

# The invisible science of the invisible hand: the public presence of economic sociology in the USA

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In the USA, the public visibility of economic sociology (ES) has been abysmal, especially in contrast to economics. We start with two case studies where economists borrowed ideas from sociologists, executed them at not particularly high levels and still received great publicity. Once we established that economics gets better press even with less original and overall weaker scholarship, we bracket issues of content and proceed to observe other, institutional mechanisms that privilege economists. As economic sociologists receive less notice because they are sociologists and not economists, we analyse the wider discipline of sociology. We find that sociology is more fragmented both as a discipline and as a profession, it has lost many of its outside constituencies by the 1980s, has not developed a mediating layer of journalists, works on a longer time-scale, and has had mixed success in education. We conclude with recommendations how ES can increase its profile in the USA.

## **1. Introduction**

The public visibility of sociology and economic sociology (ES) in particular has been abysmal in the USA. Sociology as a whole is slipping from the public eye since its heydays in the 1970s. In *The New York Times*, economics is five times more likely to appear than sociology. If this were to reflect a shift in interest toward economic concerns, one would expect ES to grab more attention than other sociologies, but as far as the public is concerned, ES is almost a clandestine operation. *LexisNexis* shows about a dozen mentions of the phrase ‘economic sociology’ in the last five years. In the *New York Times*, in the past quarter of a

century it is mentioned just once and only three times in *The Wall Street Journal* since 1985. By contrast, US economics has been spectacularly successful at entering the public sphere and disseminating its academic ideas to a wider public through the media. At first glance, this may seem surprising. Economics is not a discipline easily accessible to lay people. Economic departments usually produce a highly abstract discourse, disconnected from the real world and completely oblivious to the uninitiated. Some self-critical economists even refer to their discipline as ‘autistic’.<sup>1</sup> In fact, precisely some of the same qualities that lend economics academic prestige—its deductive formalism, mathematization, fabricated models and abstracted rhetoric—make it an unlikely candidate for popular consumption. By contrast, sociological research, with its inductive, narrative, sometimes even colloquial presentation, should be a much easier sell in the media.

Some explain this difference in visibility with the quality of the ideas. Economics, so the argument goes, has better analytical tools, produces more interesting ideas and tests them more rigorously than sociology. Without disputing that economics often does produce interesting ideas of high quality that are indeed tested with great rigour, we will start with two case studies where economists borrowed ideas from sociologists, executed them at not particularly high levels but still received publicity that economic sociologists who developed those ideas were never granted. Moreover, these ‘discoveries’ were presented in the press as revolutionary, novel and exciting without much reference to the body of literature already accumulated in sociology. By looking at ideas that economists borrow from sociologists, we can bracket (hold constant) many of the issues concerning content.

The line between new renditions of old ideas and new discoveries is often difficult to draw and as ideas travel from one discipline to another they necessarily change. This could raise the question: is a sociological idea the same idea once it is transplanted into economics? Luckily, in the context of our investigation, this is a less vexing problem than it seems. Since we are looking at these arguments through the low intellectual resolution of popular discourse, we do not have to pay heed to subtle differences that get lost in the popular translation.

Once we have established that economics gets better press even with less original and overall weaker science, we can shed arguments about creativity, rigour and style, leave them for a time in the coatroom at the lobby and enter the door of sociological analysis to observe other, institutional mechanisms that privilege economists. Because ES suffers from ailments rooted in its disciplinary

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<sup>1</sup>Now there is a movement among economists to counter the autistic tendencies of their discipline. Their journal is the *Post-Autistic Economic Review*; <http://www.paecon.net/PAEReview/index.htm>.

habitat, we will tour the wider discipline of sociology. We will finish with a few recommendations of what ES can do to increase its public profile in the USA.

We are very well aware of the important differences between the USA and the rest of the world with respect to economics (Fourcade-Gourinchas, 2001; Frey and Eichenberger, 1993) and sociology (Nedelmann and Sztompka, 1993), but because of the enormous influence the USA has on the social sciences elsewhere on the globe, we believe that the lessons we draw may be of interest to others.

## 2. Arrow's discovery

On 22 August 2004, Daniel Gross, a business writer for *The New York Times*, announced in the pages of the Sunday Business Section a major discovery by Nobel-laureate, Kenneth Arrow and his co-author, that should soon revolutionize the way we think about labour markets (Arrow and Borzekowski, 2004). Arrow, Gross wrote, made the stunning observation that labour markets are not always efficient because employers often do not know enough about future hires. So how can they still find the right person for the job? Gross, paraphrasing Arrow, explained that the key to this mystery lies in social networks that supply additional information about job applicants to employers. Networks are especially valuable, we learn from Gross, in finding out about such personal characteristics as reliability and sense of humour. Because better chosen workers fit their jobs better, they will be more productive and thus make more money. Thus it is not just *what* you know that matters in how much you will earn, but also *who* you know. Arrow's breakthrough insight then was followed by testimony from others. The line-up included Arrow's co-author, now at the Federal Reserve, Ron Borzekowski, along with an economist from Georgetown and a management professor from NYU. Never, throughout Gross's article is there any mention of ES or sociologists who had published widely on this topic (for a review of the sociological literature on the topic see Lin, 1999 and Mouw, 2003).<sup>2</sup>

In the original article published as a working paper of the Federal Reserve, Arrow and Borzekowski start from the assumption that wages depend purely on productivity of workers, which, in turn, is a function of the worker's observable and unobservable abilities. Workers with more social ties will be able to

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<sup>2</sup>This was, indeed, not the first time that Arrow shocked his own profession by espousing sociological ideas. He has always kept a famously open mind. In the 1960s, studying healthcare he discovered the importance of trust (Arrow, 1968), and in the early 1970s, he got interested in employment discrimination (Arrow, 1973, 1998). By then, both topics already had an extensive sociological literature. Trust was largely shunned by economists, so was discrimination except for Gary Becker's pioneering dissertation (Becker, 1957).

inform employers better through those connections about their unobservable talents, and will find jobs that fit them better. Thus they can be more productive and will earn more. The authors build a theoretical model and run a simulation showing how change in the size of one's social networks should influence one's earnings. To calibrate their model, they look at aggregate census data. They take African Americans and white men with similar education, age and labour force commitment and see what differences in the number of social ties will result in the wage gap that exist between the two groups. In fact, they assume that the two groups 'differ only in the distribution of ties' and that ties are exogenous. They also set aside the nature and structure of these ties. They find that the number of ties their model predicts is not very far from what Marsden found for blacks and whites analysing the General Social Survey more than a decade earlier, although they acknowledge that the ties in Marsden's study are very different from those in their model (Marsden, 1987).

Unfortunately, the basic premise of the article, i.e. getting hired through contacts has a positive effect on wages, has no empirical support in the literature (Bridges and Villemez, 1986; Elliot, 1999; Volker and Flap, 1999; De Graf and Flap, 1988; Lin, 1999; Mouw, 2003), a fact the authors seem to be unaware of. Informal ties matter in finding a job but not for subsequent earnings (or promotions). The quality and structure of informal ties are correlated with earnings but the causal relationship is in dispute. The simplifying assumptions of the model building in the paper are staggering even by the excessive standards of economics. The mathematical model is relatively simple and will not be counted among Arrow's big analytical achievements. The lack of real data, acknowledged in Gross's article, is another sign that the piece is just a light finger exercise. That the academic qualities of the paper are at best mediocre is obvious from the fact that it never passed peer review and, after being released as a working paper, it never got published.

In spite of Gross's presentation, the authors do not claim they invented the idea of the importance of social networks in the labour market.<sup>3</sup> In fact, they dutifully acknowledge previous work. Their first footnote starts with a reference to Arrow's sociologist colleague at Stanford: 'The classic study is that of Granovetter (1974)'. Of the 23 items listed among the references, four are by sociologists and another three are authored by James Montgomery, who holds a joint appointment in Sociology and Economics at UW-Madison. What is curious is that the word 'sociology' is completely absent from Arrow's paper and any lay reader

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<sup>3</sup>The broader implication that economics is unaware of inefficiencies in the labour market is also misleading. The literature on unemployment (see Bewley, 1999, Chapter 20), signalling (Spence, 1973) and discrimination (Arrow, 1998), just to name a few, all try to grapple with information problems and the resulting labour market inefficiencies.

would be forgiven concluding that Mark Granovetter or Peter Marsden are economists. Sociology, and here ES, is completely erased as a discipline and sociologists appear as pioneering economists.

So if it is neither the originality, nor the execution of the idea that makes Arrow's piece a public event, it might be that it is the style of argumentation that makes the difference. Clearly, it is not. After considering an article, written by economists in the style of economics, let us take a piece of scholarship on this very same topic written by a sociologist but in the style of (labour) economics. For further contrast, let us consider another one written by an economist but in the style of sociology.

More than half a year before Arrow's discovery, *The American Sociological Review* (ASR) published a rigorous empirical study, based on various surveys including the National Longitudinal Study of Youth by Ted Mouw questioning the causal effect of social ties (Mouw, 2003). He finds no effect of getting a job informally on wages, and argues that even the correlation between the quality of one's contacts and earnings may be largely an artefact: people with better income associate with others who are like them. In fact, better social ties are more the consequence than cause of better incomes. The style of Mouw's analysis would be certainly familiar to any econometrician as he is using sequential job search models developed by labour economists (Devine and Kiefer, 1991). Mouw's piece was roundly ignored by the media and there is no sign that Arrow or his co-author read the article either.

Consider, by contrast, Truman Bewley's 500-plus page book, *Why Wages Don't Fall During a Recession* (Bewley, 1999). Bewley, Cowles Professor of Economics at Yale, described by *The Boston Globe* as 'a mathematical economist out of your worst dreams' (16 July 2000)<sup>4</sup> and as 'one of the leading mathematical economists of his generation' in *The New Republic* (7 August 2000), conducted over 300 unstructured interviews to find the answer to the question posed in his book's title. Most of the book consists of long, verbatim quotes from his respondents. Bewley's conclusion is that all existing theories of wage rigidity are incorrect. It is the employers' desire to encourage loyalty—a curious motivation in the time of layoffs—that keeps wages high during bad times. Bewley's book, which is argued in a clear and straightforward prose, shows none of his mathematical talents; in fact, it could be mistaken for a work of qualitative sociology. Yet neither its sociological style and nor its pages of unedited interview material in great need of judicious trimming were hindrance in generating publicity, as the quotes above suggest. *The Economist* also had a full-page

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<sup>4</sup>This back-handed compliment is an acknowledgement of the chasm between economics and the common folk.

article on the book (24 February 2000) praising the ‘intrepid economist’ for venturing ‘into the real world’. Bewley’s volume, which supports the importance of social ties in finding a job, is also cited by Arrow and Borzekowski as a good literature review.

### 3. Barro’s discovery

Every week, *The Economist* reports on recent achievements in economics in its popular Economics Focus section. In the 13 November 2003 issue it reported that Robert Barro of Harvard, ‘one of America’s best known economists’, and his co-author, Rachel McCleary, found that religion has an effect on economic growth (Barro and McCleary, 2003a). The article was published as a working paper of the National Bureau of Economic Research (NBER),<sup>5</sup> in May that year<sup>6</sup> and, unlike Arrow’s discovery, it appeared in a peer-reviewed periodical but not in an economics journal (Barro and McCleary, 2003b). The article was published in *ASR* a month before *The Economist* reported on it, and a few months before *The New York Times* took notice.<sup>7</sup>

*The Economist* says nothing about *ASR* or sociology, except that it briefly mentions ‘Max Weber, a founder of sociology’, and his observations about the Protestant ethic and capitalism. The article in *The New York Times* on 31 January 2004, also refers to Weber. It describes the article as an *ASR* publication and interviews Mark Chaves, a sociologist, along with Ronald Inglehart, a political scientist who had gathered some of the data Barro and McCleary used. Inglehart remarked: ‘I find that belief factors play a major role in economic growth, but here is one of the world’s leading economists saying so’, and then added with reference to Weber, ‘This is a revised view of the Protestant ethic’.<sup>8</sup>

The NBER paper and the *ASR* article are almost identical, except for a longer footnote in the latter that gestures towards the content of various religious teachings. The authors present a sophisticated set of regression analyses of countrywide

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<sup>5</sup>NBER was founded in 1920 with the leadership of Edwin Gay and Wesley Mitchell. NBER, an institute that is privately funded but very well connected to the federal government, soon became the most influential economic think-tank in the USA.

<sup>6</sup>The article was also picked up by *The Christian Science Monitor* from an earlier draft a year before *ASR* published it (21 October 2002).

<sup>7</sup>Barro’s bio in *ASR* ends with a friendly gesture to sociology: ‘[Barro] is pleased to be publishing an article in a sociology journal’.

<sup>8</sup>What Barro and McCleary actually find is that, contrary to Weberian expectations, it is countries with more Catholics that are doing best, and having a lot of Protestants helps development as much as having a large share of the population with Eastern religions once church attendance and belief in heaven and/or hell are controlled for.

averages for 59 countries observed over decades in multiple time points. The statistical models tackle the issue of the direction of causation using instrumental variables and produce the finding that the countrywide averages of beliefs in heaven and hell have a positive effect, while church attendance has a negative effect on economic growth.<sup>9</sup> Why this is the case is far from clear. The authors advance the argument that somehow ‘religious beliefs stimulate growth because they help to sustain aspects of individual behavior that enhance productivity’. They speculate that those beliefs augment ‘individual characteristics, such as thrift, work ethic, honesty, and openness to strangers’ to be studied in the future. Why is church attendance detrimental to economic development? They conjecture that going to church takes up time and resources.

As intriguing as these findings are, the argument is a classic case of ‘ecological fallacy’. Here it is practised in two steps. First, the economic success of the country which is observed is conflated with the economic success of individuals which is unobserved, ignoring thorny issues of economic organization and inequality (Baumol, 1990). An increase in individual success can easily occur in the context of a zero or negative sum game. Then it is assumed that, because we observe that countries with more religious beliefs grow faster, it is the believers that are instrumental in this economic growth. Even if it is the believers who contribute disproportionately, say through obedience and hard work to economic growth, it is not necessarily the case that they do so by benefitting themselves. The religious masses could serve as obedient drones to enrich secular elites. Issues of power, institutions and legal structure are all cast aside to leap from country-level data to individual behaviour. Government policies and institutions related to religion make a brief appearance as instrumental variables (i.e. factors unrelated to growth).

There has been a sprawling body of sociological research that looked into the relationship between economic success and religiosity (e.g. Lenski, 1961; Glen and Hyland, 1967; Mueller and Johnson, 1975; Woodrum, 1985; Keister, 2003) and an even larger literature on the historical and institutional connection between economic development and religion (e.g. Tawney, 1954/1962; Collins, 1980; Lehmann and Roth, 1993; Kalberg, 1996; Delacroix and Nielsen, 2001). All those are ignored in favour of a vague psychological explanation.

Neither Arrow’s nor Barro’s discovery became a public event because of novel content or unusually high quality scholarship. Neither article is an easy read for

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<sup>9</sup>The extent to which one believes these findings depends on how much one is convinced by the instrumentation that is aimed at separating secularization (the effect of economic development on religion) and the religious factor (the effect of religion on economic development). The original, bivariate relationships between all three indicators of religiosity and growth point in the same, negative direction.

the educated lay public. What then explains their success in garnering public attention?

#### 4. The role of institutions

Public attention is structured by institutions. The reason why works by economists are more visible in the public eye is because the economics profession is better able to channel public notice than sociology can. Taking the two cases above as our points of departure, we can see that both papers were written by economists of high repute. Arrow received his Nobel Prize in 1972 for providing the mathematical underpinnings of general equilibrium theory. Barro is one of the most highly cited economists. The reputation system of the economics profession is much more hierarchical and consensus over who the leaders are in the field is much more uniform than in sociology. In a 1977 survey of US academics, Lipset and Ladd found that economists had a strong agreement over the top people in their field (Lipset, 1994, p. 215). Back then, Friedman, Samuelson and Arrow topped the list. Arrow, who came third, got three-fifths of the professions support. In sociology, the comparable number was 31%, less than in psychology, political science or even English literature. The economics reputation system is much more cohesive. Economics reputation system has been built and maintained by a set of institutions, which structure the production of knowledge in each discipline and the ways in which this knowledge is disseminated and consumed.

##### 4.1 *Internal coherence of economics and sociology*

*Disciplinary cohesion.* One of the keys to economics public success is its exceptional achievement in creating internal disciplinary cohesion. Since the 1930s, economics settled on a commonly agreed formalized core that has not just provided a mathematical language for describing data, but formalized economic theory itself (Yonay, 1998; Weintraub, 2002). While US sociology has not been averse to mathematical formalism (Sorensen, 1978; Fararo, 1997), attempts to mathematize sociology always focused on empirical description, be it network analysis (White *et al.*, 1976; Boorman and White, 1976), the study of social mobility (Duncan, 1966; Featherman and Hauser, 1978), diffusion (Coleman, 1964), demographic processes (Siegel and Swanson 2004) or the causal modeling of survey data (Lazarsfeld, 1946/1955; Blalock 1972). The most ambitious attempt of theoretical formalization in sociology has been in organizational theory (Hannan and Freeman, 1989; Peli, 1997; Hannan *et al.*, 2003).<sup>10</sup> None

<sup>10</sup>Sociologists also borrowed mathematical tools from econometrics in data analysis and tried to import rational choice theory into sociology (Hechter, 1997) with limited success.

of these efforts attempted to unify sociology as a whole or aspired to become a dominant voice throughout the discipline.

Mathematization is not the only way of creating unity in a discipline. Several of the natural sciences from geology and paleontology to biology and chemistry have prospered for a long time without a mathematical or formalized core on the strength of their empiricism, agreed upon problem sets and ways of settling disputes.<sup>11</sup> Sociology is unlikely to be able to follow in economics footsteps and it probably should not. Its comparative advantage is in its diversity. One can have a coherent enough discipline that fosters diversity without a common, formalized theory, as long as there is some agreement on what the significant questions are and on how disputes are to be solved.

However, diversity is different from fragmentation. The problem with sociology is not, as Collins and Yearly claim, that its academic training requires sociologists to develop the ability of switching between alternate frames of reference, which teaches sociologists that all taken-for-granted-reality, including their own most deeply held beliefs, are just one set of beliefs among many (Collins and Yearly, 1992). To be sure, good sociological training does also teach sociologists that no one, not even sociologists, can hold any belief without thinking it to be somehow privileged. (Why would anyone bother to believe anything, if it were just one of an infinite number of equally valid beliefs?) Relativism is indeed detrimental to any discipline that aspires to wider public attention, but very little of sociology succumbed to this academic malady. Indeed, the problem often seems to be the opposite. Absolutist advocacy of particular epistemological positions is much more rampant in the profession than the reckless belief that 'anything goes'. Just try to convince a culturalist that sometimes people act according to rational calculations or almost any sociologists that biological differences may have social relevance.

The trouble is also not, as others assert, that sociology is too open a discipline, too much influenced by history, psychology, political science, anthropology and, yes, economics (Rigney and Barnes, 1980, pp. 116–7; Calhoun, 1992, p. 182) or that departments hire scholars occasionally from outside the discipline (Halliday, 1992, p. 12). Openness is strength not weakness for sociology as it is the main-spring of its intellectual creativity.

The challenge is neither relativism nor openness but the increasing Balkanization of the discipline, which results from an unfortunate combination of the opposites of relativism and openness: sociologists are overly committed to the

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<sup>11</sup>Collins adds to this another unifying factor, a set of technical instruments that are necessary to generate new discoveries. Indeed, sharing the same expensive gadgetry can also unify disciplines (Collins, 1994).

particular vision of their subdisciplines and are uncurious about sociology as a whole. Many sociologists, however, do cross the boundaries of their subdiscipline, and indeed, these incursions often bring intellectually the most interesting results. The success of ES within sociology has been to a large extent the result of such cross-subdisciplinary labour as well as the constant engagement with economics. Yet, in general, too many sociologists, while interested in other disciplines directly connected to their area of inquiry, perceive much of sociology as irrelevant and uninteresting from their own perspective. In the absence of some common understanding about the main issues and procedures of settling competing claims, it is not surprising that sociologists tune out much of sociology. Why should the public care about particular sociological ideas when most sociologists themselves are not interested?

*Balancing coherence with innovation.* Economics achieved a high level of intellectual unity by finding a formalized theoretical core which made it easier for economists to settle on a set of key research problems and on specific ways to adjudicate competing claims. This resulted in a unified, hierarchical structure and a disciplinary closure, which imposes some limitations on the discipline. For instance, ideas new to economics must enter mostly from above. Highly prestigious economists, who have earned their stripes by excelling in the traditional core, earn the license to voice unorthodox ideas.<sup>12</sup> Arrow and Barro, as well as Bewley, receive attention for ideas that do not fit the mainstream of economics because of their earlier ideas that did. Once an idea is 'discovered' by a top economist, it becomes a legitimate line of research for others. Arrow transferred legitimacy onto those who until now have worked on these topics at the margin of economics (e.g. Montgomery, 1992) and both luminaries blazed the trail for new research (e.g. Calvo<sup>2</sup>-Armegol, 2004; Calvo<sup>2</sup>-Armengol and Jackson, 2004; Guiso *et al.*, 2003, 2006).

Another way for economics to deal with disciplinary inflexibilities has been the creation of satellite disciplines such as management science, organizational, operational and marketing research, human resources, and business history etc., mostly housed in business schools. Practitioners of these less prestigious satellite disciplines are almost always trained as economists (as satellites rarely grant their own PhD), but they have their own associations, journals and conventions. They fulfill three functions for economics. They provide jobs for economics graduates, allow for experimentation with unorthodox ideas and spread the gospel of economics.

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<sup>12</sup>Barro most likely came to the idea of religion as a factor in economic growth through his coauthor and wife, who holds a degree in religion and philosophy.

Sociology also has a few satellite disciplines (namely, ethnic and gender studies), but these are much smaller, with far fewer resources, and are accommodated within the structure of sociology as accepted specialty areas. In spite of each having its corresponding social movement and despite their efforts to reach out to it, these satellites are even more trapped in academia than sociology and, focused on political activism, they are reluctant evangelists for the discipline.

*Professional organizations.* The professional organizations play a key role in presenting their disciplines to the public and managing the scarce resource of academic prestige within their respective professions (Cole, 1994; Bernstein, 2001; Turner and Turner, 1990). The American Sociological Society was founded in 1905, twenty years after the American Economic Association (AEA). The founding meeting was held at the AEA's annual conference and originally there was a debate whether to keep sociology within the AEA. Currently, the American Sociological Association (ASA), renamed in 1959, has a membership of about 14 000, but they are dispersed into a gaudy assemblage of 44 sections including sections such as Alcohol, Drugs and Tobacco (fortunately a single section not three), Marxist Sociology, and Race, Gender and Class, which exists along with such sections as Racial and Ethnic Minorities, Sex and Gender, and Latino/a Sociology. Most of the proliferation of sections happened in the last two decades. In 1961 there were only five sections and in 1982 it still stood only at 20. The AEA, by contrast, is a single organization with over 18 000 members.

ASA's fragmented structure is the result of American sociologists' historical inability to adjudicate internal disputes, which is both the result and reflection of its weak disciplinary core. Straddling the sciences and humanities, negotiating differences between applied and theoretical camps, academic and activist interests, US sociology has been unable and unwilling to enforce unity in the profession. Each time conflicts arose, the ASA decided to accommodate all sides by creating organizational subunits (Rhoades, 1981; Turner and Turner, 1990, Simpson and Simpson, 1994). The trend towards fragmentation in sociology continued throughout periods of expansion and contraction. In the 1960s and the 1970s, when sociology experienced a dramatic growth, American sociologists did not mobilize their increasing resources toward a more coherent conception of themselves as a discipline. This lack of professional consolidation continued in the 1980s and 1990s, when sociology experienced a period of decline, as further differentiation was encouraged by trying to sustain membership in ASA. Finding itself in an increasing competitive environment with specialty associations, the ASA sought to co-opt as many factions of professional sociology as it could. The result was 'an almost complete inability to consolidate symbolic resources around . . . a sense of a common professional community' (Turner and Turner, 1990, p. 139).

By offering something for everyone, the ASA was organized first and foremost as an umbrella organization that would house, tolerate, if not actively encourage, enormous intellectual diversity. While this injected creative intellectual tensions by not policing too heavily academic inquiry, it also reinforced the intellectual Balkanization we mentioned earlier.

*Prizes.* One of the biggest successes of the economics profession was the creation of the Nobel Memorial Prize in economics. This annual prize, established by the Bank of Sweden in 1968, was redefined in 1995 as a prize for social science but so far only one recipient came from outside economics. The Nobel Prize bestows instant international fame on its winners and elevates the prestige not just of the recipients but the reputation of the entire field. The award also brings the subfield of the winner into focus, both putting it into the headlines and generating momentum for new research. The second most prestigious prize in the USA in economics is the John Bates Clark Medal awarded biannually to the best economist under 40 by the AEA. Forty per cent of the Medal winners have gone on to become Nobelists. The AEA gives no other awards except the Distinguished Fellow and the Richard T. Ely Lecture Award.

Although sociologists have a few international prizes, such as the Amalfi Prize, and a handful of general prizes such as the Holberg or the Balzan Prize that are also open to them, none of these awards confer either the public or academic prestige enshrined in the Nobel Prize. Domestically, US sociologists are eligible for a plethora of awards but the profession does not have the ability to make them into public events. Part of the problem is the fractured nature of ASA. The organization itself gives eight prizes (plus one dissertation prize). Even these are mostly earmarked to special subgroups; there is one for sociology of women, another for African Americans and there is even an award for promoting the public understanding of sociology. There are only two truly general awards, one for best publication and the other for a distinguished career. In 2005, the various sections gave out 48 awards not counting dissertation and student prizes. The Economic Sociology section gave two prizes, the Ronald Burt Outstanding Student Paper Award and the Viviana Zelizer Distinguished Scholarship Award. Such honours may help in academic promotions but will not register with the public as not even fellow sociologists outside the subfield take notice. (Which ASA section awards the Max Weber prize and who got it this year?)

It is not just the abundance and narrow focus of the awards that make them publicly irrelevant but also the type of work they honour. Because its professionalism depends almost entirely on the academic system, sociology's prevailing reward system favours those whose principal audience is their narrowly trained colleagues and students (Buxton and Turner, 1992). Many of these awards

honour works of exceptional quality but they are incapable of commanding public attention.

*Public role vs ivory tower.* Internal coherence of a discipline and the unity of the profession are important, but in themselves are no guarantees of public relevance. In fact, economics' attempt to fashion itself as a unitary science initially hampered its ability to address important policy issues. Ironically, taking one step back to make two steps forward, economics achieved its ultimate public strength through a partial retreat from public life in the 1930s. During the Great Depression, the neoclassical model that emerged as the core of the discipline, had very little to offer to building the New Deal. Most of the policy expertise in this gigantic effort was supplied by the institutionalist school, which was completely marginalized from the 1940s on (Bernstein, 2001; Yonay, 1998). After World War II, developmental economics, attacking the most urgent policy issues of the era, suffered the same fate for not being able to fit itself into the mathematical models of the core (Krugman, 1995). The retreat to the ivory tower, however, was only partial. The mathematical mainstream did chalk up some important practical successes during World War II (for instance, in planning the war economy and transport logistics). It was also a major coup that, in 1946, the Council of Economic Advisors to the Office of the President (CEA) was formed, a symbol of the indispensability of economics in policy making.<sup>13</sup> Yet, the era of post-war reconstruction when the state was taking on a major role in the economy, was not a hospitable ideological environment for work emerging from the developing neoclassical core. However, once economics achieved its internal unity (Kearl *et al.*, 1979; Frey *et al.*, 1984), it was in a powerful position to take advantage later of the liberal political wave shaped by the Cold War and its denouement.

World War II was a defining moment in the rise of economics, as it was for physics, linguistics and many other disciplines. Sociology, too, made itself useful during the war mostly by deploying survey research,<sup>14</sup> although its efforts were not honoured with anything comparable to the CEA. Sociology vastly benefitted from the creation of the America's Great Society that provided

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<sup>13</sup>During the early years of the CEA, the economics profession made an enormous effort to keep a unified voice on the Council (Bernstein, 2001).

<sup>14</sup>See, for example, Samuel Stouffer's four-volume opus, *The American Soldier*, which was produced in the Research Branch of the War Department's Information and Educational Division (Stouffer *et al.*, 1949/1965a, 1949/1965b). Rhoades writes: 'sociologists entered all branches of the armed forces and served in such war agencies as the Office of Strategic Services, the Selective Service System, the Office of War Information, the National War Labor Board, the War Department, and the Office of Price Administration' (Rhoades, 1981, Chapter 6.)

it with plenty to do<sup>15</sup> and was buoyed by the social movements of the 1950s and 1960s. By the 1980s, however, the tide of social movements subsided and the conservative revolution began to dismantle the welfare state. US sociology found itself adrift without intellectual anchors, strong professional organization and discernable clientele outside higher education. While economics built a strong non-academic constituency in the business community by taking over the curriculum of the business schools and building positions for itself in the economy from tariff boards to the Federal Reserve, sociology has not been nearly as successful in institutionalizing itself in private industry, public administration or civil organizations.<sup>16</sup> In spite of the strength of political activism within the discipline, sociologists were not particularly successful at enlisting social movements as their public audience either. By the end of the millennium, the discipline largely had to retreat into its last institutional base, the university (Halliday 1992; Buxton and Turner 1992). When universities began to re-examine their support for the discipline in the 1980s, the sociology profession could not ignore its predicament any longer (see Huber, 1995).

Economics, on the other hand, captured important public positions, which made its public relevance secure. Economists became not just commentators but active players in creating the economy; economics became performative (Callon, 1998). To know what economists think about interest rates, tariffs, taxes or corporations became important because they are indicative of where those economic artefacts may be headed in the near future.

Economics and sociology in the USA have been shaped differently as disciplines and professions. Economics achieved a high level of internal cohesion compared with sociology. Not surprisingly, sociology was also less successful in disseminating its ideas in the public sphere.

#### 4.2 Dissemination

*Training.* Presenting the disciplines to young people is an important part of their public presence. Learning about economics and sociology at an early age creates an audience for the research and the ideas. Introducing sociology into

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<sup>15</sup>It was in 1965, within a year of the launching of the Great Society program by President Johnson, that 'sociologist' as an occupation entered the Federal Civil Service Register (Rhoades, 1981, Chapter 8)

<sup>16</sup>What were the business schools to economics were the schools of social work to sociology. Yet social worker training has always been much smaller and its resources much more meager even before the welfare state started to wither away. Nevertheless, sociology did make inroads into the criminal justice system by providing professional training in criminology, into the polling industry, and its demographers captured the Census Bureau.

the high school curriculum was a failure (DeCesare, 2002) despite the fact that high school teachers should have been receptive allies. Economics, by contrast entered successfully the curriculum and in a dozen states it is a required subject (Walstad, 2001).

On the other hand, both disciplines were successful at planting themselves firmly in undergraduate education. The number of undergraduate majors in sociology is actually larger than in economics (but smaller than in political science). The popularity of sociology is no doubt related to its more open structure, making it more appealing to students. However, the same openness also gave rise to a weaker curriculum. While economics could create a set of introductory textbooks (Samuelson and Nordhaus, 2004; Mankiw, 2003) that present the main ideas and the heroes of economics to young people, sociology textbooks, while including references to the holy trinity of Marx, Durkheim, and Weber, present a smorgasbord of different topics and a variety of perspectives that are only loosely connected. Unlike economics textbooks, which are often written by star economists, sociology textbooks are typically written by lesser known scholars employed at less prestigious institutions, and the books are mostly held in low esteem by the elite of the profession. Many introductory courses are taught from course readers and a collection of exemplary books. Later courses in sociology can rarely build on earlier ones; each course must start from sea level. Therefore, sociology students graduate with very varied notions of what sociology is and what and whose work is worth knowing in the discipline.

*Time scale.* Economics and sociology operate on different time scales in producing academic knowledge. Economists are faster because they usually do not produce their own data. (Bewley is the exception that proves the rule.) By being successful in creating a quantified monitoring system for the economy, economists have off-the-shelf standardized data that are instantly available. It is not that economists are blind to problems of data validity and reliability, but the division of labour between data production and analysis removes the often paralysing awareness of the socially constructed nature of economic facts. Barro's article assumes, for instance, that people report church attendance truthfully, even though, at least in the USA, the evidence points to a substantial overreporting (Hadaway *et al.*, 1998). Moreover, overreporting has been increasing over time, suggesting that the effect of secularization on this particular measure may be underestimated, which may have consequences for their findings. Our point is that the separation of data collection and analysis results in a speed and certitude that suit the media much better than the plodding indecisiveness of data-confused sociologists. The short time scale of newspaper or

television reporting, when information is needed often within hours, meshes better with what economists can offer.

*Journalism as a mediating institution.* Economics is not a particularly entertaining subject. Much of economic writing is inaccessible to the public. Economics therefore needs a mediating layer of journalists, whose job is to put economics to prose. Many of these journalists have a degree in economics but then receive special training in journalism or have a degree in business reporting. While sociologists, on average, may write more readable prose than economists,<sup>17</sup> they cannot compete with staff writers for *The Economist* or *The Wall Street Journal*.

The problem is not just with the quality of the writing. The ASA does have one quarterly publication, *Contexts*, that aims at popularizing sociological research. Each issue has five or six feature articles of five to six pages and another 15–20 shorter items such as book reviews, interviews and notes on topical issues. In the last four issues, five of the 22 featured articles were on ES and others were covering areas close to the field. Many of the articles are well written, but circulation is only a little over 3000.

Journalists often hook up with academic economists through the public relations departments of research institutes. There are many more research institutes in economics than in sociology. The National Bureau of Economic Research is one of the biggest and most prestigious, with a wide network of non-resident affiliates. The same goes for the research arm of the Federal Reserve. Pushing sociological work onto the media, on the other hand, is left mostly to universities that are less interested in promoting a particular discipline than improving the image of the school as a whole.

#### 4.3 Summary

The answer to the question why economic sociologists get less credit in public for their work than economists, even when their work is not any worse is simple and might even sound trite: regardless of what they write, economic sociologists will have a harder time becoming visible because they are sociologists.

While economists benefit from a professional organization that can effectively manage academic prestige, select top practitioners and line up the discipline behind them, sociologists cannot rely on such a professional juggernaut. Sociology is too disjointed both as a discipline and a profession, and it cannot

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<sup>17</sup>Some top economists, just as some top sociologists, write famously well. Paul Krugman, Robert Solow, Amartya Sen and Milton Friedman come to mind. Barro himself wrote columns for *Business Week* and *The Wall Street Journal*.

present the public with a coherent message about what research is important and who should be listened to. Economists have a mediating layer of business journalists whom they can engage more effectively due to their accelerated practices of knowledge production. Those journalists then present them to a public wider than any academic publication can reach. Through the high school and college curricula, the public gets a better preparation in economics than in sociology.

Having, so far, introduced a sociological explanation, which locates the visibility problems of ES at the level of large and hard-to-change structures, may run the risk of illustrating yet another handicap of sociology: its clumsiness in offering practical advice about what to do. Thus in the concluding section, we feel obliged to dispense some practical advice.

## 5. What can be done?

ES should appreciate the relative advantages of belonging to sociology (intellectual diversity and openness) while taking measures to mitigate disadvantages of its disciplinary affiliation. ES should keep its interest in sociology as a whole and keep scouring the rest of the field for ideas because its fortune is linked to that of its mother discipline. It should also avoid its own intellectual balkanization. This should be easier in a subfield but there are also other reasons for hope. So far, ES has been able to keep a common empirical focus: the embeddedness of the economy in its social context (Beckert, 2006). Another reason for its intellectual success is that ES has insisted on a dialogue with economics. Because economics is so highly structured, ES could keep a focus through this conversation, achieving internal intellectual common ground, to some extent, parasitically, on the back of the coherence of economics. ES should not become a collection of complaints about economics, and should not feel constrained by economics in setting its research agenda. Nevertheless, whatever ideas it develops should be measured against economics. Maybe this constant dialogue turns out to be training wheels that can be abandoned later but for now this is indispensable. Economics itself is getting much more colourful. On the one hand, this makes the dialogue less limiting; on the other hand, ES is beginning to face mighty competition in new thinking about the economy. This exchange will also help ES to enter the public sphere where ideas from economics are unavoidable and must be addressed anyway.

ES should also keep being self-reflexive, taking count periodically of its achievements and failures, schools and disagreements (see e.g. Swedberg, 2003; Smelser and Swedberg, 2005; Beckert and Zafirovski, 2005). As ES will move into more applied areas, keeping business school ES and more critical or theoretical approaches within the same fold is essential. Self-assessment through

review articles, collected volumes, handbooks, encyclopedias etc., will also guard against fragmentation and will bring the clarity to the field as a whole that is necessary to present it in public.

ES needs good textbooks. As the field is growing fast, the textbooks will have quick obsolescence but it is important that college students get a good introduction to sociological ways of thinking about economic processes. ES should not stop at the college level. It should reach down into the high school social science curriculum as well.

Economic sociologists should establish an international prize for the study of the relationship between economy and society. The prize should be open to economists too. It should be the only such prize, and be given probably every two years. The presentation of the prize should be a public event and designed in a way to maximize its impact on the field.

ES must find its way into the media. It should be made easier for business journalists to find sociologists with relevant knowledge on economic issues. The ES section of the ASA, therefore, should have a website to promote ES with a publicly accessible catalogue of experts including contact information and their areas of competence. Professional newsletters should report on public appearances by economic sociologists. Economic sociologists, on the other hand, when they speak in public, should insist on being labeled as ‘sociologists’.

At the end of this article, as we exit, we must retrieve content—creativity, rigour and style—from our rhetorical cloakroom and emphasize that none of the efforts proposed will matter unless ES keeps asking new and interesting questions and giving well researched and well presented answers. In any case, why bother to become visible without high quality scholarship?

## References

- Arrow, K. J. (1968) ‘The economics of moral hazard: further comment’, *The American Economic Review*, **58**(3), 537–539.
- Arrow, K. J. (1973) ‘The Theory of Discrimination’. In Ashenfelter, O. and Rees, A. (eds) *Discrimination in Labor Markets*, Princeton, NJ, Princeton University Press.
- Arrow, K. J. (1998) ‘What has economics to say about racial discrimination’, *Journal of Economic Perspectives*, **12**(2), 91–100.
- Arrow, K. J. and Borzekowski, R. (2004) ‘Limited Network Connections and the Distribution of Wages’, Finance and Economics Discussion Series 2004-41, Washington, Board of Governors of the Federal Reserve System.
- Barro, R. J. and McCleary, R. M. (2003a) ‘Religion and Economic Growth’. NBER Working Paper Series no. 9682.

- Barro, R. J. and McCleary, R. M. (2003b) 'Religion and Economic Growth across Countries', *American Sociological Review*, **68**(5), 760–781.
- Baumol, W. J. (1990) 'Entrepreneurship—productive, unproductive, and destructive', *Journal of Political Economy*, **98**(5), 893–921.
- Becker, G. (1957) *The Economics of Discrimination*. Chicago, IL, University of Chicago Press.
- Beckert, J. (2006) 'The Great Transformation of Embeddedness. Karl Polanyi and the New Economic Sociology'. Manuscript.
- Beckert, J. and Zafirovski, M. (eds) (2005) *International Encyclopedia of Economic Sociology*. London, Routledge.
- Bernstein, M. A. (2001) *A Perilous Progress: Economists and Public Purpose in Twentieth Century America*. Princeton, NJ, Princeton University Press.
- Bewley, T. (1999) *Why Wages Don't Fall During a Recession*. Cambridge, MA, Harvard University Press.
- Blalock, H. M. (1972) *Causal Inferences in Nonexperimental Research*. New York, Norton.
- Boorman, S. A. White, H. C. (1976) 'Social structures from multiple networks, II. Role Structures', *American Journal of Sociology*, **81**(6), 1384–1446.
- Bridges, W. P. and Villemez, W. J. (1986) 'Informal hiring and income in the labor market', *American Sociological Review*, **51**(4), 574–582.
- Buxton, W. and Turner, S. P. (1992) 'From education to expertise: sociology as a "profession"'. In Halliday, T. C. and Janowitz, M. (eds) *Sociology and its Publics*. Chicago, IL, The University of Chicago Press.
- Calhoun, C. (1992) Sociology, other disciplines and the project of a general understanding of social life. In Halliday, T. C. and Janowitz, M. (eds) *Sociology and its Publics: The Forms and Fates of Disciplinary Organization*. Chicago, IL, University of Chicago Press. 137–196.
- Callon, M. (1998) 'Introduction: the embeddedness of economic markets in economics'. In Callon, M. (ed) *The Laws of the Market*. Oxford, Blackwell.
- Calvo'-Armengol, A. (2004) 'Job contact networks'. *Journal of Economic Theory*, **115**(1), 191–206.
- Calvo'-Armengol, A. and Jackson, M. O. (2004) 'The effects of social networks on employment and inequality'. *American Economic Review*, **94**(3), 426–454.
- Cole, S. (1994) 'Why sociology doesn't make progress like the natural sciences', *Sociological Forum*, **9**, 133–154.
- Coleman, J. S. (1964) *An Introduction to Mathematical Sociology*. New York, The Free Press.
- Collins, H. M. and Yearly, S. (1992) 'Epistemological Chicken'. In Pickering, A. (ed.) *Science as Practice and Culture*. Chicago, IL, The University of Chicago Press.
- Collins, R. (1980) 'Weber's last theory of capitalism: a systematization', *American Sociological Review*, **45**, 925–942.

- Collins, R. (1994) 'Why the social sciences won't become high-consensus, rapid-discovery science', *Sociological Forum*, **9**(2), 155–177.
- DeCesare, M. A. (2002) 'The lesson to be learned: the past troubles and future promise of teaching high school sociology', *Teaching Sociology*, **30**(3), 302–316.
- De Graf, N. D. and Flap, H. D. (1988) 'With a little help from my friends: social resources as an explanation of occupational status and income in West Germany, The Netherlands, and the United States', *Social Forces*, **67**, 452–472.
- Delacroix, J. and Nielsen, F. (2001) 'The beloved myth: Protestantism and the rise of industrial capitalism in nineteenth-century Europe', *Social Forces*, **80**(2), 509–553.
- Devine, T. J. and Kiefer, N. M. (1991) *Empirical Labor Economics*. Oxford, Oxford University Press.
- Duncan, O. D. (1966) 'Path Analysis: Sociological Examples', *American Journal of Sociology*, **72**(1), 1–16.
- Elliot, J. (1999) 'Social isolation and labor market insulation: network and neighborhood effects on less-educated urban workers', *Sociological Quarterly*, **40**, 199–216.
- Fararo, T. J. (1997) 'Reflections on mathematical sociology', *Sociological Forum*, **12**(1), 73–101.
- Featherman, D. L. and Hauser, R. M. (1978) *Opportunity and Change*. New York, Academic Press.
- Fourcade-Gourinchas, M. (2001) 'Politics, institutional structures, and the rise of economics: a comparative study', *Theory and Society*, **30**(3), 397–447.
- Frey, B. S. and Eichenberger, R. (1993) 'American and European economics and economists', *Journal of Economic Perspectives*, **7**(4), 185–193.
- Frey, B. S., Pommerehne, W. W., Schneider, F. and Gilbert, G. (1984) 'Consensus and dissonance among economists: an empirical inquiry', *American Economic Review*, **74**(5), 986–994.
- Glenn, N. D. and Hyland, R. (1967) 'Religious preference and worldly success: some evidence from national surveys', *American Sociological Review*, **32**(1), 73–85.
- Granovetter, M. (1974) *Getting a Job: A Study of Contacts and Careers*. Cambridge, MA, Harvard University Press.
- Guiso, L., Sapienza, P. and Zingales, L. (2003) 'People's opium? Religion and economic attitudes', *Journal of Monetary Economics*, **50**, 225–282.
- Guiso, L., Sapienza, P. and Zingales, L. (2006) 'Does Culture Affect Economic Outcomes?' NBER Working Paper no. 11999.
- Hadaway, C. K., Marler, P. L. and Chaves, M. (1998) 'Overreporting church attendance in America: evidence that demands the same verdict', *American Sociological Review*, **63**(1), 122–130.
- Halliday, T. C. (1992) 'Introduction: sociology's fragile professionalism'. In Halliday, T. C. and Janowitz, M. (eds) *Sociology and its Publics*. Chicago, IL, The University of Chicago Press.

- Hannan, M. and Freeman, J. (1989) *Organizational Ecology*. Cambridge, MA, Harvard University Press.
- Hannan, M. T., Carroll, G. R. and Pólos, L. (2003) 'The organizational niche', *Sociological Theory*, **21**(4), 309–340.
- Hechter, M. (1997) 'Sociological rational choice theory', *Annual Review of Sociology*, **23**, 191–214.
- Huber, J. (1995) 'Centennial essay. Institutional perspectives on sociology', *American Journal of Sociology*, **101**(1), 194–216.
- Kalberg, S. (1996) 'On the neglect of Weber's Protestant ethic as a theoretical treatise: demarcating the parameters of postwar American sociological theory', *Sociological Theory*, **14**(1), 49–70.
- Kearl, J. R., Pope, C. L., Whiting, G. C. and Wimmer, L. T. (1979) 'A confusion of economists?' *American Economic Review*, **69**(2), 28–37.
- Kiester, L. (2003) 'Religion and wealth', *Social Forces*, **82**(1), 175–207.
- Krugman, P. R. (1995) *Development, Geography, and Economic Theory*. Cambridge, MA, MIT Press
- Lazarsfeld, P. F. (1946/1955) 'Interpretation of statistical relations as a research operation'. In Lazarsfeld, P. F. and Rosenberg, M. (eds) *The Language of Social Research*. New York, Free Press. 115–125.
- Lehmann, H. and Roth, G. (eds) (1993) *Weber's Protestant Ethic: Origins, Evidence, Contexts*. Cambridge, Cambridge University Press.
- Lenski, G. (1961) *Religious Factor*. Garden City, NY, Doubleday.
- Lin, N. (1999) 'Social networks and status attainment', *Annual Review of Sociology*, **25**, 467–487.
- Lipset, S. M. (1994) 'The state of American sociology', *Sociological Forum*, **9**, 199–220.
- Mankiw, N. G. (2003) *Principles of Economics*, 3rd edn. Mason, OH, Thomson.
- Marsden, Peter, V. (1987) 'Core discussion networks of Americans', *American Sociological Review*, **52**(1), 122–131.
- Mouw, T. (2003) 'Social capital and finding a job: do contacts matter?' *American Sociological Review*, **68**(6), 868–898.
- Mueller, C. W. and Johnson, W. T. (1975) 'Socio-economic status and religious participation', *American Sociological Review*, **40**(6), 785–800.
- Nedelmann, B. and Sztompka, P. (eds) (1993) *Sociology in Europe: In Search of Identity*. New York, Walter de Gruyter.
- Peli, G. (1997) 'The niche hiker's guide to population ecology: a logical reconstruction of organization ecology's niche theory', *Sociological Methodology*, **27**, 1–46.
- Rhoades, L. J. (1981) *A History of the American Sociological Association*. Washington, DC, ASA. Online: <http://www.asanet.org/page.wv?section=ASA+History&name=A+History+of+ASA+%281905-1980%29+Table+of+Contents>

- Rigney, D. and Barnes, D. (1980) 'Patterns of interdisciplinary citation in the social sciences', *Social Science Quarterly*, **61**(1), 114–127.
- Samuelson, P. A. and Nordhaus, W. D. (2004) *Economics*, 18th edn. New York, McGraw Hill.
- Siegel, J. S. and Swanson, D. A. (eds) (2004) *The Methods and Materials of Demography*. New York, Academic Press.
- Simpson, I. H. and Simpson, R. L. (1994) 'The transformation of the American Sociological Association', *Sociological Forum*, **9**(2), 259–278.
- Smelser, N. J. and Swedberg, R. (eds) (2005) *Handbook of Economic Sociology*. Princeton, NJ, Princeton University Press.
- Sorensen, A. (1978) 'Mathematical Models in Sociology', *Annual Review of Sociology*, **4**, 345–371.
- Spence, M. (1973) 'Job market signaling', *Quarterly Journal of Economics*, **87**(3), 355–374.
- Stouffer, S. A., Suchman, E. A., De Vinney, L. C., Star, S. A. and Williams, R. M. (1949/1965a) *The American Soldier, Vol 1. Adjustment During Army Life*. New York, Wiley.
- Stouffer, S. A., Lumsdaine, A., Lumsdaine, M. H., Williams, R. M., Smith, M. B., Janis, I. L., Star, S. R. and Cottrell Jr, L. S. (1949/1965b) *The American Soldier, Vol 2. Combat and Its Aftermath*. New York, Wiley.
- Swedberg, R. (2003) *Principles of Economic Sociology*. Princeton, NJ, Princeton University Press.
- Tawney, R. H. (1954/1962) *Religion and the Rise of Capitalism: a Historical Study*. Gloucester, MA, Peter Smith.
- Turner, S. P. and Turner, J. H. (1990) *The Impossible Science: an Institutional Analysis of American Sociology*. London, Sage.
- Volker, B. and Flap, H. (1999) 'Getting Ahead in the GDR: Social Capital and Status Attainment under Communism', *Acta Sociologica*, **42**(1), 17–34.
- Walstad, W. B. (2001) 'Economic Education in U.S. High Schools', *The Journal of Economic Perspectives*, **15**(3), 195–210.
- Weintraub, E. R. (2002) *How Economics Became a Mathematical Science*. Durham, NC, Duke University Press.
- White, H. C., Boorman, S. A. and Breiger, R. L. (1976) 'Social structures from multiple networks, I. Blockmodels of roles and positions', *American Journal of Sociology*, **81**(5), 730–799.
- Woodrum, E. (1985) 'Religion and economics among Japanese Americans: a Weberian study', *Social Forces*, **46**(1), 191–204.
- Yonay, Y. (1998) *The Struggle over the Soul of Economics: Institutional and Neoclassical Economists in America between the Wars*. Princeton, NJ, Princeton University Press.