David W Fletcher, December 2001

THE EARLY DEVELOPMENT OF QUANTITATIVE HISTORY IN THE UNITED STATES

In historical research, quantitative methods made use of systematic gathering, organizing, and interpreting of data to illuminate answers to queries of serious study. The use of quantitative methods borrowed from practices articulated by and widely relied upon in social sciences such as sociology and psychology. In theory, by interjecting sets and subsets of tangible realities that could be established or discredited according to mathematical formulas, the answers to questions of historical import could reach a greater degree of certainty or objectivity. This desire for objectivity seemed to result from the attempt to situate the conclusions of historical research on a more scientific basis.[1] In this respect, the search for scientific history, that logically developed from the influence of positivism in academic disciplines, followed the quest outlined by Leopold von Ranke and others in Germany in the late nineteenth century.

[1]For a skeptical view–"history is not a science"–note Chapter VIII: "Causality and 'Retrodiction' in Paul Veyne, *Writing History: Essay on Epistemology*, trans. Mina Moore-Rinvolucri (Middletown, CT: Wesleyan University Press, 1984), 144-175.

This type of scientific historical research, that was spawned by German rationalism, had depended to some extent on quantitative methods.[2] Primitive types of quantification had been employed generally by those who researched issues of economic history, political history, and social history. Sub-disciplines such as archaeology and anthropology also had used the tools of quantification. But in the United States, quantitative methods did not take hold in traditional circles of historical research until the 1960s. By then, objectivity in historical studies had begun to fall victim to the growing influence of the social sciences and the mood of subjectivism that swept the country. Ironically, historians took from social sciences their means of objectivity (i.e., quantitative methods) but then in turn used such means to make their end product more subjective (i.e., the greater uncertainty in interpretation created by the large influx of new data that fell under the rubric of social history).

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[2]So James H. Robinson, *The New History: Essays Illustrating the Modern Historical Outlook* (New York, 1912), 71-72, cited in Don K. Rowney and James Q. Graham, Jr., eds., *Quantitative History: Selected Readings in the Quantitative Analysis of Historical Data* (Homewood, IL: Dorsey, 1969), vi-vii. Rowney and Graham observed: "Historians who use quantitative methods have been noteworthy for their willingness to extend the boundaries not only of historical method but of historical subject matter also." See also Leonard Krieger, "The Horizons of History," *American Historical Review* 63 (October 1957): 62-74.

Compare Charles M. Dollar and Richard J. Jensen in their response to the objection that quantification was an alien approach borrowed from anti-historical disciplines of social science: "A brief review of the role of quantification in the development of American historiography will indicate that, on the contrary, statistical methods were important in historical analysis even *before* they became important in other social sciences." *Historian's Guide to Statistics: Quantitative Analysis and Historical Research* (Huntington, NY: Krieger, 1971), 3.

Actually, the roots of quantification in historical studies derived from much earlier origins. Charles M. Dollar and Richard J. Jensen surveyed the influence of Frederick J. Turner and his students on the quantification of political history from the late 1890s through the 1930s. They noted that Turner's *American Nation* series, which appeared in twenty-five volumes (1902-1906), and Charles Beard's *An Economic Interpretation of the Constitution* (1913) as well as his *Economic Origins of Jeffersonian Democracy* (1915) illustrated what Turner and others like Orin Libby, William Dunning, and Carl Becker believed about the broad scope of historical research: "No satisfactory understanding of the evolution of [the American] people is possible without calling into cooperation many sciences and methods hitherto but little used by the American historian. Data drawn from studies of literature and art, politics, economics, sociology, psychology, biology, and physiography, all must be used. The method of the statistician as well as that of the critic of evidence is absolutely essential."[3]

In the 1920s, quantitative methods spread to political science, research in journalism, economics, and sociology, but declined in historical research. In the 1930s, the only important historical studies that made use of quantitative methods came from highly theoretical works by agriculturists. These agricultural historians kept alive "the spark of quantification and scientific research" in the profession from the 1930s until the 1960s. Generally, this decline in emphasis on quantitative methods in historical research paralleled the waning interest in research on rural America. This situation was aggravated further by three factors: (1) a neglect by historians to

[3]Ibid., citing Turner's *The Significance of Sections in American History* (New York, 1932), 20.

adopt new statistical methods apart from the technique of cartography which had significant limitations; (2) the influence of the Beardian "economic interpretation" that made multi-factor statistical analysis seem irrelevant; and (3) the growth in availability of data gleaned from sources other than statistical compilations such as manuscript archives and newspaper files. For the most part, the resulting demise took quantitative techniques, except for the use of punch cards by Frank Owsley and his students in the 1930s and 1940s and by Merle Curti and Bernard Bailyn in the 1950s, out of the realm of historical research. Consequently, "there was no cumulative progress in quantitative techniques–indeed, the usual story after 1901 was regression. The historians of the 1950s and 1960s who wanted to learn statistics could rely on no heritage of technique from the past, and had to turn to friends in neighboring social science departments."[4]

Leaders in the field of quantification began to produce practical textbooks that aimed "to provide a step-by-step introduction to all the important techniques necessary for conducting serious quantitative research using historical data."[5] Early on, they integrated historical research and techniques like elementary descriptive statistics, measurement of correlations, special purpose statistics, data processing, and computer applications. Bibliographies were compiled to make available to historians practical guides to published data, methodologies, political studies,

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[4]Dollar and Jensen, *Historian's Guide to Statistics*, 5-7.

[5]Ibid., vii. Cf. later texts on methods: Roderick Floud, *An Introduction to Quantitative Methods for Historians* (Princeton, NJ: Princeton University Press, 1973); Konrad H. Jarausch and Kenneth A. Hardy, *Quantitative Methods for Historians: A Guide to Research, Data, and Statistics* (Chapel Hill, NC: University of North Carolina Press, 1991); Pat Hudson, *History by Numbers: An Introduction to Quantitative Approaches* (New York: Oxford University Press, 2000).

and social and economic studies. Proponents countered two fears that often led objectors to mistrust the empiricism of quantitative methods: "dehumanized history and mistrust of an alien methodology."[6] But Dollar and Jensen assured that "no historian to our knowledge has maintained that quantification is the new dispensation that will unlock all the secrets of the past and reduce the corpus of traditional historiography to so much scrap paper. The bogey of deterministic history that ignores the 'human factor' and somehow causes people to behave the way they did should not trouble the historian."[7]

With the belief that counting could assist "in the explanation of a limited class of historical problems" and that the principal value of quantification lay in it usefulness as "a means of verifying general statements" or "a systematic means of testing hypotheses," early quantifiers of historical research capitalized on the often quoted dictum of G. S. R. Kitson Clark: "Do not

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[6]Dollar and Jensen, *Historian's Guide to Statistics*, 1.

[7]They admitted that while much of the process of quantification was tedious and routine, most quantitative research, especially in the formulation of models and strategies (the most important work), remained laborious and painstaking–the result of months and sometimes years of work. In other words, it was not haphazard nor trivial. The problems with quantification in history, they believed, came from too much data or poor quality data and from a lack of interpretive theory: "Much of the criticism of the new economic history is a reaction against excessive reliance upon economic statistics and an avoidance of social and political factors. Social and political historians have never to our knowledge suggested that statistics tell all. Furthermore, it would seem that the dichotomy between 'quantitative' and 'qualitative' data is largely a false distinction. Practically any attribute that people, events, or institutions possess can be quantified in some way or another. It is true that when the data are of poor quality because of obscurity or meagerness, quantification will not work; nothing else will work well either." Thus, they called for a careful and deliberate use of quantification. Ibid., 1-2.

guess, try to count, and if you can not count admit that you are guessing."[8] With the use of a simple set of tables taken from election statistics, Richard P. McCormick labeled as myth the idea of a sizeable popular turnout during the election of 1824, contrary to statements about Jacksonian prominence by Charles and Mary Beard, Arthur M. Schlesinger, Jr., and Richard Hofstadter. Ludwig Kohlmeier illustrated canal and riverboat commerce with statistical data, and Stephan Thernstrom corrected older views about social mobility in Massachusetts with the use of census records.[9] William O. Aydelotte noted the work of several historians in simple quantitative methods: Thomas B Alexander, Bernard and Lotte Bailyn, Allan G. Bogue, Robert W. Fogel, Frank L. Owsley, and Sam B. Warner, Jr.[10]

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[8]*The Making of Victorian England* (Cambridge, MA, 1962), 14, cited in William O. Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 3-6.

[9]Ibid., 6-7, citing Richard P. McCormick, "New Perspectives on Jacksonian Politics," *American Historical Review* 65 (January 1960): 288-301; Ludwig Kohlmeier, *The Old North-West as the Keystone of the Arch of American Federal Union: A Study in Commerce and Politics* (Bloomington, IN, 1938); Stephan Thernstrom, *Poverty and Progress: Social Mobility in a Nineteenth Century City* (Cambridge, MA, 1964).

[10]Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 6-7, citing Thomas B. Alexander, "Who Were the Alabama Whigs?" *Alabama Review* 16 (No. 1, 1963): 5-19; "Alabama Black Belt Whigs during Secession: A New Viewpoint," *Alabama Review* 17 (No. 3, 1964): 181-194; Bernard and Lotte Bailyn, *Massachusetts Shipping, 1697-1714: A Statistical Study* (Cambridge, MA, 1959); Allan G. Bogue, *From Prairie to Corn Belt: Farming on the Illinois and Iowa Prairies in the Nineteenth Century* (Chicago, 1963); Robert W. Fogel, *Railroads and American Economic Growth: Essays in Econometric History* (Baltimore, 1964); Frank L. Owsley, *Plain Folk of the Old South* (Baton Rouge, LA, 1949); Sam B. Warner, Jr., *Streetcar Suburbs: The Process of Growth in Boston, 1870-1900* (Cambridge, MA, 1962).

This early work to integrate statistics and historical inquiry rested on the use of simple description rather than the more complex process of inference by which "an attempt is made to ascertain the characteristics of a large population by inspection of relatively small samples."[11] Aydelotte explained that the use of descriptive statistics, which avoided the problems inherent in inference, "generally required a few totals, a few percentages, and a few correlations in which the relationship between certain variables is examined while other variables are controlled. . . . [But] even so modest a use of quantitative methods can sometimes produce results of great interest and can be used to test historical generalizations of some scope on which there has heretofore been scholarly disagreement."[12] Yet the value of such methodology was not fully appreciated by all historians.[13] For example, Arthur M. Schlesinger, Jr. criticized the overly simplistic assumptions

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[11]Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 6-7.

[12]Ibid., 7-8.

[13]Aydelotte detailed some of the objections by historians to the use of quantification: the value, reliability, and usefulness of the approach and the practicality of the method in light of "limited materials available to historians." He believed the weightiest objection to be the limited prospect of feasibility or the perception that quantitative techniques could be used only within very narrow limits. The problem was one of epistemology and resources rather than methodology due to "the complexity of historical materials and the restrictions on historical knowledge." The difficulties came from imprecise data or inadequate and simple conceptual schemes, which failed to portray the reality of historic events and yielded computer-like computations–garbage in, garbage out. He labeled heretical the use of statistics that came "from a few not necessarily representative examples," and he referenced the discussion between Charles Beard and Forrest McDonald about the U.S. Constitution [see Lee Benson, *Turner and Beard: American Historical Writing Reconsidered* (Glencoe, IL, 1960), 167-174]. This led Aydelotte to conclude: "formal statistical presentations are feasible only for a limited range of historical problems." Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 8-11.

of statistical procedures when he asserted that "almost all important questions are important precisely because they are not susceptible to quantitative answers." Richard Hofstadter likewise countered the significance of the use of quantitative methods to verify historical generalizations. He argued from the viewpoint that statistics created new epistemological categories to the detriment of old ones that "held sway in the historian's vocabulary." Rightly, Aydelotte chided this latter criticism of quantification as flawed since "it applies equally to any form of verification."[14]

Perhaps a more forceful uncertainty from quantification came from the ambiguity of its results–the fact that concrete evidence could lead to diametric conclusions. For example, Fogel's study, *Railroads and American Economic Growth: Essays in Econometric History*, concluded that the settling of the American West would have occurred regardless of the expansion of the railroad, since transportation by wagon and water provided ample means for economic growth and the spread of people and goods westward. His interpretation of the data by systematic means contradicted a widely held tenet of historical inquiry and added a sense of ambiguity to the quest for objectivity.[15]

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[14]Ibid., 18-19, also citing Arthur M. Schlesinger, Jr., "The Humanist Looks at Empirical Social Research," *American Sociological Review* 27 (December 1962): 770; Richard Hofstadter, "History and the Social Sciences," *Varieties of History: From Voltaire to the Present*, ed. Fritz Stern (New York, 1956), 415. See Roderick Floud's response to Schlesinger, *Introduction to Quantitative Methods*, 3.

[15]Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 20.

This highlighted the need for moderation in the use of quantitative methods, since in the thinking of many historians, quantification could not possibly usurp the contributions of more "traditional" methods of historical research. Aydelotte himself noted, "Scholars of great talent have worked along what would now be described as traditional lines, and to jettison their achievements would be to deprive ourselves unnecessarily of a distinguished part of our intellectual heritage."[16] But in favor of quantification, Aydelotte showed solid support for the belief that the lack of more rigorous theoretical analysis plagued historical studies with major deficiencies. For instance, Schlesinger advocated the need for historians to develop a greater sense of critical judgment, "to criticize their assumptions, to expose their premises, to tighten their logic." H. Stuart Hughes protested the "unexamined" aspects of the treatment of causation by historians. Lee Benson and Allan G. Bogue noted the inadequate use of sophisticated theory by historians and the need to borrow such from other disciplines.[17] In this respect, the quest for quantification represented an earnest attempt to return to the empiricist roots of the modern historical enterprise but with modification from other disciplines.

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[16]William O. Aydelotte, *Quantification in History* (Reading, MA: Addison-Wesley, 1971), 13-14.

[17]Ibid., 15, citing Schlesinger, "The Humanist Looks," *ASR* 27 (December 1962): 768; H. Stewart Hughes, "The Historian and the Social Scientist," *American Historical Review* 66 (October 1960): 24-25; Lee Benson, "Research Problems in American Political Historiography," *Common Frontiers of the Social Sciences*, ed. Mirra Komarovsky (Glencoe, IL, 1957), 113-183; Allan G. Bogue, "United States: The 'New' Political History," *Journal of Contemporary History* 3 (January 1968): 5-27.

This adaptation, however, came about rather quickly and stirred a revolution in historical research methodology and critical analysis of historical texts. Even by 1960, according to Don K. Rowney and James Q. Graham, Jr., the revolution brought about by quantitative methods had appeared a decade earlier and transformed economic history into "econometric history, or cliometrics."[18] Two factors especially characterized the shift in economic history: first, the growth in interest among economists in historical studies, and second, the effect of "the application of statistics to the study of economic systems" or econometrics. A correlative development used neoclassical economic theory to interpret specific historical problems, and yet another factor came from the availability of data-crunching computers to process large pools of data efficiently.[19] Fogel likewise observed the steady growth in application of "statistical and mathematical models" to American economic history, and he remarked that "the first definitely formulated expression of the new approach" came from two articles by Alfred H. Conrad and John R. Meyer in the late 1950s.[20] By December 1960, Purdue University had hosted the first conference on Quantitative Methods in Economic History. As a result, growth in econometric

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[18]Rowney and Graham, eds., *Quantitative History*, 317, citing Lance E. Davis, Jonathan R. T. Hughes, and Stanley Reiter, "Aspects of Quantitative Research in Economic History," *Journal of Economic History* 20 (December 1960): 540.

[19]Rowney and Graham, eds., *Quantitative History*, 317-318.

[20]"Economic Theory, Statistical Inference and Economic History," *Journal of Economic History* 17 (December 1957): 524-544, and "The Economics of Slavery in the *Ante-Bellum* South," *Journal of Political Economy* 66 (April 1958): 95-130, cited in Robert W. Fogel, "The New Economic History, Its Findings and Methods," in Rowney and Graham, eds., *Quantitative History*, 320.

research and training ensued during the 1960s, as workshops multiplied and interdisciplinary programs developed.[21]

But the success of the new economic history did not fail to draw out the objections of its critics. One such critic, Fritz Redlich, decried the unverifiable "hypothetical models" of econometrics and labeled its methods "anti-empiricistic" and "anti-positivistic" that resulted in "quasi-history." A supporter, George G. S. Murphy, countered by ironically noting that Redlich's objection highlighted one of the strengths of the new approach, namely "by rigorously developing hypothetico-deductive models the cliometricians are providing economic history with 'a really defensible set of techniques' and 'coming close to what a modern empiricist might demand of it.'"[22] But the critics objected not to the methods but to the results produced by the application of quantification to economic history–its "quasi-history." Ironically, this was the very thing that made cliometrics beneficial. Fogel boldly asserted that the influence of econometrics on historical research derived from "the novelty of its substantive findings." He wrote, "If cliometrics merely reproduced the conclusions of previous scholarship, its methods would be of trivial consequence. The studies of the new economic historians have substantially

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[21]Ibid., 321. See the articles and discussions in *Journal of Economic History* 25 (December 1965): 465-717.

[22]Fogel, "New Economic History," in Rowney and Graham, eds., *Quantitative History*, 321, citing Fritz Redlich, "'New' and Traditional Approaches to Economic History and their Interdependence," *Journal of Economic History* 25 (December 1965): 480-495; George G. S. Murphy, "The 'New' History," *Explorations in Entrepreneurial History (2nd Series)* 2 (Winter 1965): 132-146; cf. Douglass C. North, "Quantitative Research in American Economic History," *American Economic Review* 53 (March 1963): 128-130; Robert W. Fogel, "A Provisional View of the 'New Economic History,'" *American Economic Review* 54 (May 1964): 377-389.

altered some of the most well-established propositions of traditional historiography. They have also yielded knowledge that was hitherto considered unobtainable concerning institutions and processes central to the explanation of American economic development."[23]

For example, Conrad and Meyer challenged the assumption that slavery handicapped the antebellum South with an archaic and unprofitable agricultural system. In a study based upon their seminal work, Yasukichi Yasuba emphasized the importance of calculating the net cost of production for rearing slaves (a holistic approach) rather than looking at net income in relation to the market price of slaves (a regional or occupational approach). A similar work by Richard A. Easterlin showed how *per capita* income in the antebellum South grew just as fast in the rest of the nation, about 1.5 per cent per annum. These investigations implied that the South depended upon slavery for its economic survival and that the slow development in the southern states from Reconstruction through World War II resulted from the devastation wreaked on the South by the North during the Civil War rather than economic stagnation during the antebellum period.[24]

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[23]Fogel, "New Economic History," in Rowney and Graham, eds., *Quantitative History*, 321. See the essays in Robert W. Fogel and Stanley L. Engerman, eds., *The Reinterpretation of American Economic History* (New York: Harper & Row, 1967).

[24]Fogel, "New Economic History," in Rowney and Graham, eds., *Quantitative History*, 323-325, citing Conrad and Meyer, "Economics of Slavery," *JPE* 66 (April 1958); Yasukichi Yasuba, "The Profitability and Viability of Plantation Slavery in the United States," *Economic Studies Quarterly* 12 (September 1961): 60-67; Richard A. Easterlin, "Regional Income Trends, 1840-1950," *American Economic History*, ed. Seymour E. Harris (New York: McGraw-Hill, 1961), 525-547.

This hotly debated issue of American slavery inspired a vigorous controversy over the use of statistics in studying history especially important socioeconomic problems like slavery.[25] Aydelotte remarked that this quantitative attempt to shed light on such a thorny historical issue represented one of many examples of a "tour de force . . . to measure what previously seemed impossible to measure."[26] He referred to a later work by Conrad and Meyer, *The Economics of Slavery and Other Studies in Econometric History* (1964), as an endeavor to assess "the profitability of slavery and the efficiency of the slave labor market in the American South before the Civil War" with conclusions that negated the commonly held idea of antebellum slavery as unprofitable.[27] Another tour de force came from Richard P. McCormick who tried to link the economic status of voters with their political choice. While the anonymity of the electoral process precluded any direct connection between voters and their particular choice, it did not negate McCormick's finding a general alignment between economic status and party affiliation.[28]

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[25]Another important topic enlightened by econometrics was the relationship of technology to productivity. Fogel detailed four categories of such studies: explanations of increases in productivity, explanations of the growth of certain industries, analyses of the diffusion of technological innovations, and evaluations of the social benefits of certain innovations. Unlike the issue of American slavery, this discussion had wider implications for European economists and historians. Fogel, "New Economic History," in Rowney and Graham, eds., *Quantitative History*, 326-328.

[26]Aydelotte, "Quantification in History," in Rowney and Graham, eds., *Quantitative History*, 13.

[27]Ibid., 14.

[28]Ibid., citing Richard P. McCormick, "Suffrage Classes and Party Alignments: A Study in Voter Behavior," *Mississippi Valley Historical Review* 46 (December 1959): 398-403.

Regardless, certain critics maintained that the task of direct measurement of political outcomes from economic variables remained flawed with inherent problems.[29]

These limitations did not stop Samuel P. Hays, though, from delivering a paper at the annual meeting of the American Historical Association (AHA) in December 1964 entitled "New Possibilities for American Political History: The Social Analysis of Political Life." In his presentation, Hays surveyed the political use of traditional economic and demographic resources like census records, tax documents, and registers of votes.[30] Almost seventy years earlier, Orin G. Libby, one of Turner's students, had quantified political history in "A Plea for the Study of Votes in Congress," *AHA Report* (1896), a study that mapped election returns and analyzed legislative roll calls. But this early interest in quantification of political history soon waned from lack of rigorous methodology.[31] By 1965, the time was right for a revitalization. In the summer of that year, a small band of professional historians gathered at the University of Michigan for a seminar on the use of data in political research.[32] The spinoff produced significant historical research by political quantifiers on popular voting trends, the use of roll call analysis, collective

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[29]Robert W. Fogel, "Reappraisals in American Economic History–Discussion," *American Economic Review* 54 (May 1964): 377-389.

[30]Compare his "Archival Sources for American Political History," *American Archivist* 28 (January 1965): 17-30.

[31]Alan G. Bogue, "United States: The 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 109.

[32]Ibid., 110, noting the report of the conference by Samuel P. Hays and Murray G. Murphey, "Research Conference on Political Data: Historical Analysis of Quantitative Data" (Ann Arbor, MI, 1965).

biographies about political elites, presidential elections, political ideology during the Jacksonian period, and issues associated with quantitative methodology.[33] Bogue recognized the work of McCormick and Benson as the "most impressive exhibits of the new historical persuasion," but he likewise applauded the work of Joel Silbey on party alliances in Congress during the 1840s and early 1850s, the study of George Daniels on the meaning of ethnic loyalties during the 1860 presidential election, the emphasis of Stanley Parsons on the slight negative correlation between mortgage interest rates in Nebraska and the Populist vote, and the collective biographical work of William T. Kerr, Jr. that compared sources of support for Conservatives and Progressives.[34]

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[33]Bogue, "U.S.: 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 110-111, citing George Daniels, "Immigrant Vote in the Election of 1860: The Case of Iowa," *Mid-America* (July 1962); Howard W. Allen, "Studies of Political Loyalties of Two Nationality Groups: Isolationism and German-Americans," *Journal of the Illinois State Historical Society* 57 (Summer 1964): 143-149; Gerald Wolff, "The Slavocracy and the Homestead Problem of 1854," *Agricultural History* (April 1966); Howard W. Allen, "Geography and Politics: Voting on Reform Issues in the United States Senate, 1911-1916," *Journal of Southern History* 27 (May 1961): 216-228; Grady McWhiney, "Were the Whigs a Class Party in Alabama?" *Journal of Southern History* 23 (November 1957): 510-522; Gerald W. McFarland, "The New York Mugwumps of 1884: A Profile," *Political Science Quarterly* 78 (March 1963): 40-58; Robert A. Skotheim's corrective study, "A Note on Historical Method: David Donald's 'Toward a Reconsideration of Abolitionists,'" *Journal of Southern History* 25 (August 1959): 356-365; Richard P. McCormick, "Suffrage Classes and Party Alignments: A Study in Voter Behavior," *Mississippi Valley Historical Review* 46 (December 1959): 397-410; Charles Sellers, "The Equilibrium Cycle in Two-Party Pollitics," *Public Opinion Quarterly* 29 (Spring 1965): 16-38; Lee Benson, "Research Problems in American Political Historiography," *Common Frontiers of the Social Sciences*, ed. Mirra Komarovsky (Glencoe, CA, 1957); Lee Benson, *The Concept of Jacksonian Democracy: New York as a Test Case* (Princeton, NJ, 1961); Samuel P. Hays, "History as Human Behavior," *Iowa Journal of History* (July 1960).

[34]Bogue, "U.S.: 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 112.

But Bogue emphasized that these ventures in quantitative methods by political historians were basically "unsophisticated in social-science terms." Until the mid-1960s, social scientists like Walter D. Burnham, William N. Chambers, Robert A. Dahl, Manning J. Dauer, V. O. Key, Theodore J. Lowi, Duncan MacRae, John Schmidhaeuser, and Ruth C. Silva had written more behavioral history on political subjects than historians had written. But historians were catching up as they began to achieve greater expertise in quantification by forming institutional links to their fellow quantifiers in the social sciences. Lee Benson, Charles Sellers, Samuel P. Hays, and William Riker led the effort to centralize the data archives of the Inter-University Consortium for Political Research and thereby reduce repetitious labor by historians and political scientists.[35] In 1964, the Center for the Advanced Study in the Behavioral Sciences created an interdisciplinary organization called the Mathematical Social Science Board (MSSB). The fields of anthropology, economics, history, geography, linguistics, political science, psychology, and sociology were represented, as well as the disciplines of mathematics, statistics, and computer science. With grants from the National Science Foundation, MSSB conducted training programs, research and training seminars, advanced research workshops, and special conferences.[36] Those who had already integrated their research and quantitative methods–Charles Tilly, Richard A. Easterlin, Robert W. Fogel, Ronald Lee, Gilbert Shapiro, and Stephan Thernstrom–served on the initial

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[35]Ibid., 114-115.

[36]See the preface in Leo F. Schnore, ed., *The New Urban History: Quantitative Explorations by American Historians* (Princeton, NJ: Princeton University Press, 1975). This volume was one of several titles published under the auspices of MSSB.

history advisory committee of the MSSB, and this inclusion meant that the convergence of history with the social sciences in primary institutional settings had begun to take shape.

Even before this time, Bogue traced notable predecessors of the confluence of social science with political history, especially in regards to the influence of behaviorism–James C. Malin, Oscar Handlin, Paul W. Gates, and Thomas C. Cochran.[37] In particular, he noted the work of Merle Curti, *The Making of an American Community: A Case Study of Democracy in a Frontier County* (1959), in which a reputable intellectual historian gave legitimacy to the methods of quantification, and he called this "a milestone in American historiography."[38] But Robert A. Dahl, according to Aydelotte, labeled the use of behavioristic approaches in political science as a movement of protest–"scholars who had become dissatisfied with the achievements of conventional political science attempted to work out methods and approaches that would provide theories of a systematic sort that could, in turn, be tested by close and rigorously controlled observation."[39]

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[37]Bogue, "U.S.: 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 117.

[38]Ibid., 118.

[39]Aydelotte, *Quantification in History*, 17-18, citing Robert A. Dahl, "The Behavioral Approach in Political Science: Epitaph for a Monument to a Successful Protest," *American Political Science Review* 15 (December 1961): 763-772. Dahl paralleled the "little behavioral revolution" in the historical profession with the new directions in historical research evidenced by the publication of articles and books about quantitative methods, the appointment of a standing committee in the AHA in 1962 to deal with issues about quantitative data, the beginning of *The Historical Methods Newsletter* in 1967, and the publication of research tools such as textbooks and bibliographical guides.

This "new trend" in American political historiography drew out a negative note from Cochran to the effect that "no one has yet developed a model in which all the variables can be quantified."[40] No doubt, the role of quantification in historical inquiry stirred excitement, but some scholars remained guarded due to the limits they perceived in strictly verifiable approaches. Optimists nevertheless saw a bright future for the new political history. Benson wrote, "The prediction does not seem absurd that . . . by 1984, a significant proportion of American historians will have accepted [Henry T.] Buckle's two basic propositions: (1) past human behaviour can be studied scientifically; (2) the main business of historians is to participate in the overall scholarly enterprise of discovering and developing general laws of human behaviour."[41] For some, this integration of the behavioristic aspect of the social sciences with the historical enterprise meant the formal realization of a new sub-discipline–social history.

Until the 1960s, social history functioned as a hybrid with either economic or intellectual history. As social history gravitated toward cultural history, it resisted the "tested and tangible facts" of quantification in favor of "moods, styles, and other evanescent substances."[42] On the other hand, social history that treated the tangible seemed trivial to traditional historians and

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[40]Bogue, "U.S.: 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 122, citing Thomas C. Cochran, *The Inner Revolution: Essays on the Social Sciences in History* (New York, 1964), 142.

[41]Bogue, "U.S.: 'New' Political History," in Rowney and Graham, eds., *Quantitative History*, 126, citing Lee Benson, "Quantification, Scientific History, and Scholarly Innovation," *AHA Newsletter* (June 1966), 12.

[42]Jacques Barzun, "Cultural History: A Synthesis," in Stern, ed., *The Varieties of History*, 388, cited in Rowney and Graham, eds., *Quantitative History*, 179.

came to be called "history with the politics and the ideas left out."[43] In time, criticisms subsided and the new social history gained respectability. Social history came to be seen as a true sub-discipline "whose object is the study of society in all its complex relationships."[44] Above all, though, social history appeared to many to be the necessary type of history for the times. "In spite of its difficulties and demands," H. J. Perkin believed, "the neglect of social history is only

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[43]H. J. Perkin similarly quoted several definitions to illustrate the confusion of meaning about social history, and then he raised the question: "Is it, in the words of Professor G. M. Trevelyan, 'the history of a people with the politics left out,' or, in those of Dr D. A. Rowse, how society consumes what it has produced? Is it economic history without the more technical problems of currency, credit, and taxation, or even without the economics? Is it, stripped to the skeleton, simply how men spent their leisure hours? . . . What is the field of the social historian? How can we find a place for him?" Perkin affirmed a close correlation between economic and social history, and certainly he advocated use of empirical data, such as demographics. But he chided social history as "nothing more and nothing less than the history of society . . . [with] its wayside hazards. On the one side there is, since nothing human happens outside society, the whirlpool of exhaustiveness, of totality, the desperate, plunging end of those 'still climbing after knowledge infinite.' On the other side prowls the devouring monster of social science." He surveyed the possibilities for the first type of social history–ecology, anatomy, physiology, pathology, and psychology–and concluded, "If so capacious a study as social history, thus delimited, sounds a superhuman task, that is because, in relation to any one human being, it is so." This raised two thorny problems with social history, that of presentation and that of sources. The first he called the "rank-and-file dilemma" which, quoting J. H. Hexter, was like Heisenberg's indeterminacy principle in quantum physics: "The historian cannot simultaneously pursue all the aspects of a complex society *and* show the whole society in motion. He cannot write both narrative and topical history at the same time. But somehow he must try" [J. H. Hexter, "A New Framework for Social History," *Journal of Economic History* 15 (December 1955): 423]. The second problem of sources concerned the difficulty with such a wide variety of possibilities. The demands on the social historian to be researcher, archaeologist, statistician, and literary critic were great. H. J. Perkin, "Social History," *Approaches to History: A Symposium*, ed. H. P. R. Finberg (Toronto: University of Toronto Press, 1962), 51-59, 74-76.

[44]Rowney and Graham, eds., *Quantitative History*, 179, citing Mario S. Depillis, "Trends in American Social History and the Possibilities of Behavioral Approaches," *Journal of Social History* 1 (Fall 1967): 38-60.

apparent." He viewed the emphasis on social history as egocentric and a part of the prevalent *Zeitgeist*: "Every age has its own interest in the past, its own version of the perennial question of Milton's Adam, 'How came I thus, how here?' The interest of our own age can only be described as social. . . . 'Social questions,' Beatrice Webb confided to her diary in 1884, 'are the vital questions of today: they take the place of religion.' In the 1960s they take the place of everything."[45] By the end of the decade, Rowney and Graham could summarize: "Social groups, social structure, social conditioning factors, social mobility, career-line analysis, to mention some of the more common borrowings [from sociology], are terms so widely used that a graduate history student would have to be unsophisticated indeed not to have a nodding acquaintance with most of them."[46] But problems with the methods and results of quantification still troubled many in the historical profession.[47]

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[45]Perkins, "Social History," in Finberg, ed., *Approaches to History*, 79, 81-82.

[46]Rowney and Graham, eds., *Quantitative History*, 180; cf. Richard Hofstadter, "History and Sociology in the United States," *Sociology and History: Methods*, eds. Seymour M. Lipset and Richard Hofstadter (New York: Basic, 1968), 14-15.

[47]After a decade of much work in the field, Aydelotte could say that the revival in interest in applications of quantitative methods to historical queries had occurred "within only a limited segment of the profession. . . . Anyone who thinks that this is a dead issue and that the battle about quantification is over should do some browsing in the bound volumes of *History and Theory*. There is obviously sharp disagreement on the subject. Questions have been raised about the value of quantitative methods, the importance and significance of the theoretical purposes for which they can be used, and the extent to which it is feasible to use them at all in dealing with historical materials and historical problems." Aydelotte, *Quantification in History*, 2.

By 1970, the enthusiasm for the novelty of social science approaches to history began to wane, and quantifiers searched for ways to refocus their efforts.[48] In the midst of a diverse and substantial literature on quantification, historians sought out something pragmatic, something useful. In other words, they wanted results: "It is useless to try to lay down rules for the profession as a whole. Little can be gained by arguing in the abstract whether historians should generalize or tell stories. Historians do different things, and the test of the validity of what they do should be professional judgment of the results rather than the conformity of these results to a formula."[49] As a result, those who worked with large chunks of data felt anxious to make some

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[48]The perspective on this varied within the profession. Those who favored more traditional methods of research wanted to detach themselves from the new social history and sought blame for the lack of productivity elsewhere. C. Vann Woodward reported a decreased interest in history to the AHA annual meeting in 1969, and Oscar Handlin told the 1970 annual AHA conferees that the blame rested on the historical profession itself from a "decline in craftsmanship" since a generation earlier (i.e., the 1930s). But the judgment was different from those who did not see the 1930s as some sort of golden age of historical scholarship. Those historians who favored borrowing quantitative methods from the social sciences lauded the efforts of the French *Annales* school and observed that social history should be viewed as in its infancy. They agreed with Eric J. Hobsbawm's optimistic viewpoint about "the remarkably fluorishing state of the field. It is a good moment to be a social historian." According to them, this was true because "the professional historian of the 1970s, less concerned about the 'completeness' of his archive than his nineteenth-century predecessor, realizing that he is himself in part the creator of that archive, shows a hospitality to the study of near-contemporary events that would have been inconceivable fifty years ago. While he still has a long distance to traverse before he reclaims whole fields that have fallen into the hands of sociologists and political scientists–because no historical claim was ever made for these fields–this may in fact increasingly be his purpose." Stephen R. Graubard, "Preface," *Historical Studies Today*, eds. Felix Gilbert and Stephen R. Graubard (New York: W. W. Norton, 1972), vii-x.

[49]Ibid., 5.

practical use of it.[50] Francois Furet noted that the phrase itself–"quantitative history"–had become fashionable, but it had lost any definite meaning. Furet did admit the usefulness of quantitative methods for three general concerns: (1) problems that came from "the technology of research in the social sciences" or the methods by which historians treat their data; (2) problems that came from questions raised by economic historians on "retrospective econometric" issues (which especially affected the work in France); and (3) problems that dealt with "the study of time, of the diachronic dimension of phenomena" or the challenges of what Pierre Chaunu labeled "serial history."[51]

Felix Gilbert likewise claimed for quantification a utility that could help the intellectual historian assess the "simple and repetitive" ideas in popular literature that he claimed were "of secondary interest." He noted the desire of such researchers to find out about the scope of mass

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[50]Sampling came to be regarded as an important method due to the overwhelming quantity of evidence. By necessity sampling had to be done, but R. S. Schofield cautioned: "Sampling deserves serious consideration for the benefits it may confer; but it cannot in any way reduce the necessity for a strict appraisal of the evidence in its historical context. Indeed, by compelling a careful consideration of the objects of an enquiry and the nature of the evidence available, sampling should reinforce rather than replace the fundamental methods of historical research." "Sampling in Historical Research," *Nineteenth-Century Society: Essays in the Use of Quantitative Methods for the Study of Social Data*, ed. E. A. Wrigley (New York: Cambridge University Press, 1972), 184.

One thing that sparked this deluge of data and the greater utilization of historical source material was newer technology in the copying and reproduction of documents. Another factor was the centralization in libraries and museums of manuscript copies, and this facilitated the reconstruction of original texts. This collecting and replicating of source documents both helped and complicated the goals of quantitative history. See Felix Gilbert, "Introduction," in Gilbert and Graubard, eds., *Historical Studies Today*, xii-xiii.

[51]Francois Furet, "Quantitative History," in Gilbert and Graubard, eds., *Historical Studies Today*, eds., 45.

literature–editions, distribution, and quotations. "This is a field for statistical investigation," he remarked, "and has become more manageable through recent technical inventions. But we are only at the beginning of establishing the possibilities and limitations of statistical methods in this area."[52] He discussed the competition and the collaboration between social and intellectual history. Quantification was important to both, no doubt, but especially for the intellectual historian in order to counter the claim that "he operates with vague terms like 'influence' or 'dominating trend,' that his product lacks in precision and is 'unscientific.'"[53]

Like Gilbert, social history quantifiers sought to legitimize their use of data and broaden its interpretation with theoretical paradigms. Eric J. Hobsbawm, for instance, highlighted "an approach to history systematically different from the classical Rankean one" and a marked advance on the work of the French *Annales* school and the initial social economic history (i.e., in *Comparative Studies in Society and History*). He observed, "What interested historians of this kind was the evolution of the economy, and this in turn interested them because of the light it threw on the structure and changes in society, and more especially on the relationship between classes and social groups."[54] This inductive technique allowed historians to bridge the gap

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[52]Felix Gilbert, "Intellectual History: Its Aims and Methods," in Gilbert and Graubard, eds., *Historical Studies Today*, 153.

[53]Ibid., 154.

[54]Eric J. Hobsbawn, "From Social History to the History of Society," in Gilbert and Graubard, eds., *Historical Studies Today*, 3.

between the elites and the commoners in society, to give the masses a voice and provide a witness to their neglected perspective.

To this end, Lawrence Stone elaborated uses of quantitative methods for *prosopography* or collective biography ("multiple career-line analysis" according to social scientists). He suggested that case-study and statistical methods were appropriate for a number of fields, so much so that "the mass school had a flourishing political subbranch called *psephology*, or the analysis of the voting behavior of the electorate; and the elitist school has spawned a more scientific subbranch, roll-call analysis of the legislature."[55] More often though, interpreters got wrapped up in minutiae, or they found that the amount of stuff they had to deal with was simply overwhelming.[56] Still others, especially if they were trained in the disciplines of pure or applied science rather than the social sciences, obscured the interpretation of historical phenomena by

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[55]Lawrence Stone, "Prosopography," in Gilbert and Graubard, eds., *Historical Studies Today*, 112-113. Cf. Part VI, "Voters and Publics: Studies in Legislative and Electoral History," in Rowney and Graham, eds., *Quantitative History*, 369-470.

[56]This proved true of historians who tried to distill huge chunks of data, mostly derived from government sources for official uses, from nineteenth-century Great Britain. "During the nineteenth century the state became involved in gathering more and more information about its subjects. To the traditional interests in trade, taxable wealth, religious schismatics and war potential, were added many new interests which resulted in immense compilations of data. Some of these were eventually tabulated and published, though far more were not. Even the material which was published was so bulky that it is seldom consulted. . . . Because so much information was collected by the state during the course of the last century, there are great opportunities for studying nineteenth-century society in depth, but also special difficulties in doing so." Wrigley, ed., *Nineteenth-Century Society*, 1.

Also, compare the massive "Philadelphia Social History Project" and its goal to trace social mobility by studying the city's entire population. Georg G. Iggers, *Historiography in the Twentieth Century: From Scientific Objectivity to the Postmodern Challenge* (Hanover, NH: Wesleyan University Press, 1997), 45.

language that was too technical and beyond the grasp of historians who had little training in mathematics.[57]

But technicalities from specialists and hindrances from traditionalists did not stop the vigorous work of the quantifiers. For example, efforts in population and demographic studies shifted from data collecting to model building.[58] Researchers sought to overcome the tendency toward measurement and description: "The statistical work which gets done tends to have an inductive cast–searching for patterns rather than determining whether expected patterns exist. Demographic historians like to justify their emphasis on description and measurement in terms

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[57]Elliott W. Montroll and Wade W. Badger developed strategies by which mathematical models could be used to analyze complex social phenomena. But the book, written by two physicists from the University of Rochester, resembled a technical science text rather than a treatise on history, even though they included a superb discussion about speculation and the stock market. Of importance, perhaps, to demographers and urban specialists were their chapters on populations and vital statistics, vehicular traffic, atmospheric pollution in cities, and the growth of cities. *Introduction to Quantitative Aspects of Social Phenomena* (New York: Gordon and Breach, 1974).

In a similar vein, an earlier work by Nicholas Rashevsky tackled difficult historical constructs such as the interaction of individuals in a society, imitative behavior, changes in the behavior of society, belief and prejudices, the formation of early villages, trade between cities as a vehicle of information, rates of cultural development, and history as the development of a social organism. While he affirmed the value of quantitative methods in historical inquiry, he strongly indicated their incomplete and theoretical nature. He rigorously applied technical equations of relational mathematics to cultural and social questions of history, but his theoretical models seemed more appropriate to a mathematics textbook than an analytical or a descriptive treatment of historical issues. Predictably, his work caught the attention of very few professional historians, since the genre definitely resembled mathematics not history. *Looking at History through Mathematics* (Cambridge, MA: M.I.T. Press, 1968).

[58]For a straightforward treatment to bridge the gap between demographic studies and its use by historians, see Louis Chevalier, "Towards a History of Population," *Population in History: Essays in Historical Demography*, eds. D. V. Glass and D. E. C. Eversley (Chicago: Aldine, 1965), 70-78.

which are congenial to their allies the demographers: you have to get the facts right before you can explain them. On the whole, they dislike the obvious counter: in order to know which facts matter, you need to have a theory."[59] In this way, noted Charles Tilly, demographic history followed the earlier evolution that occurred in economic history: "The demographic historian draws on theoretical resources which are more disparate and less well developed–some economic theory, some sociology, some anthropology, some demography, and a good deal of reformulation of existing historical arguments. Nevertheless, today's demographic history resembles the economic history of two decades ago in being ripe for a shift from description to the formulation and testing of determinate models."[60] But the work of Richard Easterlin on the baby boom after World War II, Franklin Mendels on the link between demographics and the expansion of the cottage industry, and E. A. Wrigley on the fluctuation in vital rates in English villages showed that the theory of transition from high, unstable fertility and high, unstable mortality in pre-industrial populations to low, fluctuating fertility and low, stable mortality in mature industrial populations seemed to create more problems than it solved.[61]

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[59]Charles Tilley, "The Historical Study of Vital Processes," *Historical Studies of Changing Fertility*, ed. Charles Tilly (Princeton, NJ: Princeton University Press, 1978), 5-6.

[60]Ibid.

[61]Ibid.

This reevaluation of long-held tenets on the basis of newly uncovered data caused many historians to reassess the validity of quantitative methods for their particular sub-disciplines.[62] This also forced quantifiers to address two basic problems of communication between historians and social scientists: (1) lack of a common stock of terms or linguistic identifiers to convey theoretical concepts between disciplines; and (2) unrealistic expectations concerning plausible outcomes of quantification–the scope and reliability of its findings.[63] Indeed, some quantitative historians affirmed the undesirability to develop "universal laws" or "complete explanations" from their research. With a degree of reservation, they noted that "a resort to quantitative methods is more likely to restrict than to broaden the focus of a particular inquiry. . . . This

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[62]For example, see R. W. Fogel and S. L. Engerman, *Time on the Cross: The Economics of American Negro Slavery* (Boston: Little, Brown and Company, 1974). The harsh criticism of *Time on the Cross*, especially by cliometricians, caused many historians to question the objectivity of quantification: "History is not an exact science. . . . Ultimately the most meticulously weighed and finely measured data, both numerical and literary must be subjectively interpreted by the historian, for historical facts do not speak for themselves." Kenneth Stampp, "Introduction: A Humanistic Perspective," *Reckoning with Slavery: A Critical Study in the Quantitative History of American Negro Slavery*, ed. Paul A. David (New York, 1976), 1-2, cited in Naomi R. Lamoreaux, "Economic History and the Cliometric Revolution," *Imagined Histories: American Historians Interpret the Past*, eds. Anthony Molho and Gordon S. Wood (Princeton, NJ: Princeton University Press, 1998), 72-74. See also Herbert G. Gutman, *Slavery and the Numbers Game: A Critique of Time on the Cross* (Urbana, IL: University of Illinois Press, 1975); Robert Fogel and Geoffrey Elton, *Which Road to the Past? Two Views of History* (New Haven, CT: Yale University Press, 1983).

[63]One problem was that "quantitative historians sometimes find themselves occupying a delicate middle ground, a kind of no man's land, between statisticians and traditional historians, in which they are trying to apply the technical devices developed in one field to the substantive problems that have been raised in the other. A historian who tries to bridge the gap is sometimes left dangling in between and has trouble in making effective contact with the specialists in either direction." William O. Aydelotte, Allan G. Bogue, and Robert W. Fogel, eds., *The Dimensions of Quantitative Research in History* (Princeton, NJ: Princeton University Press, 1972), 7-9.

restriction of focus, however, is not a disadvantage of the method but, properly considered with all that it implies, its principal merit. . . . Restriction of focus is the price that must be paid for being more sure of one's ground."[64] But this did not completely invalidate the methodologies of quantification, since such "permits easy control over large, in some cases extremely large, masses of information that would be difficult to handle by other means, so difficult indeed that in many cases it would scarcely be practicable to attempt the task."[65] This perspective of moderate pragmatism allowed quantifiers in the 1970s to eschew "abstract discussion of methodology" for the more "concrete" application of mathematical methods to specific problems like rural ownership of land, religion and occupational mobility, social mobility and political radicalism, urban economics, and political power in the legislative branch of government.[66]

The diversification and specialization of social history helped inaugurate novel areas of inquiry such as family history and the new urban history. Concerning the former, historians benefitted from previous analyses by their sociological counterparts, as they started to look at some of the "small-scale processes" (i.e., variations in family behavior) and the interaction of these dynamics within "the social and cultural milieu in community contexts."[67] As quantifiers

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[64]Ibid.

[65]Ibid.

[66]See a wide range of applications from the French perspective in Jacques Le Goff and Pierre Nora, eds., *Constructing the Past: Essays in Historical Methodology*, trans. David Denby, et al. (London: Cambridge University Press, 1985).

[67]See Tamara K. Hareven and Maris A. Vinovskis, eds., *Family and Population in Nineteenth-Century America* (Princeton, NJ: Princeton University Press, 1978), 3.

opened up new windows for the analysis of rural household processes and the demographics of fertility (i.e., farm families in old and new areas of northern states in 1860, patterns of childbearing in late nineteenth-century America, changes in black fertility from 1880 to 1940, and patterns of consumption and family income strategies in late nineteenth-century America), they realized that, except for the preindustrial period, historians had failed to provide "a systematic analysis of the relationship between demographic processes and family and household structure." This signaled the serious quantifiers to look for directions toward "the future integration of these areas."[68]

The concentration of research on special issues associated with the history of urbanization, which was of concern to economists, geographers, and sociologists as well as historians, definitely challenged the integrative skills of those so inclined toward quantification.[69] As early as 1968, a volume edited by Stephan Thernstrom and Richard Sennett postulated a "new urban history" with three distinct traits: (1) the integration of sociological theory and historical data; (2) the use of quantitative materials; and (3) the broadening of urban studies to include

[68]Ibid., 4.

[69]The work edited by Leo F. Schnore, *New Urban History*, brought together three distinct groups of researchers: historical economists (Claudia D. Goldin, Robert Higgs, Joseph A. Swanson, and Jeffrey G. Williamson), historical geographers (Martyn J. Bowden, Allan R. Pred), and urban historians (Kathleen N. Conzen, Kenneth T. Jackson, Zane L. Miller, and Gregory H. Singleton). The first group depended on a lot of mathematics and statistics; the second occupied a middle ground; and the third worked with much less technical methodology.

social experiences of ordinary, unexceptional people.[70] But over time, Thernstrom learned that the label "new" might be misleading, just as the idea of an "old" monolith was too simple. He surmised that "urban" as a specialized branch of history was probably not correct, and that the use of the phrase "new urban history" to echo "new economic history" was overworked. The real differences rather than semantics, he believed, came from examination of urban phenomena with greater emphasis on quantitative approaches, less dependence on descriptive methods, and more application of theory.[71] True, Thernstrom and others hesitated to tackle "issues of urban leadership and broader questions concerning the evolving institutional structure of the American city," since they perceived that "psychologizing at a distance–whether through time or across cultures–[was] a hazardous and frustrating business."[72] But the reliance on case studies by some of the "old urban historians" like Carl Bridenbaugh and Blake McKelvey failed to convince more thoroughgoing quantifiers.[73]

At first, the new urban historians devoted their attention to a limited range of interpretive issues that reflected a sort of microscopic examination–issues like social mobility, spatial

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[70]*Nineteenth-Century Cities: Essays in the New Urban History* (New Haven, CT: Yale University Press, 1969), vii.

[71]Schnore, ed., *New Urban History*, 6, citing Stephan Thernstrom, "Reflections on the New Urban History," *Daedalus* 100 (Spring 1971): 359-375.

[72]Schnore, ed., *New Urban History*, 4-5.

[73]For example, see Peter R. Knights, *The Plain People of Boston, 1830-1860: A Case Study in City Growth* (New York: Oxford University Press, 1971), 3-10.

patterns, and urban stratification.[74] But early works on cities seemed to focus on a select group of elites rather than the common people, and this created in urban studies the lack of a "grassroots" type of history or a history "from the bottom up." A ready solution to the problem lay in the "available and largely unexploited historical sources which could be used for these purposes." The difficulty, though, arose from how to tap into these resources, since "the sheer quantity and complexity of the information . . . was bewildering."[75] Fortunately, the improvement in computer technology eased some of the laborious research required of urban quantifiers. Faster computer systems with larger storage capacities allowed investigators "to do in one setting kinds of microscopic social analyses that were previously impossible, except in communities with a very small population."[76] But this utility also held a distinct disadvantage in that new urban research–although a corrective to past distortions about urban population fluidity, class and ethnic differentials in spatial mobility, and rates and trends in social mobility–remained heavily oriented to quantitative methods, microscopic inquiries, and theoretical interpretations. This pleased many of the urban quantifiers. They knew that their blunders were "at least a little

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[74]The application of quantifiable data to sociological questions brought to light other areas of opportunity in family studies, neighborhood studies, urban institutions, and the interaction of labor organizations and the urban environment. Schnore, ed., *New Urban History*, 8.

[75]Stephan Thernstrom, "Reflections on the New Urban History," in Gilbert and Graubard, eds., *Historical Studies Today*, 321.

[76]Ibid., 326.

more open to exposure and future correction, since the procedure itself forces an investigator to make explicit assumptions which are left implicit in other kinds of work."[77]

Overall, the utility of explicitness gave quantification a negligible advantage over traditional approaches to historical research in the era of post-modern fragmentation.[78] In spite of limitations in methods and controversies over application, by the close of the 1970s and well into the 1980s, quantitative methods remained an important part of several sub-disciplines of history.[79] Quantitative history understandably never became its own sub-discipline under the broad historical umbrella, and this probably was never intended by those who promoted quantitative methodologies. Nor did quantifiers reach any consensus regarding the theories that should control the research process. The use of quantification in historical research predictably followed the pattern of so many other beneficial, as well as problematic, tools. The productivity of the implement followed the creative hand that guided it along the path, and the type of field plowed offered nuances of meaning for a particular subject's context and interpretation. Hence,

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[77]In spite of limitations, Thernstrom voiced a strong plea for quantification: "The austerely objective facts uncovered by empirical social research influence the course of history as they are filtered through the consciousness of obstinately subjective human beings. Religion, ideology, cultural traditions–these affected human behavior in the past and shaped the meaning of the demographic and ecological patterns which can be neatly plotted on a map or graph. If we fail to grapple with these dimensions of the past and make no effort to examine them in the light of what we know from harder data, we will have shirked the most difficult but also the most rewarding of challenges." Ibid., 332.

[78]See Martha Howell and Walter Prevenier, *From Reliable Sources: An Introduction to Historical Methods* (Ithaca, NY: Cornell University Press, 2001), 92-97.

[79]Hudson, *History by Numbers*, 5.

quantitative means adapted well to certain types of historical research, especially demographics and economics, and in a more limited way, intellectual, political, and social history.[80]

In a real way, even though a period of *glasnost* in historical research emerged from the murky environment of post-modernism, historical linguistics forced the discipline into a decided retreat away from perspicuity.[81] In no small measure, the reliance on quantification by some historical researchers provided no relief but rather aggravated the situation. Instead of gaining ground with the aid of considerably more data and, theoretically, a greater understanding of the processes of the past, objectivity set out on a path of seemingly irreversible decline. With the demise of objectivity, the empirical knights in their shining quantitative armor gave up the quest for unadulterated scientific history and consequently scattered to their respective disciplinary domains.[82] In their individual areas of expertise, though, these quantifiers continued to challenge, to refine, and to reshape modern views about the past. By their resolve, quantitative history has persisted as a productive element of historical research. For the most part, a positive contribution to the expansive pool of empirical data for historical studies has resulted.

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[80]Ibid., 6.

[81]See Nancy S. Struever, "Historiography and Linguistics," *International Handbook of Historical Studies: Contemporary Research and Theory*, eds. Georg G. Iggers and Harold T. Parker (Westport, CT: Greenwood, 1979), 127-150. Cf. "History and the Study of Culture," in Carl E. Schorske, *Thinking with History: Explorations in the Passage to Modernism* (Princeton, NJ: Princeton University Press, 1998), 219-232.

[82]See "Every group its own historian" in Peter Novick, *That Noble Dream: The 'Objectivity Question' and the American Historical Profession* (Cambridge: Cambridge University Press, 1988), 469-521.

But two perplexing questions have lingered in the minds of these historical empiricists. First, what comprehensive and inclusive interpretive structures should guide quantifiers as they amass data on any given historical topic? Second, what definable goals and limits should quantifiers place on the quality and quantity of their data? These basic questions have engaged quantifiers in the United States for the past four decades, so the issues have not changed. But important changes have been forced upon professional historians as a result of the difficulty of the questions and the uncertainty of the answers, both intensified by constant multiplication of data and myriad voices of interpretation. Historians who are proficient in quantitative methods can face the challenges by balancing the dual nature of their task–to uncover data and interpret it carefully. In this way, for the sake of empirical historical inquiry in the midst of post-modern uncertainty, they can build more positive epistemological foundations.

David W Fletcher, December 2001

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