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The Permanently New Economy: The Case for Reviving Economic Sociology

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The United States is characterized by what may be best described as a "permanently new economy" because radical changes can be expected to continue to occur. Four broad types of change are discussed—those external to the United States, internal changes, changes in technology and knowledge, and demographic shifts. While various subareas within sociology have made important contributions to our understanding of these changes, there is a strong need for the revival of economic sociology to deal in a more general manner with economic changes. A resuscitated economic sociology could help us focus on the relationship between the economy and other social institutions. Also of great utility would be increased cross-fertilization between economics and economic sociology.

The Permanently New Economy

THE CASE FOR REVIVING ECONOMIC SOCIOLOGY[1]

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As the American economy enters the last decade of the twentieth century, it is being radically transformed by an array of rapidly changing conditions. There is clearly much that is new about the economy, but has so much changed that we are justified in calling it a "new economy?" After all, economies, as well as all other social institutions, are continually in flux. When I began this article, I strongly doubted that current changes were so extreme that the label of the "new economy" was warranted. However, as I delved more deeply into the issue, I became convinced that the changes *are* so dramatic that such a label *is* justified.[2]

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Editor's Note: *Because of space limitations, three of the seven articles prepared for this Special Issue will appear in the next issue of* Work and Occupations.

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Economic change is accelerating at such a dizzying pace that it would be better to think of ourselves as confronting a continually changing new economy. While economic change has always existed, the situation in the United States between the end of the World War II and the early 1970s was, in retrospect, relatively stable. The American economy was healthy, it dominated the world economy, and it seemed that well-being and dominance was unassailable. However, that has been dramatically altered by changes that have made it impossible to return to that set of circumstances. Yet it cannot be said that we have created a new stable economic reality to replace the one that stood in place for almost three postwar decades. Rather, we (and an increasing portion of the rest of the world) seem to be in a state of permanent economic change. Indeed, if the United States ever hopes to even approximate its post-World War II economic health, it must seek the capacity to adapt constantly to the new economic realities that are likely to continue to arise at an accelerating rate.

The idea of a new economy can be seen as an alternative as well as a challenge to the now decades-old idea of a postindustrial society (Bell, 1976; Touraine, 1971). In spite of voluminous criticisms, the label "postindustrial society" has survived and is frequently used to describe current realities.[3] The articles in this Special Issue make the limitations of this idea clear and suggest that the label "permanently new economy" might be more appropriate. While the dominance of the service sector, of professionals, scientists and technicians, of new technologies, and of knowledge and information processing, and other characteristics of the postindustrial society have come to pass, many others have not.[4]

Industry, goods production and manual workers remain of crucial importance in the American economy and there is much hand wringing over the need to revitalize American industry (Sullivan, see next issue). It now appears that too much faith has been placed in high-tech industries and there continues to be a central role for low-tech industries and manual workers. The postindustrial thesis that skills will be upgraded by technological change is only partially true, and there is considerable downgrading of skills as well. In fact, Wallace (next issue) argues that "skill disruption" is the best term to describe the impact of technological change. The union movement, while suffering grave losses, has not disintegrated but continues to find new ways to organize white-collar (and other) workers and new techniques for influencing the state (Cornfield, this issue). Capitalism is not disappearing; indeed it appears revivified, and thus, even if one thinks in postindustrial terms, it is necessary to discuss "postindustrial capitalism" (Heydebrand, this issue). The postindustrial society thesis also fails to take into account such important changes as the decline of occupation and increase in organization in importance and the emergence of consumers as an occupation (Abbott, this issue). Most generally, there is pessimism about issues that the postindustrial society theorists were optimistic about (e.g., impact of technology, improvement in the position of women and blacks) and optimism over the issues (e.g., the future of the labor movement) that they were pessimistic about. Overall, the term "permanently new economy" is preferred to the idea of the "postindustrial society," because it is more general, more forgiving, allows for a much wider set of both differences and continuities with previous economic circumstances, and recognizes the continuing nature of economic change rather than a static new economic reality.

The nature of the "new economy" is one of the issues that we will address in this article and throughout this Special Issue of *Work and Occupations.* Along the way we will try to grapple with another question: What does sociology have to offer in helping us understand these changing economic realities? After all, the new economy is the kind of issue that we would expect to find examined in economics or business journals. The editor of this issue, and all of the contributors, are sociologists. We take as a secondary objective the demonstration of distinctive sociological contributions to an understanding of America's new economic realities.[5] To anticipate our conclusion, not only will we show these contributions, but their demonstration will lead to the view that while specific subareas within sociology (e.g., sociology of work, organizational sociology) have much to offer, there is a need to revive economic sociology. In recent years, this subfield has tended to be subordinated to these more specific sociologies. This article proposes an overarching approach to the sociology of the economy, that can only be provided by economic sociology.

The contributors to this special issue are recognized experts in important, and rapidly changing, areas of the economy. Andrew Abbott will deal with the changing occupational structure and, in a parallel piece, Wolf Heydebrand will analyze the changing structure of the organizations in which many of those occupations are found. Daniel Cornfield will examine the dramatic alterations within a specific structure, the American labor movement. Also at a structural level, Michael Wallace (next issue) will deal with our rapidly changing technologies. Another dramatically shifting area is the place of women in the work world, a topic that will be examined by Theresa Sullivan (next issue). Finally, Jerald Hage (next issue) will address what sociology has to offer to an understanding of the economy that is different from, and offers advantages over, economics.

While all of the changes to be discussed in these articles are particularly important, they far from exhaust the significant shifts taking place within the American economy as well as in their relationship to changes in the world economy. In the following section we offer an overview of important changes in the American economy, many of which will not be covered in other articles in this Special Issue. The various changes to be discussed fall under the heading of four broad types—changes external to the United States, internal changes in the United States, changes in technology and knowledge, and demographic changes.[6]

While we will focus on change, it would be wrong to conclude that there is no continuity in the work world. Furthermore, in some cases the most notable fact may be an absence of change. For example, the lack of a change in the minimum wage through much of the 1980s was quite striking (Smith and Vavrichek, 1987). It had a particularly important effect on low-paying service industries, which were able to hire poorly paid workers, as well as on the workers who received wages that doomed many of them to life near or below the poverty line. In addition to areas in which there is a lack of significant change, there are others in which change is highly cyclical. A good example is inflation, which was a serious problem in the United States at the beginning of the 1980s, largely tamed through much of the decade, but a problem that seems ever able to reassert itself.

THE CHANGING ECONOMY

CHANGES EXTERNAL TO THE UNITED STATES

Perhaps the most important and far-reaching economic change is the dramatically shifting position of America in the world economic system. Bestride the economic world after World War II, the position of the United States has been eroding in recent decades, most notably relative to Japan, and more recently, to other Asian economic powers such as South Korea. Looming on the horizon, given current developments, is the emergence of the Chinese behemoth as a serious player in the world economy (Tidrick and Jiyuan, 1987), to say nothing of the "Greater China" (Business Week, 1988a) now being produced by the growing economic ties among the mainland, Hong Kong (to become part of the mainland in 1997), and Taiwan. Also worth noting is the strength of various European economies, especially West Germany. Europe is likely to become an even more serious competitor in 1992 when it is planned that the 12-nation European Community will become more integrated by, among other things, the elimination of economic barriers to the free exchange of workers, money, goods and services, and the creation of a single market among the member nations. Then there is the imponderable of ongoing economic and political reforms (*glasnost, perestroika*) in the Soviet Union and the possibility that it, too, might someday become a much more substantial marketplace for the world's goods, and perhaps more significantly (but less likely) a substantial producer and contributor to the world market.

What all of these changes come down to is the fact that the United States no longer dominates, and will never again be able to control, the world economy. Immediately following World War II, all of America's major potential competitors (Japan, Great Britain, Germany, the Soviet Union) were decimated by the war, while the United States emerged from the war with its economic system intact. While it took some time, many of these traditional competitors rebuilt economically while others (e.g., South Korea) came to the fore. As a result, the U.S. share of global production has gone from 40% in 1946 to 24% in 1987; its share of global trade has dropped during the same period from 22% to under 10% (*Economist,* 1987: 12). America's declining economic fortunes are also reflected, among other places, in the huge trade deficit that has confronted the United States since the early 1980s (Carvounis, 1987). In fact, in 1980 the United States had a $7 billion trade surplus, while in the first quarter of 1988 it ran a net deficit of about $132 billion. Furthermore, that deficit has itself become a problem that is likely to have negative effects on the American economy such as reduced output growth, increased inflation, and further erosion of our industrial base. Internally, America's problems are reflected in the fact that foreigners have garnered an increasing share of the domestic market (from 21.5% in 1982 to almost one third in 1986). Foreign investment in the United States has increased dramatically while the United States is playing a declining role in investment in other nations.

Changes in the world marketplace have also had a variety of more specific effects on the internal economic situation in the United States. For example, the success most notably of the Japanese steel and automobile industries sent economic shock waves through America's rust belt.[7] Such shock waves are likely to continue to reverberate as, for example, Japan (and other nations) moves more and more heavily into other manufacturing areas. Good examples are the substantial expansion of the Japanese defense and space industries and their threats to American hegemony in those areas.

But while America continues to struggle with these (and other) new world economic realities, those realities continue to change. While Japanese and

South Korean companies continue to be important players, we are seeing more and more transnational corporations, global joint ventures (e.g., General Motors and Toyota), international contracting, and strategic alliances (e.g., Ford and Mazda) that make it increasingly difficult to identify which nation or nations we are competing with (Galbraith and Kazanjian, 1988). Also contributing to this is the international growth of offshore affiliates and outsourcing, which are making it harder and harder to identify a product's country of origin and which particular nation is benefiting economically. Thus, as the United States struggles to cope with a new economic reality, the nature of that reality is rapidly changing.

A somewhat different problem confronting America and its position in the world economy is the inability of many Third World countries to repay huge loans made to them by American banks. Many banks have had to write off some of these loans with an adverse effect on their balance sheets. More importantly, the problems confronting these banks have contributed to the wide-scale banking crisis in the United States. Many banks have been hurt by bad international (and national) loans and some have gone under while others are teetering on the brink. This has put severe strains on the FDIC and FSLIC, which seek to keep the banking system stable and solvent.

The answer to many of the problems discussed in this section lies, paradoxically, in the United States doing what it can to stimulate successful economies around the world. While such stimulation will help our competitors, it will also serve to broaden the market for American goods and services and help various nations begin to repay some of their debts.

CHANGES INTERNAL TO THE UNITED STATES

Not only have other nations become more competitive, but the United States has contributed to its international economic problems through a number of internal problems. Management has emphasized short-term profits rather than long-term goals (Reich, 1983) and this has led, among other things, to poor quality goods, aging plants and technologies (since there was a disinclination to invest in newer ones because they would entail high immediate costs), and lack of foresight about what the economy is likely to demand in the future. Management has also tended to use new equipment more to better control workers than to maximize the quantity and quality of production (Shaiken, 1985). More generally, we continue to be a nation dominated by consumption rather than saving and investment. Our productivity declined for many years and in recent years has experienced only a modest improvement. Workers and unions have played a key role in the decline of manufacturing through the deterioration of the "work ethic," the negotiation of ever-higher wage agreements that raised labor costs and made our products uncompetitive in the world market.

Intimately related to the deterioration of America's position in the world economy is the so-called problem of de-industrialization or the "widespread, systematic, disinvestment in the nation's productive capacity" (Bluestone and Harrison, 1982: 6). Major contributors to America's de-industrialization have been the merger mania of the 1980s as well as the entrepreneurs who have specialized in taking over some of our best-known corporations. There is a substantial belief that the devotion of great energy and huge sums of money to such activities has served to divert them from more constructive economic activities that could have helped to improve our position within the world economy.

The resulting deterioration of our industrial plant over much of this century has, on one hand, made the United States vulnerable to foreign competition. On the other hand, the success of those foreign competitors led to rapid industrial decline in a number of sectors of the economy. "It is estimated that more than 13,000 plants were closed between 1975 and 1981 as a result of foreign competition alone" (U.S. Department of Labor, 1988: 1). In either case, there has been a substantial decline in American manufacturing as exemplified by the deterioration of entire industries (e.g., steel, although it is experiencing a modest revival; *Business Week*, 1989) and of a variety of specific companies (e.g., the Singer sewing machine company). The projections are that manufacturing employment will continue to decline from 19 million jobs in 1986 to 18.2 million by 2000, even though the economy as a whole is likely to generate almost 21 million new jobs between 1986 and 2000 (Personick, 1987: 30).

While some plants have closed (Staudohar and Brown, 1987) others have been downsized to "hollow shells," leading to large numbers of laid-off workers, some never to work in those industries again. The decline of manufacturing companies has clearly hurt America's ability to compete in the world market. In fact, much of the improvement in productivity in the United States since 1982 (after a long period of decline) is attributable to massive layoffs by large corporations. Beyond that, there is the adverse impact on the large number of laid-off workers (e.g., in lost earnings; Podgursky and Swaim, 1987). Laid-off workers often have had little advance notice of plant closings (Addison and Portugal, 1987; although recent legislation has changed this situation), few other job possibilities except for low-paying service jobs, and little chance of receiving the retraining they need to find new, higher-paying jobs.

A significant contributor to the decline of American industry as well as to America's problems in the international marketplace has been the inability in many areas to produce high-quality products. One of the effects of the rise of Japanese (and other) industry was to raise the quality of manufactured goods, and perhaps more importantly to increase the demand by consumers around the world for high-quality products. Consumers are now more discerning; less willing to accept marginal or poor-quality products.[8] American industry, which had long emphasized quantity rather than quality, found itself more and more unable to compete in this new environment. The lack of quality of American goods opened the American market to foreign competitors and hurt the ability of American companies to compete in the international market. But in recent years American companies have taken increasing cognizance of their quality shortcomings as well as the quality successes of others. In 1988, the federal government, also coming to recognize the importance of quality products, gave out the first Malcolm Baldridge National Quality Awards. There has also been increasing attention to quality in American industry and some notable examples of quality American products. If the United States hopes to compete in the future, it will have to devote more attention to producing high-quality goods.

In spite of the obvious decline of American industry, there are some hopeful signs such as the success of Ford in the automobile industry, and the modest comeback in the steel mills. In addition, other manufacturing areas have been strong and expansive. Two of the most notable examples are the defense industry through much of the 1980s, and computer manufacturing, which is expected to expand to over a half million jobs by the year 2000 (Personick 1987: 34). Furthermore, new developments bring new economic opportunities to the United States. Take, for example, the case of the commercial application (e.g., faster computers, trains that run above railroad tracks) of superconductors. Scientific discoveries in the mid-1980s, largely made in the United States, have opened up this new area of economic development. The American government and private industry have invested heavily in developing commercial uses for superconductors, but they are in a worldwide race with other countries, most notably Japan. The United States is seeking to avoid a repeat of the video recorder debacle in which an American invention was made commercial by the Japanese who profited handsomely for their farsightedness. We will know in a few years whether the United States learned enough from such experiences to become a significant player in the superconductivity market. However, the indications from the race for high density television (HDTV) are that the United States has not learned its lessons as it lags far behind not only Japan, but Western Europe as well. While some de-industrialization is likely to continue, and many Americans will need to look elsewhere for work, the fact is that manufacturing continues to be a key to economic success within the United States as well as in the world market (Hayes and Wheelwright, 1984).

While large American industries have suffered in recent years, small companies (both manufacturing and service) remain highly vital (Birch, 1987). In fact, it could be argued that the heart of the American economy is shifting from large, *Fortune 500* companies to the one million plus small enterprises begun each year. Between 1980 and 1987, *Fortune 500* companies laid off over three million employees while companies with less than 100 employees created 12 million new jobs. These small companies alone were three times more productive than the entire Japanese economy in terms of job creation. Furthermore, while employment in the United States will continue to grow through the year 2000, Western Europe is unlikely to experience any growth.

While decline has defined manufacturing in the United States, other areas of the economy have undergone substantial growth. The services in general have grown enormously (Giarini, 1987). Actually, employment in the services has exceeded that in goods production since soon after World War II, but the gap has steadily widened with services now representing about 80% of the labor force. Furthermore, that percentage will be even higher in the year 2000 since about 95% of all new jobs created between now and then will be in services. More specifically, very powerful expansion has been notable in the health services area, an area that is likely to continue to experience a boom even though increasing limits are likely to be placed on it by the government and health insurance companies. Notable here is the shift from hospital services to outpatient care in emergency care centers, surgicenters, and walk-in treatment centers (Personick, 1987: 40). Business services in general have been booming also, and particularly notable has been the growth in temporary help agencies and the increasing utilization of temporary workers in many areas of the economy. Employment in retail establishments of all types is growing and likely to continue to grow. While we tend to think of services as requiring physical proximity, as all of the foregoing examples do, there is an array of services (e.g., telecommunications, banking, insurance) that do not. It is in these "tradable" service areas that the United States, given its comparative advantages in these domains, may be able to make up for some of the economic ground lost as a result of de-industrialization. In fact, to this day, the United States has run a positive balance of trade in services, but this has been more than offset in recent years by the deficit in goods trading. However, the surplus in the service trade balance has been declining during the 1980s. The Japanese, among others, are studying our services and the reasons for our success in them (Burgess, 1988). It may be that we are beginning to lose our advantage here just as we lost our advantage in goods production in an earlier epoch.

The expansion in the services (and our ability to spawn a large number of small businesses) is reflected in the comparatively low and declining unemployment rate during the 1980s. It is usually assumed that most of the jobs produced in the service sector are low-skilled and low-paying, but highly skilled service jobs (e.g., professional medicine, computing, accounting) are growing at a slightly faster pace than low-skilled service jobs (e.g., medical orderlies, janitors). Nevertheless, many of the new jobs have been created in low-paying service occupations and businesses. The result is that despite the comparatively good statistics on unemployment, many of those who are working are employed in low-paying, dead-end service occupations. In spite of the decline in unemployment, as of this writing over 5% of the labor force is unemployed and these marginal members of society continue to be a serious social problem. In addition to the millions of unemployed, there are large numbers of underemployed and working poor.

The decline in manufacturing and the rise of services are reflected in vast changes in the American occupational structure. Blue-collar, manual occupations have been declining and white-collar, service occupations have been increasing dramatically. Rather than address these and other well-known changes, Abbott, in this issue, has chosen to take a more general and abstract look at the changing occupational structure. Perhaps his strongest conclusion is that over a long time organizations have gained increasing ascendancy over occupations as a way of organizing work. While in the past, occupationally based systems like guilds, unions, and professional associations were central, in the modern world they have either disappeared or are in retreat. It is an open question as to how much, if any, significance our traditional notion of an occupation will have in the future. While detailing the decline of our traditional sense of an occupation, Abbott makes the fascinating point that in the modern world we have created a new and crucially important occupation, that of consumer. Looking at the consumer as an occupation opens a range of fascinating new issues.

One of the most significant changes in the American economy, as is made clear by Abbott, has been the decline in the labor movement in absolute numbers, percentage of the labor force, and positive image throughout society. For a number of years, the proportion of the labor force in labor unions has been declining (from about 23% after World War II to 18% in 1985 and to a projected 13% by 2000; Lipset, 1987) and in more recent years the absolute number of union members has been dwindling. Between 1980 and 1984 unions lost 2.7 million members (Adams, 1985: 25-6). There have been other signs of decline as well and these include low, sometimes record low, wage increases as well as union concessions (Kaufman and Vazquez, 1988), "give backs" (Katz, 1985), and so on. (Management has often sought to meet the threat of foreign competition by lowering labor costs, but the issue is whether such a strategy can succeed. Can we really ever hope to cut our labor costs to that of, for example, mainland China? Furthermore, should we?) Union contracts have been less and less advantageous from the members' point of view (Kessler-Harris, 1987: 35). For five consecutive years, between 1982 and 1986, average wage increases were substantially below those obtained in 1982 (Lacombe and Borum, 1987: 10). Instead of focusing on wage increases, unions have come to focus on other goals such as preserving jobs (and members) (Ruben, 1988: 24). To some extent, union declines have been the result of structural changes in the labor force (e.g., the decline of blue-collar workers and the increase in low-status ["dirty white-collar"] service occupations) as well as technological changes that have eliminated many jobs. De-industrialization has cost the labor movement millions of members and the deregulation of such industries as airlines and trucking has led to an increase in antiunion activities on the part of management. But not all of the decline is attributable to structural changes; some of it must be traced to union failures and problems. To take one example, union corruption has put off many potential members, and public attention to that corruption reached something of a peak in the summer of 1988 when the federal government filed a racketeering suit in an effort to take over the Teamster's union because of its long-running involvement with organized crime. Also adversely affecting the union movement was a hostile Reagan administration during the 1980s, which set the tone for the decade with the defeat of PATCO (Professional Air Traffic Controllers Organization) in 1981 (Hurd, 1986).

While these and other defeats were serious, the union movement continues to represent about 17 million American workers. In some areas, the union movement struggles to organize groups that it has never been able to unionize. A good example is clerical workers, especially female clerical workers. If unions are able to find ways to unionize such workers (Hurd and McElwain, 1988), it will be a significant impetus to the union movement. Furthermore, the movement has already demonstrated its resilience, as evidenced by such efforts as finding new groups (e.g., health workers, athletes; Staudohar, 1986) to organize. For example, in the health care area union presence has increased from 14% in 1980 to 20% in 1988 of the industry's 6.9 million workers (American Hospital Association, 1988). Unions have also evolved new goals such as a wide range of cooperative efforts with management, job guarantees in the face of plant closings, and prevention of the international flight of jobs. Some unions are shifting some of their attention from collective bargaining to gains through the courts and government legislation. In 1986 the AFL-CIO developed a new series of programs for members, such as credit cards with no annual fee and low interest rates, a low-cost legal service plan, health protection, and retirement investment counseling (Ruben, 1987: 48).

While many corporate executives might welcome the decline of the union movement since it frees them in terms of decision making, there are reasons to regret the deteriorating position of unions. Among other things, we might find a more docile labor force unwilling and unable to object to management initiatives, a decline in pay equity within organizations, declines in absolute wage levels, as well as in the quality of working conditions, and decreasing impartiality with the disappearance of labor-management contracts, mediation, and arbitration. Furthermore, the decline of union power has already led to increased pressure on the government to intervene on behalf of workers thereby exerting a new form of unwanted power over management (Heckscher, 1988).

Cornfield (this issue) has discussed the decline of the labor movement in the context of its efforts to influence the political sector. He differentiates between organizational claims ("demands for legislation and policy which serve to buttress unions as organizations") and redistributive claims ("demands for distributing wealth . . . as well as the opportunity to attain it, by the government rather than, or in addition to, the private marketplace"). Cornfield demonstrates that over the years unions have continued to make both types of claims, although the nature of those claims is affected by the political and economic climate at a given point in time, as well as the nature of the group of workers pushing a particular claim. The key theme, from the point of view of this discussion, is that unions, in spite of their troubles, continue to make both types of claims and they are likely to continue to do so in the future. In other words, unions will continue to be a viable political force.

In the 1990s, Cornfield argues, the growing number of contingent workers (e.g., temporary workers) will represent a new challenge to the labor movement, a challenge unions are likely to meet by both trying to make organizational claims to limit the contingent workforce and, assuming those efforts are not fully successful, redistributive claims on behalf of contingent workers. Finally, the unions must find new ways of bringing the difficult-to-organize contingent workforce into the union movement. The union movement in the 1990s may find unity in its efforts to deal with the contingent workforce as well as in the more general objective of staving off further union decline.

Changes in labor and industry have been paralleled by changes in labor-management, or industrial, relations (Kochan et al., 1986; *Industrial Relations,* 1985; *Industrial Relations,* 1986). Given our theme of a new economy, Kochan et al. (1986: 21) conclude that there is a "new" system of industrial relations: "recent concession bargaining, workplace innovations, and the rise in the importance of nonunion human resource management systems represent a breakdown of the industrial relations system that was shaped by New Deal labor policies and the early institutionalization of collective bargaining during and immediately after World War II." In addition to dramatic overall changes, specific industries such as tires (Jeszeck, 1986) and autos (Katz, 1985) have been among those undergoing alterations in labor-management relations.

A major theme in the new industrial relations is the increasing cooperation between unions and/or workers and management. Department of Labor publications have documented a number of successful cooperative arrangements between management and workers (and in some cases the union) such as those involving Xerox and the Amalgamated Clothing and Textile Workers Union (Cutcher-Gershenfeld, 1988), Ford's Louisville plant and the United Automobile Workers (M. Smith, 1986), National Steel and the United Steelworkers of America (Ball et al., 1987), Preston Trucking Company (Pearlstein, 1988), New United Motor Manufacturing Inc. (NUMMI) and the United Automobile Workers[9] (U.S. Department of Labor, 1987) and Harley-Davidson (Roadley, 1988). While these efforts take very different forms from one work setting to the other, the overriding theme is the replacement of a history of adversarial relationships with cooperation between labor and management. Once again, the model here is Japan and its emphasis on shared responsibility and decision making in the workplace, which has enabled Japanese industry to make better use of its workers' skills and abilities.

In addition to experimenting with new overall relationships between labor and management, there are now a number of efforts underway to develop innovative compensation plans. Instead of negotiating a set wage increase over a period of years, labor and management are moving toward more cooperative compensation plans such as gain sharing, profit sharing, Scanlon plans, Rucker plans, Employee Stock Ownership Plans, pay for knowledge (Ruben, 1987: 48), and skill-based pay plans. Given the constantly changing character of our economic situation, it seems highly unlikely that we will ever be able to go back to the old system in which pay increases were negotiated years in advance with the expectation that business would expand, and prices raised, to pay the cost. The new, more competitive and volatile world economy make such expectations increasingly unrealistic.

There have also been a number of dramatic changes in organizations and those changes are likely to continue for years to come (Hage, 1988c; Power, 1988). Among the most notable changes is the downsizing of many organizations. There is a growing realization that organizations need not be huge to be successful and, in fact, large size may mean substantial organizational fat and inefficiency. The model organization has shifted from a huge bureaucratic behemoth like the General Motors of old to today's McDonald's, which runs a huge corporate empire with a minuscule bureaucracy. The most notable result of downsizing has been the laying off of many bureaucrats, especially middle managers. Not only are our large corporations becoming smaller, but there is an increasing sense that small businesses have a key role to play in the American economy. More generally, organizations seem to be growing less loyal to their employees; less likely to even imply a lifelong commitment. Instead, more workers are hired when needed and let go when the need disappears. The notion that predominated in America after World War II, that workers and managers were virtually assured of jobs for life by successful companies (and by unions and union-management relationships, where applicable), has became more and more a fantasy.

Americans are experimenting with a variety of new organizational forms, such as adhocracies (Mintzberg and McHugh, 1985), employee-owned organizations (Kelso and Kelso, 1986; Rosen et al., 1986), as well as the adoption of a wide variety of Japanese innovations (Alston, 1986), including quality circles (Bradley and Hill, 1987; Crocker et al., 1984). Then, of course, there is the increasing use of autonomous, or self-managed, work groups. Individuals are evaluated more on the basis of their contribution to the group than on their individual performance. While such groups serve to give workers some decision-making control, they also exert group control over individual workers (Manz and Sims, 1987)

In his article in this issue, Heydebrand examines the transition from bureaucratic structures to new, more informal, more flexible, postbureaucratic organizational forms. He examines a number of different ways of conceptualizing these new organizational forms, but sees them coalescing around a view of postbureaucratic forms as small, computer-mediated or -integrated, peopled by experts, organized into relatively autonomous work groups, possessing a flexible organizational structure, highly changeable, and with new methods of fostering cohesion.

Rather than focus on a range of other models, Heydebrand outlines the six dimensions of his own "technocratic" model of the postbureaucratic organization. First, such organizations are informal in order to allow for the free interactions needed to solve today's complex problems. Informality is a conscious choice in such organizations and allows for both greater flexibility and greater measures of indirect and internalized control. Second, these organizations are run by general guidelines rather than by specific rules requiring close supervision. Third, cognitive codes are weak and this makes for an array of permeable boundaries throughout the organization. Fourth, the organization's subunits are "loosely coupled" allowing more flexibility in the way they relate to one another. Fifth, rather than being independent entities, postbureaucratic organizations consciously foster an array of linkages with their environment. Finally, these organizations are characterized by an organizational culture dominated by an ethos of trust and loyalty. It is clear that the new economy will be characterized by new organizational forms.

CHANGES IN TECHNOLOGY AND KNOWLEDGE

Changing technologies of production are an ever-increasing central reality within the American economy. While they may offer long-term, substantial economic gains to society as a whole, technological changes can be profoundly threatening (Osterman 1986). Technological changes must often be implemented over the objections of workers and unions. Many countries (e.g., Canada, Sweden) have found it necessary to create committees to deal with the wide array of problems created by technological change in the workplace—worker retraining, redundancy, work sharing, for example (Deutsch, 1986: 35).

In the next issue, Wallace examines 10 "core" changes that result in large part from technological change. Among the most important are the emergence of the "high flex" workplace to replace standardized mass production, increases in "technocratic" control over workers, "skill disruption," technological unemployment, and a decline in the middle class. While Wallace is looking at changes wrought by technology, he is persistently drawn to the problems created by technological change. Along the way, he pulls us in the direction of looking at some traditional issues in new ways. Instead of thinking in terms of bureaucratic and technological control, he uses the idea of "technocratic"[10] control to suggest a combination of the two raised to new heights in high-tech work settings. Instead of deskilling, reskilling, or some combination of the two, we are urged to think in terms of "skill disruption" as the most apt description of the effects of technological change. Instead of thinking in terms of the positive or negative effects of technological change on the quality of work life, we are urged to take a "contingency" approach to the issue.

While Wallace looks at a wide range of the issues and problems associated with technological change, it is impossible to address them all in a single article. For example, Wallace does not deal with the fact that changing technology is rapidly reducing the life cycle of products. Products are being replaced at a rapid rate and this, too, affects workers and the need to continually alter their skills and abilities. Similarly, he does not address the future role of low-tech industries. While the nation emphasizes, and is likely to continue to emphasize, the growth of new, high-tech industries (Crandall, 1986: 119), they are not evenly distributed throughout the United States (Falk and Lyson, 1988). Furthermore, many low-tech industries are doing well and making a substantial contribution to our economic well-being. Nevertheless, we continue to associate future economic well-being with the continued development of new technologies and new, high-tech industries. However, some of our previous expectations for high-tech industries have been excessive—they have not produced as many jobs as hoped and the costs have sometimes proven to be too high. Furthermore, there continues to exist a variety of biases against moving in the direction of high tech. Unions have traditionally opposed technological changes, usually because they cause job losses that are difficult, if not impossible, to replace (Scott, 1987). Yet there is hope for such high-tech industries of the future as superconductors as well for the increased utilization of advanced technologies such as robots, not only in such obvious places as automobile factories, but also in such less evident locales as orange groves. High-tech may offer some long-term gains for the American economy, but in the short-run it seems likely that we will need to concentrate on doing a better job with traditional technologies.

Hage (1988b: 8) takes a broader view than Wallace and sees the growth in knowledge (which encompasses changes in technology as well as changes in methods and human capital) as "the most fundamental and critical trend that is reshaping not only society but also the entire world." A focus on the growth in knowledge leads to a concern for our ability to innovate. Past failures in this realm include a lack of adequate investment in research and development, fear of taking risks on new ventures, a focus on short-term rather than long-term profitability, and managers that stifle rather than encourage creativity and innovation. In all of these ways, Americans have fared badly in comparison with the capacity of the Japanese (and others) to innovate. But there has been a reawakening of concern about, and interest in, innovation in American industry. As a result, there are some hopeful signs including innovative efforts in biotechnology, "cosmeceuticals" (e.g., the development of Retin-A to treat wrinkles), advances in pharmaceuticals (e.g., TPA), gains in the semiconductor industry (Sieling, 1988), as well as the previously mentioned work on superconductors. Nevertheless, the fact that almost half of all U.S. patent applications in 1987 were made by foreigners gives cause to worry about our ability to continue to lead in innovations.

Related to both rapid changes in technology and growth in knowledge is the increasing need for education to qualify for many occupations as well as the increased emphasis on specific training throughout one's career. Jobs are changing at a faster rate than is the population, at least in terms of its educational attainments. Jobs requiring little skill and education (less than a high school degree) are declining, while those requiring more skill and education (at least some college) are increasing (Silvestri and Lukasiewicz, 1987). By the 1990s the percentage of jobs requiring a high school degree will outstrip the percentage of Americans earning such a degree. This has led to great concern over the literacy of the American population; not just for the millions of functionally illiterate Americans (our literacy rate is about 80%, while in comparison Japan's is above 95%; *Business Week*, 1988b), but for the millions more who have marginal basic skills competence.

This leads to the issue of the relationship between the educational system and the work world. There is a wide perception that the educational system is increasingly unable to keep up with the needs of the workplace. On one side, this has led many businesses to begin educating their employees in English as a second language, workplace mathematics, writing, oral communication, reading and computer literacy. These skills are made necessary not only by the increasing complexity of the work, but also by the belief that more and more employee involvement and increasing utilization of work teams (requiring skills in oral communication, interpersonal relations, etc.) are necessary if American business is to be able to compete in the new world marketplace. To put it another way, it is linked to the increasing realization that America must produce high-quality products and to do so requires a more educated, more highly skilled, and more involved workforce. Furthermore, since work is seen as constantly changing, there will be an ongoing need for employers to train and continually "reskill" its workforce.

On the other side, there is increasing attention to the failures of the educational system to provide a workforce with the needed skills and abilities. A recent publication (U.S. Department of Labor, 1988) *Building a*

Quality Workforce, cosponsored by the Departments of Labor and Education and the U.S. Chamber of Commerce, has focused on this issue. One of the report's conclusions is that there exists a "basic skills gap" between the abilities of the people emerging from the educational system and the capacities required by the rapidly changing economic system. The deficiencies of workers are costly in various ways including lower productivity, wasted time and effort, higher rework costs, poorer quality, and ultimately and most importantly, a reduced ability to compete internationally. Education is called upon to do a better of job of training students and the business system is urged to do more to communicate its changing needs and requirements to the educational system. In sum, America will need to devote at least as much attention and money to problems of human capital as it must to capital equipment.

DEMOGRAPHIC CHANGES

There have been a number of striking demographic changes in the labor force. For one thing, the postwar "baby boom" has been transformed into the "baby bust." During the years 1972-1979, the labor force grew at an annual rate of 2.7%, by 1979-1986 the rate had dropped to 1.7%, and between 1986 and 2000 the rate is projected to fall to 1.2%. In the early 1970s, there were three million new entrants into the labor force each year; by the year 2000 there will be only about one million new entrants. This will create important labor shortages, especially for lower-level and entry-level positions as a result of dramatic declines in the number of younger workers.

Then there is the trend toward early retirement, which serves to remove people from the labor force much earlier than in the past. This has been encouraged in recent years by a reduction in age requirements for retirement, and improvement in pension programs (Bell and Marclay 1987:18). The projections are that we will continue to see a decline in the older labor force through the mid-1990s when things will begin to turn around for this age group as the baby boomers begin to move into this cohort. Some of these people will have voluntarily left the labor force while others will have left involuntarily as a result of plant closings and layoffs. Some from both groups, but especially those in the involuntary category, may want back into the labor force, but they are hampered by high wage demands based on being overqualified for jobs. One issue is whether older workers can be a resource in the future, labor-short economy. Perhaps, but factors such as disincentives built into pension plans tend to keep them out of the labor force.

Comparatively young (and healthy) retirees leave the work world with a variety of dreams (Anderson et al., 1986), but many face a number of problems including difficulties in finding meaningful activities and adequate funds to last them through an increasing number of retirement years. This is linked to the forecasts that the Social Security program, while currently running a substantial surplus, will begin to run dry by the year 2048 (Trustee's Report, 1988). Turning to a somewhat different demographic issue, it will be the over 85 age category that will grow most rapidly in the next several years (4% compared to the overall growth rate of 1%) and this will have a profound effect on the American economy, especially in terms of the greater demands that will be placed on health industries and occupations.

America's economic deterioration is related to the declining fortunes of younger generations. Levy (1987) found that from 1945 and 1973 the wages for American workers, adjusted for inflation, increased by 2.5 to 3.0% per year, but since 1973 wages have either stagnated or declined. Younger employees either find it impossible to live as well as their parents, or they must make sacrifices (e.g., incur heavy debt, have both spouses work), in order to try to close the gap.

The number of white, male workers, the group that at one time was considered to be the mainstay of the labor force, is declining rapidly. In its place, we are seeing large increases in the numbers of women and other minorities in the labor force. Many more women are working (Shank, 1988). Between 1972 and 1986, the number of women in the labor force grew by 57%, compared to a 22% growth rate for males. Between 1986 and 2000 the growth rate for women will be double that for men (25% to 12%), although growth rates for both will be down as a result of the declining birth rate. Looking at the net change in the labor force, two-thirds of it has come, and will continue to come, from women. Women are also holding increasingly high-status and high-paying occupations (Blum and Smith, 1988). Even the stubborn pay gap (the percentage of male income earned by female workers), which stood at 60% for a long time has recently improved to 70% (although there is, of course, a long way to go before we will have pay parity between men and women; Hodson and England, 1986). Another problem is the comparable worth of male and female occupations (Feldberg, 1984; Sorenson, 1987). While there is much pressure for action on comparable worth, there is some debate over whether it would help much, and some evidence that it would even lead to greater wage inequality (Smith, 1988).

Another continuing problem for women is the lack of adequate corporate child care facilities (Fernandez, 1986). This has become particularly pressing in the 1980s since 60% of women are working by the time their children are four years of age. Approximately 25 million children are living in households in which the mother works for at least part of the day on a regular basis (Hayghe, 1986). Child care problems are exacerbated when mothers (and/or fathers) are engaged in nonday shifts. In fact, Presser (1987; 1988) has documented a surprisingly high level of nonday shift work among dual-earner couples.

As a result of the increasing magnitude of the child care problem, there is more attention to employer sponsored day care, either on-site or contracted out. Employers are also helping more in this area through programs of expense assistance, referrals to relevant outside agencies, and employee counseling. With more and more women working, and the realization that this creates child-rearing problems either because the woman is the sole provider or because both parents are working, employers are developing an array of new family policies. These include more flexible leave policies, voluntary part-time work, job sharing, homework and flextime. Over 12% of wage and salary workers now report that they have jobs with flexible schedules (S. Smith, 1986: 10). In 1985 more than 17 million people reported working out of their homes. While the majority of these homeworkers were men, many more women than men did full-time work at home (Horvath, 1986: 32).

Another alternative form of work scheduling is moonlighting, or holding more than one job. Almost six million workers, or 5.4% of the workforce, moonlight. While men are more apt to moonlight, the gap between males and females is closing. In 1970, 5% more males than females moonlighted, but by 1985 males outnumbered females by only 1% (Stinson, 1986: 22-23).

Temporary work (Howe, 1986) is still another alternative form that is attractive to females. In fact, two-thirds of the temporary workforce is female. Women, especially those with young children, are attracted to temporary work because it allows them easy reentry into the workforce after a long absence and it offers flexible schedules.

While women have made dramatic strides in the work world, other minorities continue to experience major problems. While it is hard to get precise numbers, a good portion of the growth in the labor force between now and the year 2000 will come from legal and illegal immigrants. Hispanics are likely to be the fastest-growing significant minority group, rising from 7% of the labor force in 1986 to 10% in 2000. Turning to the major indigenous minority group (if we exclude females), the black portion of the labor force is likely to increase from 11% in 1986 to 12% in 2000. A significant problem facing both Hispanics and blacks is that both are likely to be found disproportionately in slow-growing or declining, low-skilled occupations, and underrepresented in fast-growing, more highly skilled occupations. Since the overall number of low skilled jobs is declining, the supply of blacks and Hispanics is likely to far outstrip the number of jobs available to them.

The problems of black workers (Albelda, 1986; Montgomery and Wascher, 1987) stand out in spite of the fact that there have been advances (Smith and Welch, 1986), especially among black managers and executives as well as in the black middle class as a whole. But the black underclass continues to find itself disproportionately in low-paying, marginal jobs, as well as being much more likely to be underemployed and unemployed. Other minority groups represent a conglomeration of failures and successes (e.g., Asian-Americans). A particularly deprived group is the millions of undocumented aliens who labor at the margins of the American economy. A good example is the horrible pay and conditions facing immigrant workers employed in the restaurant industry (Bailey, 1985).

In her article in the next issue, Sullivan focuses on two scenarios for the future of women and minorities in the work world. In the optimistic scenario, new technology, along with the decline in white male workers, will lead to more jobs, more interesting work and better working conditions for women and minorities. In the pessimistic scenario, technological change will lead to so much job loss that even women and minorities, in spite of their advantageous demographic situation, would suffer with unemployment as well as finding themselves, when they are able to find work, in low-paying, tightly controlled, and highly insecure jobs. Based on an analysis of projections of occupational growth and decline, Sullivan finds that women and blacks are overrepresented in growing "old economy" low-level clerical and service occupations rather than in the growing high-tech "new economy" jobs. This leads her to conclude that the pessimistic scenario is more likely than the optimistic one and that women and blacks will remain as "remnants of the old economy, even in a new economy."

SOCIOLOGY AND THE NEW ECONOMY

Throughout this article we have described many (but certainly far from all) of the changes taking place in the American economy, changes of such a magnitude that we feel justified in describing the current situation as a "new economy." Furthermore, these changes are likely to accelerate, and new ones will certainly come to the fore, with the result that we are likely to be faced with what may be termed a *permanently* new economy. We turn now, briefly, to what sociology has to offer in helping us better understand the new economy.

This Special Issue has demonstrated what sociologists from a variety of subdisciplines (e.g., sociology of occupations [Abbott], sociology of organizations [Heydebrand], industrial sociology [Wallace], sociology of labor markets [Cornfield], demography and the sociology of gender and minorities [Sullivan], etc.) can contribute to our understanding of economic issues.

While these subareas (and others) have clearly made contributions, the most obvious place to start is the subfield of economic sociology (Swedberg et al., 1987). Unfortunately, in recent years economic sociology (as exemplified by Parsons and Smelser, 1956, *Economy and Society*; Smelser, 1976, *The Sociology of Economic Life*; and Stinchcombe, 1983, *Economic Sociology*) has taken a back seat to these other, subareas in sociology. Swedberg et al. make a strong case for the resuscitation of economic sociology including its powerful theoretical tradition (e.g., Marx and Weber), increasing interest in and concern about the economy, and the failures of economists to comprehend fully the dramatic changes taking place in the economy. Furthermore, many sociologists are concerned about the invasion of the "clean" economic models (e.g., rational choice) into sociology and are making the case for an independent, "dirty" sociological approach to economic issues (Hirsch et al., 1987). I would add to this the need for a general sociological approach to the economy to complement the insights derived from more specific subareas within sociology.

Swedberg et al. (1987; see also Hirsch et al., 1987) have performed a useful function by laying out seven basic dimensions of economic sociology and contrasting it to those of economics. First, economics restricts its view of action to that of utility maximization, while economic sociology includes a broader, complex, and often contradictory set of actions. Second, economics deals with the economy as a separate institution while sociology sees it as tied and subordinated to the larger society, as well as linked to other social institutions. Third, the actors in economics possess a limited form of rationality ("correct *choice* based on *full information* in a situation of *scarce resources*"; Swedberg et al., 1987: 179), while sociologists operate with a much broader and looser sense of actors' social rationality. Fourth, to the economist, rational actions lead to general equilibrium in society, while sociologists, operating with the more diverse and looser sense of rationality, see a world of tension-filled interest struggles. Fifth, economists operate as objective outsiders to what is going on within the economy while sociologists are more likely to adopt the position of objective insider. Sixth, sociologists are more sensitive to history than economists. Seventh, economists make predictions based on lofty abstractions, while sociologists engage in descriptions and explanations that are more empirically based.

We cannot apply here all of the elements of economic sociology to the economic changes discussed in this article, but we can illustrate what can be done by focusing on one, the linkage between the economy and other social institutions. In fact, Stinchcombe (1983) and Smelser (1976) see this as a main focus of economic sociology. Most useful here is Parsons and Platt's (1973) discussion of the economy as one subsystem intimately tied to the other major subsystems—the political system, the fiduciary system (e.g., schools, families), and the societal community (e.g., the law). Such an examination of institutional linkages is particularly important given the thrust of this article.

For example, the discussion of the changes in America's competitive position in the world marketplace implies a deep concern for the relationship between the economy and the polity. Sociology already has in place a number of theoretical perspectives that are well suited to deal with this linkage. One good example is world system theory (Boswell and Bergeron, 1987a), which sees "a collective reality at the world level that structures the long-term interaction of individual nation-states and national economies" (Boswell and Bergeron, 1987b: 4). World system theorists see two long-term cycles—economic expansion and contraction and hegemonic rise and fall of the core nation. From this point of view, the United States now finds itself losing its hegemonic position in a period of world economic contraction.

Another useful line of analysis stems from neo-Marxian economic sociology. For example, O'Connor (1987) has analyzed the capitalist economic crisis, but then sought to link it to crises at the social, political, and personality levels. In his view, we are not simply undergoing an economic crisis, but a much more general crisis. Cowling and Sugden (1987) have extended Baran and Sweezy's notion of "monopoly capitalism" from the national to the international realm and labeled it "transnational monopoly capitalism." Transnational monopolies remain ever ready to move out of countries with high labor costs and strong labor unions to nations with lower labor costs and weaker unions. The United States would clearly be of the latter type and movement out of the country by transnational corporations may help explain the relative weakening of the American economy.

From a non-Marxian orientation, Hage (1988b; see also, Hage et al., 1988) has linked the new economy to what he calls "the new role of the state." Citing Japan as the model, Hage argues that in the modern world there must be a partnership between the economy and the state. The polity can do such things as providing funds for research and development, cooperate in the creation of research centers, and pass legislation that makes industry more competitive. Abbott, in this issue, has examined how the state has a profound effect on the interrelationship among organizations, occupations, the division of labor and staffing through, for example, its impact on the educational system.

The body of this article deals with other institutional linkages on which sociologists already have made, and will continue to make, contributions. One is the increasing importance of the link between work and family. This has attracted interest as a result of the massive influx of women into the labor force and the wide implications that has for the family. In this article, Wallace has examined the impact of changing technology on the family (e.g., the increasing ability to work at home, to "telecommute," and the resulting increase in conflict between work and family roles); Abbott has discussed how contemporary changes in the family (e.g., more women moving out of the home and into the work world) are affecting the "occupation" of consumer. Another important tie is the relationship between the educational system and the economy (Beck and Colclough, 1988). This linkage promises to be of even greater significance in the future as the gap between the educational needs of the workplace and the abilities of those emerging from the educational setting widens. In this issue, Abbott has looked at the increasing role of education in staffing occupations. The state, family, and education are but three of the many institutions analyzed by sociologists and all the others also have important relationships to the economy. Of course, institutional linkages do not exhaust the relationships of concern to sociologists. For example, Hage (next issue) focuses on the impact of structural transformations in the larger society on markets. Wallace looks at the effect of technological change on social stratification and Abbott urges the examination of the interrelationship of work structures – division of labor, occupation, organization and staffing. Similarly, Kalleberg and Berg (1988) support what they term a "multivariate structuralist approach" that focuses on the interrelationships among business organizations, industries, occupations, classes, unions, and nation-states.

It would be useful to mention the implications of just a few other elements of economic sociology for the study of the new economy. For example, its concern with historical change is obviously of utility to the analysis of a rapidly changing economic system, indeed a system that seems destined to permanent change. Then there is the assumption within economic sociology that the economic world is filled with a tension, an assumption that certainly meshes with the stress-filled realities of economic life (e.g., between nations such as the United States and Japan, between labor and management).

Furthermore, those tensions can only be exacerbated and multiplied as the economy changes ever more rapidly and dramatically.

A revived economic sociology would not only be useful in analyzing the changing economy, but it could also make a variety of contributions to economics (Farkas and England, 1988; Winship and Rosen, 1988). For example, sociological research (e.g., Eccles and White, 1988) can uncover empirical phenomena that can be used by economic theory. For another, sociological analysis (e.g., Hamilton and Biggart, 1988) can demonstrate that institutions (e.g., the polity) other than the economy have an impact on the economy. Research (e.g., Coleman, 1988) can show that noneconomic factors (e.g., social relations; social psychological factors) are important in explaining economic phenomena. For instance, the success of Japanese industry may be the result more of the way it has constructed social relations in the workplace than of fundamental economic factors. Finally, as Hage shows, structural transformations are causing markets to behave differently than is expected by the economists' models. While economists stand to gain from economic sociology, economic sociologists can profit from the conceptual models and insights of economists. In addition to the need for a revived economic sociology, there is also much to be gained from greater cross-fertilization between economics and sociology (Etzioni, 1988; Farkas and England, 1988).

NOTES

1. This article includes assertions and statistics about what the work world will be like as it approaches the year 2000. Unless otherwise stated, these ideas are derived from the special issue of the *Monthly Labor Review* devoted to workforce 2000, the Hudson Institute's report, *Workforce 2000,* and a number of the talks given at the conference *Workforce 2000* held in Milwaukee, Wisconsin in October, 1988.

2. This is in accord with more limited conclusions by Hage (1988b) who writes of "the new rules of competition," and Kochan et al. (1986) who discuss a "new" system of industrial relations.

3. Bell (1976: ix) himself regrets this as well as its association with other simplistic ideas (e.g., "future shock"), which he labels "future schlock."

4. Bell saw these various characteristics as "tendencies" rather than inevitabilities and was well aware of the difficulties of social forecasting.

5. See the essays in Farkas and England (1988) for examples of this as well as what economists and sociologists have to offer to each other. These essays deal with the need for rapprochement between sociologists and economists.

6. I thank Jerry Hage for suggesting such a typology. In fact, this typology is similar to the one used by him in his recent volume, *Futures of Organizations* (Hage, 1988a). These distinc-

tions are, of course, artificial and differentiate among social realities that in the real world are highly interrelated. There is certainly a deep and pervasive relationship between external and internal changes. The changes in knowledge and technology and demographic changes, at least the way they are treated in this article, are actually subcategories under the heading of internal changes. This fourfold typology is offered for the sake of organizing what is otherwise a bewildering array of changes.

7. Interestingly, Japan is now facing severe competition from South Korea in steel and automobiles.

8. Consumers have changed in other ways as well, such as demanding more nonstandardized products, having more complex and often conflicting criteria for evaluating products (e.g., the taste and the healthfulness of food), and desiring more technologically advanced products (Hage, 1988b: 13-15).

9. While the government has tended to emphasize the positive aspects of these cooperative efforts, others have discussed their darker sides. Parker and Slaughter (1988) looked at NUMMI and found that the work is highly stressful; that workers do participate in developing a system, but once it is operating they must do things in standardized ways; and that learning a range of different jobs makes it easier for managers to reassign workers.

10. Interestingly, Wallace and Heydebrand independently came to use this same term.

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