I am not sure quite how to answer that question. I don't think that there's any conflict between what I say and what he says, but we approach it in a very different manner.

The essence of his story of the occurrence of the industrial revolution in this country is the combined effect of labor being expensive, which pushes you towards capital-intensive solutions to production problems, and coal being cheap, which makes it possible for you to make use of energy on a much greater scale. There's nothing in that that's in conflict, I think, with what I chose to highlight. The point that I was most anxious to try to bring home is the idea that in considering the industrial revolution, we should pay at least as much attention to the question of why it didn't come to a halt as to the question of why it started up. In that context, it's the ability to gain access to what appeared to be unlimited quantities of energy in a new way that enables growth to continue. Otherwise, the arguments that the classical economists made would have continued to remain appropriate. Adam Smith said that there is an opportunity for considerable growth, and he was conscious of the nature of the growth as it occurred and why it occurred: by creating relatively large markets that enabled the division of function to take place by specialization. But the very process of growth, in effect, ensures that it must come to a halt. The end situation that he depicted would be worse than, or no better than, where you started out essentially because of this energy problem. He

didn't express it in that form, but it exactly parallels the argument that I've made. It's one reason why I've always felt it's illuminating in considering what happened in England to be very conscious of what happened in the Netherlands, as indeed Adam Smith was. He had quite frequently said: if you want to know what the future holds for us, turn to consider what happens in the Netherlands. In the Netherlands, a man of good standing can borrow money at 2½ percent. In this country, in England, it's 3½ or 4, in France or Scotland it's 7 or 8 percent. What that reflects, he said, is the fact that the opportunity for profitable investment had largely been exhausted in Holland. They were investing in other countries, and that is what's going to happen elsewhere. The return you can get on capital is an indirect reflection of the opportunity for further growth, and as that peters out, the return that you can hope to get will decline to the point where investment tapers off and growth ceases.



Lee Alston receives the Can from Tom Weiss. (Tom stood in for Lee Craig, last year's Can recipient, who could not attend.)

Now again, following up on this and going back to the population questions, one of the things that one would expect after thinking about, especially, the more mechanical version of the Malthusian model, is that as an economy begins to exploit coal fields and have higher real wages and so forth, the demographic patterns would overwhelm economic growth. Another way you would reach this sort of unpleasant outcome (that economic growth didn't really lead to anything

better for the population) would just be much earlier ages at marriage and higher fertility as a result. So what this highlights is the importance of not just these technological things such as coal but English demographic patterns in making economic growth possible in the long run. How do you see those two fitting together? And could you ruminant on how people think about this more broadly today. Are they doing it justice?

I could talk at length about this. In a nutshell, I think it's entirely appropriate that John Hajnal's essay [5] is perhaps the most influential single statement or approach to the interplay of demographic behavior and economic circumstance that we've had in the post-war world, and his focus on the importance of a very different marriage system in parts of western Europe seems to me an essential part of the understanding of the backgrounds of the industrial revolution.

It's linked to the fact that social convention meant that embarking upon marriage meant creating a new household, and, therefore, that there was an economic hurdle to be overcome to enable you to marry. It is very different from nearly all other societies, where on marriage you characteristically join an existing household and may eventually become head of it, but much later. If the west European pattern exists, if those conventions prevail, then you make it likely that fertility will be sensitive to economic circumstances to a much greater degree than would be the case where, for women at any rate, marriage is universal and takes place at a very early age, soon after sexual maturity. It both means that it's quite likely that marriages won't be formed until a large part of the fertility life of the wife has been spent without bearing children and also that significant proportions of both sexes would never marry. And one of the things that I think proved demonstrable in the wake of the demographic work that was done on England was that in the early modern period, both aspects of marriage were sensitive to secular economic trends and helped to ensure that you don't have to live on the edge of

what people always referred to as "the Malthusian precipice," though in fact Malthus, himself, in his later work was very sensitive to this issue and pointed out that it was possible to reach an equilibrium position in which real incomes were well above bare subsistence because of suitable marriage characteristics. Where



Desert wildflowers. Photo by Andrea Matranga.

this pattern exists it's quite possible for a significant proportion of the population to get well beyond the point in which they have to spend all their income on the bare necessities of life, and, given the nature of income elasticities of demand, you therefore create the incentive to produce other goods in far greater quantities than where such goods are bought only by a tiny minority of the wealthy. Now, it's true that if it continued to be the case that improving economic circumstances encouraged people to marry earlier and more universally (as happened in late 18th and early 19th century England), you can imagine a circumstance (as H.G. Wells did in one of his novels) in which the whole country gets carpeted with people. But one of the unpredictable, but crucial, changes that occurred with increasing wealth was that people chose to have fewer children. Then age at marriage and whether or not people marry have less and less bearing on how many children they have, and you can well reach the point (as reached by many countries in Europe and now much more widely) where fertility is below replacement level. Thus population trends may be downwards, not upwards. Increasing standards of

living, rather than producing burgeoning populations, may produce the opposite. But in the crucial period—in the run up to the industrial revolution—the sensitivity of fertility to economic circumstances may have been crucial in creating a degree of demand for products other than basic necessities, which encourages investment in a way that's much more difficult to achieve where a different demographic system exists.

So, would it be fair to say that you think that understanding the industrial revolution and subsequent growth requires understanding of both what we think of as the economy and also population patterns?

Well, yes and no. I think it's absolutely demonstrable that access to energy in an unprecedented scale is a necessary, though perhaps not a sufficient, condition for an industrial revolution. Whether the kind of marriage system that existed in Western Europe was a necessary condition, I am not sure. I mean that might be pushing the argument too far, but it's at least very reasonable to believe that it was one of the circumstances that made the changes easier than they would have been if the sort of demography that was true of eastern Europe, for example, had also been the case in the west.

I have always been struck by the fact that in your work often you are talking about something, say the nature of the industrial revolution, but tend not to take a position on other ways of viewing the thing. Let me

give you one example. A lot of economic historians stress Britain's constitutional arrangements in property rights and things like that as fundamentally causal, maybe not sufficient, but certainly necessary. [6] To my knowledge, you don't really have anything to say about that. What underlies that style?

What underlies it is the problem of distinguishing between the chicken and the egg. I have no quarrel with the view that institutional change and enforceability of contracts (and all that sort of thing) is characteristic of this society and others in the transformations that occur. But if you look back on the Civil War, for example, and the evidence that showed of the huge influence of mercantile London, how can you know that it's the egg rather than the chicken, so to speak. Why not suppose that the institutional changes to which you refer are downstream from the power of the city of London rather than the reverse, or rather that there's a feedback between the institutional changes and what's happening in the economy? The belief that you can isolate something and say it's downstream from something else may be naïve. It's part of the scenario, so to speak, but to wish to set it to one side and treat it as the trigger for what happened? I'm very dubious about it.

This is interesting. So what I took as just reticence is actually a more critical posture.

No, it's more like indifference. I mean, well, I know this is a platitude: You can't conduct controlled

experiments. You can't tell what would have happened if there had not been these changes, but these changes, and some of the other developments that have been highlighted, seem to me difficult to arrange in a causal sequence. The chicken and egg problem is prominent, and it's not given the prominence that it deserves.

Okay. So I just have one more question, which is really not so much about your work, it's about our field. Economic history has always been, I think, a slightly marginal field, not in an especially derogatory way. In the States it has been clinging to economics departments; maybe a version



Cong Liu, Dongwoo You, and Taylor Jaworski enjoy the outdoors at the Westward Look.

of it is coming back in history departments. In Britain there are all kinds of funding issues which may threaten many, many different fields. If a bright undergraduate from Cambridge University came to you and said he or she is interested in these issues, what kind of advice would you give? Is this a reasonable way to devote one's professional life? What kinds of things to study? Where to study? How to go about it? In other words, when you see the world unfolding, where do you see the next generation of scholars coming?

I wish I could give either a clear-cut or an optimistic reply to that. Just, so to speak, as background, one of the things that's rather unusual about this university—Cambridge—is that there has never been a separate department of economic history as there were in a great many British universities, though virtually all of them have disappeared. But economic history has always been a plank in the Tripos and so undergraduates have the opportunity to be exposed to economic history automatically if they read history. One of the encouraging possibilities, which is quite new, is the far greater importance of the M.Phil., a one-year post-graduate degree which is now for most people a prerequisite for going on to do a Ph.D. That enables you, in principle, to begin to acquire techniques that you can't expect to acquire as an undergraduate. It may be one of the developments that helps to restore economic history as a viable possibility. If it is to flourish, it has to show that it really is important, and I suppose one of the reasons for the kind of work that I've been doing is that I consider that the distinction between an organic economy and the kind of economy we now have is fundamental to the understanding of history generally and not just to economic history; therefore, that economic history is a topic that history students in general should embark on with enthusiasm. I can't claim that they do now, but I hope it might happen in the future.

Okay, well just one last question. George Monbiot, who I realize is sort of related to you, has a blurb on the back of your most recent book suggesting that your book has something to say about global warming.[7] What do you think it has to say about the problem of global warming?

I think it *must* have something to say about it because an inescapable concomitant of gaining access to energy on a previously unprecedented scale is that it produces huge problems. And, as it turns out, many

of those problems are long-term accumulative. There is always the background possibility of reaching a tipping point at which the degree of environmental change which has been triggered by the massive use of fossil fuels gets to a stage where, whatever we do, we face a very difficult and unpleasant future. One of the issues that these sorts of questions, I think, brings into prominence is an issue that Peter Laslett, for example, was much concerned about: inter-generational justice. [8] Are we justified in relaxing in the relative comfort of modern life if the penalty is going to be paid not by us, but by our great-grandchildren. In my view, the fact that so much that's to do with global warming and other aspects of environmental change is uncertain ought to make people all the more determined to do something, and to do something quickly—precisely because no one knows how these changes may accumulate and whether there will prove to be a tipping point. So it is a moral issue which people are very unwilling to address in general. I don't think I've answered your question.

Do you have anything else to add?

Well, you know that I sometimes refer to a Greek myth: The gods wish to punish someone individual, and they do so by putting in a jar, which was to be given as a present, unimaginable forces that will be released when the jar was opened. It eventually was opened, but not by the man whom they hoped to punish—a very typically Greek twist to the story. And it released forces which were unimaginable to those at the time and of which they were unconscious, and it seemed to me that the industrial revolution had something very similar about it. Contemporaries were completely unconscious of it. If you said to a man in the street in the 1790s, "What's that revolution that's going on?" He would say, "Oh, it's the bloody French again!" If you said, "No, I am referring to your revolution," he'd have said, "What revolution?" And it wasn't just the man in the street. The best informed men—Smith, Ricardo—all simply did not believe that what was happening could happen. It was still true of John Stuart Mill. I think the first generation that saw it was really a big difference was the generation of Karl Marx. The moral indignation and fury that Marx displays in his writing stems from the fact that he said, "Yes, we have got what we now call exponential growth but all the benefit is going to a tiny minority." If you like, you can say the same prospect is beginning to surface again today. Well, you know better than I do, but I believe it true to say that the real income of the vast majority of people in the United States is

roughly where it was in the 1970s. GNP has doubled but in a rather Marxian way, the benefits are being restricted to a tiny minority. All these are a range of issues that, making reference to the Greek myth, so to speak, can be highlighted, which is why I did so.

Thank you very much.

Notes:

[1] Published as *Industrial Growth and Population Change* (1961).

[2] Sidney Pollard (1925-1998) was an economic historian who held academic positions in both Britain and Germany. His *Peaceful conquest: the industrialization of Europe 1760-1970* (1981) stresses the idea mentioned above, that nation-states are not sensible units for the analysis of early industrialization.

[3] Part of the Ellen McArthur Lectures given biennially in Cambridge.

[4] Robert C. Allen, *The British Industrial Revolution in Global Perspective* (2009).

[5] John Hajnal (1924-2008), a British demographer, wrote two influential essays on the “western European marriage pattern.” The first was “European marriage patterns in perspective,” in *Population in History*, ed. D. V. Glass and D. E. C. Eversley. London (1965) the second, “Two Kinds of Preindustrial Household System,” appeared in *Population and Development Review* 1982

[6] For example, “Constitutions and Commitment: The Evolution of Institutions Governing

Public Choice in Seventeenth-Century England” by Douglass North and Barry Weingast *Journal of Economic History* 1989.

[7] George Monbiot is a British journalist. He writes a weekly column for the *Guardian*, and is active in environmental efforts, including initiatives related to global warming. The blurb says, in part, “If you want to understand how our dependency on fossil fuels began and what we might do to escape it, you must read this book.”

[8] Peter Laslett (1915-2001) was an English historian. He and Wrigley co-founded the Cambridge Group for the History of Population and Social Structure. Laslett’s early research concerned the development of political theory, but he later turned to historical demography and especially the structure of historical households. Towards the end of his career he developed an interest in aging and the themes Wrigley notes above. These issues are discussed in *A Fresh Map of Life* (1989) and *Justice Between Age Groups and Generations* (co-edited with James Fishkin, 1992).

Books by Tony (E.A) Wrigley:

Industrial Growth and Population Change (Cambridge 1961).

Population and History (London, 1969).

The Population History of England 1541-1871 (London, 1981). With R.S. Schofield.

People, Cities and Wealth (Oxford, 1987).

Continuity, Chance and Change (Cambridge, 1988).

English Population History from Family Reconstitution, 1580-1837 (Cambridge, 1997). With R.S. Davies, J.E. Oeppen, and R.S. Schofield.

Poverty, Progress, and Population (Cambridge, 2004).

Energy and the Industrial Revolution (Cambridge, 2009)

The Early English Censuses (Oxford, 2011). ■



Definitely not all work. Guillaume Daudin shares a board game with fellow Cliometricians. Photo by Andrea Matranga

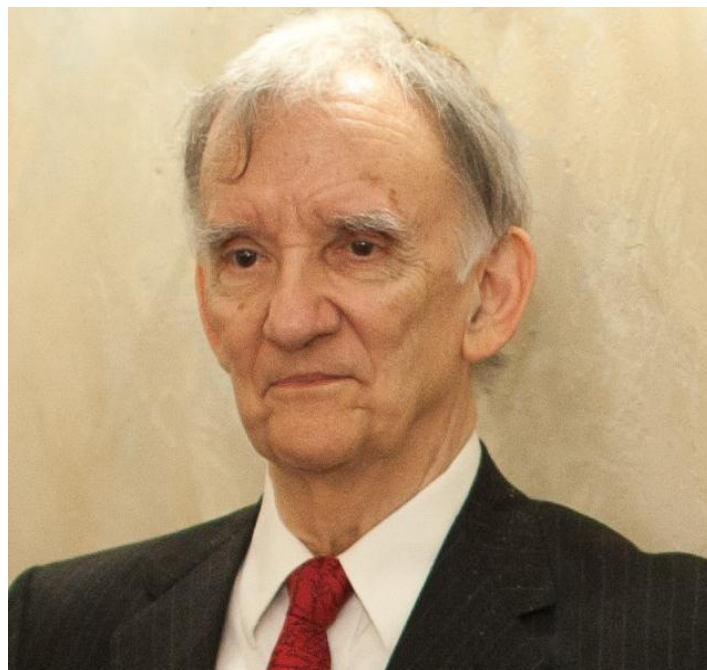
In Memory of Fred Bateman

Professor J. Fred Bateman, 74, passed away on Monday, January 10, 2012 at his home in Athens, GA. He was born in Bogalusa, LA. Bateman was the Nicholas A. Beadles Professor in the Terry College of Business at the University of Georgia. He moved to Georgia to become department head in 1991 after a long and productive career at Indiana University that began in 1964.

Bateman received his B.A. and Ph.D. degrees from Tulane University, and an M.A. from the University of North Carolina. He spent two years as a research associate at Harvard University before taking his first academic position in the School of Business at Indiana University. He was promoted to Associate Professor in 1969, Professor in 1975, and held the position of Adjunct Professor of History beginning in 1989. While at Indiana, he served as chairman of the Department of Business Economics and Public Policy from 1970-72 and 1980-88, and headed the Graduate School of Business Doctoral Program from 1977-80. He also held visiting positions at the London School of Economics, Purdue University, the University of Ljubljana (Yugoslavia), and De Pauw University. He was the Kennedy Distinguished Professor of Economics at the University of the South in 1980.

Bateman was the author of two books and more than 50 scholarly articles. Additionally, he edited two volumes. He was an expert in agricultural history and manufacturing in 19th century America. He was a valued co-author. His most frequent collaborators were Jeremy Attack, with whom he authored more than two dozen articles, and Tom Weiss. He published works on such diverse topics as the economic impact studies of the Pan American Games and Indianapolis conventions.

He was interested in archival work and created several original databases that have been used by numerous scholars, most recently a Panel Database of American Agriculture. With James Foust he created the Agricultural and Demographic Records of 21,000 rural households from the 1860 census (ICPSR study 9117). With Foust and Tom Weiss he constructed a sample of U.S. Manufacturing Firms from 1850-1870 (ICPSR studies 4048 and 4071), and with Jeremy Attack he constructed a sample of U.S. Manufacturing in 1880 (ICPSR studies 9384 and 9385) and a matched sample of rural households in 1880.



He was the frequent recipient of grants and prizes for his research and teaching prowess. He received seven NSF grants and two research awards: the 1986 All-University Outstanding Faculty Award from Indiana University, and the Kamerschen-Hampden Excellence in Research Award from the University of Georgia in 2002. In 1988 *To Their Own Soil*, coauthored with Jeremy Attack, was named the Outstanding Academic Book for 1987-88 by *Choice* magazine. It also received the Theodore Saloutos Prize as the best book in agricultural history. In 1975 he was awarded the Arthur H. Cole Prize for the best article published in the *Journal of Economic History*. He was a five time winner of teaching excellence prizes at Indiana, and a two-time winner of the George P. Swift Award for outstanding undergraduate teaching at the University of Georgia.

Bateman was generous with his time. He mentored numerous graduate students, served on the editorial board of nine journals over the course of his career, and donated much time to university and professional service. Among his many committee positions were the presidency of the Business History Conference in 1982-83, and the Chair of program committees for The Business History Conference, The Economic History Association, and the Cliometrics Conference.

Most recently, he was honored by the Cliometric Society for his lifetime of achievements in research. In the fall of 2010 he was elected a Fellow of the Cliometric Society. He was inducted posthumously at the annual meeting of the Cliometric Society in May 2012. ■