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The Journal of Sociology & Social Welfare

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Volume 13  
Issue 1 *March*

Article 13

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March 1986

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### Recommended Citation

Mann, Louella (1986) "Social Service Delivery Systems: The Impact of Technology and Organizational Structure," *The Journal of Sociology & Social Welfare*: Vol. 13: Iss. 1, Article 13.

DOI: <https://doi.org/10.15453/0191-5096.1742>

Available at: <https://scholarworks.wmich.edu/jssw/vol13/iss1/13>

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# SOCIAL SERVICE DELIVERY SYSTEMS: THE IMPACT OF TECHNOLOGY AND ORGANIZATIONAL STRUCTURE

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## Abstract

Changes in work and social structures are reviewed for the period from the early industrial era to the present. Work structure is hypothesized to have a significant impact upon society and the individual. The structure of the modern work setting and the rapid changes in technology have increased the stress associated with anxiety and isolation. In turn, these problems contribute to the onset of social ills. Also examined are ways to diminish the negative effects of the role conflict which results from the divergent structures present in the personal and work settings. Predictions about the future of social service delivery include greater emphasis on group interventions and more attention to the marketing and financial functions of service agencies.

## Introduction

"There is only one place which our images of the future can be derived and that is our images of the past" (Boulding, 1984: 19). But, forming a clear image of the past is no small task. Analyzing the impact technology has had on society is made difficult by both the breadth of the topic and the human tendency to over emphasize the impact of current developments. "Scholars delight in labeling an era by its most advanced technology, even when that technology was at first very limited in its applications" (Kranzberg, 1984: 6). Kranzberg points out that the Bronze Age was in fact a period of stone and wood for the majority of workers, while the Steam Age was dominated by the use of water power. Likewise, today's Space Age exists for most persons as a concept that has not yet been realized.

Dissemination of technological advances is rarely, if ever, immediate, but usually follows a long and circuitous path. Social institutions might be viewed as major obstacles to change, deflecting minor technological changes and adapting to major ones only after an extended time lag. Because of that lagged adjustment period, today's most pressing social conflicts have their origins in the Industrial Age rather than in the Information Era. This paper presents a preliminary model of the changing structure of society and the workplace brought about by industrialization. The time span of interest is approximately the last one hundred and fifty years.

### The Model: Reversed Trends in A Work and Social Organization

The organization of today's work place demands a more rigid separation of job tasks and responsibilities than in the nineteenth century. Over the same period, societal restraints on the individual have diminished. That is, the potential for social mobility has increased, even though perceived equality of status may have moved in the opposite direction. This inversion of rigidity related to social and work structure, and the resulting role conflict, is depicted in figure 1. The model demonstrates the idea of social problems arising out of the cognitive dissonance created by the differing degrees of structural rigidity in personal and work settings.

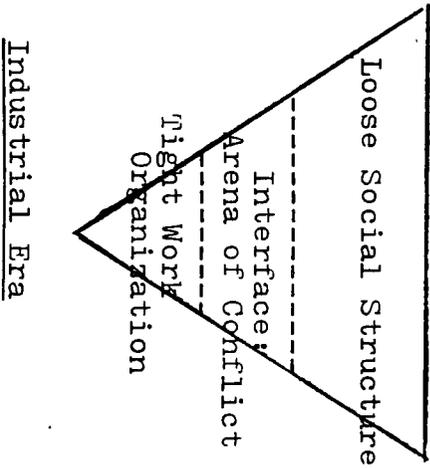
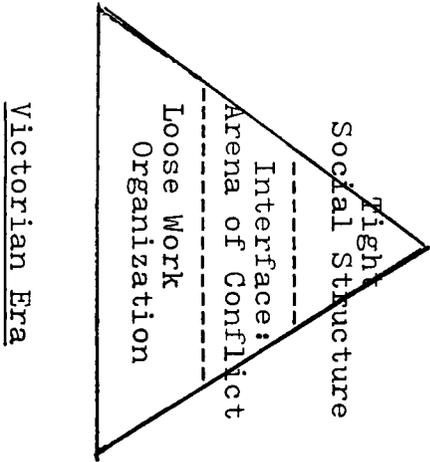
[Figure 1 Here]

### Role Conflict and Anxiety

"Every alert citizen of our society realized ... that anxiety is a pervasive and profound phenomenon of the middle of the twentieth century" (May, 1950: 3). R. R. Willoughby (1935: 498) asserts that "anxiety is the most prominent mental characteristic of Occidental civilization," and is manifested in many forms. May gives evidence that while covert anxiety is not a new phenomenon, the presence of overt anxiety seems to have arisen around 1930. He further points out that this occurrence is attributable to more than just the economic depression of that era. He attributes overt societal anxiety to a confusion of role.

Psychotherapists generally consider anxiety to be the most universal experience of modern life with the possible exception of loneliness

Figure 1



(Fromm-Reichmann, 1960: 129). The increased work structure and the decreased social rigidity over time have contributed to greater isolation and anxiety for the individual.

Modern youth are expected to choose a "career" and perhaps to advance beyond the status of their parents. The nineteenth century practice of entering into the family business or at least going to work with acquaintances from the same community eased the transition from youth to adulthood. However, modern youth typically pursue a career in a different field than their parents or childhood friends. As this person progresses he or she experiences isolation anxiety as well as the anxiety brought on by the pressure to succeed.

Anxiety also manifests itself as a feeling of uncertainty and helplessness. Williamson (1980: 19) defines the organizational hierarchy as being relatively great where few individuals have the responsibility for developing adaptations. This emphasizes the low level of personal control in modern large-scale bureaucratic organizations. The specialized nature of job tasks in a hierarchical organization contribute to a double-barrelled malaise of indeterminacy. First, specialists at lower and middle rungs of the company ladder may not have a clear image of how their jobs contribute to the overall objectives of the organization. Then again, even if persons know how their job contributes to the survival of the organization, they may find it a bit unsettling to realize that in a team environment the continuation of their work depends to a considerable degree upon the efficiency of other organizational players over which they have no control. Second, there is the uncertainty of promotion. This produces a conflict between freedom in the personal sphere and the knowledge that an individual's promotability depends upon a willingness to sacrifice for the organization. Specialized, technical jobs require a lengthy educational period. Then after one enters the job market the climb up the bureaucratic ladder is long and uncertain. Furthermore, the overly ambitious individual risks resentment from peers and superiors alike.

### Historical Perspectives on Organizational structure

Several economists have taken the position that a hierarchical structure is an unfortunate, but necessary, evil attending the mass production efficiencies brought about by advances in scientific technology. Alternatively, Williamson argues that a hierarchical work structure

provides operating efficiencies completely independent of the level of scientific technology. His argument is that internalizing market transactions into the management of a firm economizes on the coordination of costs. In a practical sense, this means that one must consider two very different kinds of technological advances: advances in scientific knowledge and advances in the knowledge or expertise of organizational management.

The last one hundred and fifty years are referred to occasionally as the Age of Knowledge. For example, the railway was a vital part of the rapid increase in knowledge during that time. The size and complexity of the nineteenth century railway projects in both the United States and Europe expanded engineering knowledge and experience. The degree of the financial undertakings of the railroads, coupled with the need to control geographically dispersed operations, may have provided the impetus for the development of more scientific management principles. An alternative interpretation is that the railway may have been made feasible only because a management structure was already in place. Whichever interpretation is correct, the availability of rail transportation expanded the market of manufacturers. At the same time, advances in communications technology and advertising methods expanded the individual's awareness of alternative life styles.

Rural families began to migrate to the cities in search of better paying jobs in factories. The growing scale of industry created opportunities for new occupations. Geographically dispersed businesses required clerks, commercial travellers, mechanical engineers, and auditors. The legal and medical professions were stimulated by the growing number of people who could afford their services. The growing professional and paraprofessional job markets formed the basis for an enlarged middle class.

Greater productivity from both increased scientific technology and human specialization allowed workers to earn their living in fewer hours. This meant that children could be relieved from strenuous work routines and attend school. Sports and entertainment activities were developed or expanded to fill leisure hours. Ambitious persons also had the new option of spending free hours studying in order to enter new professions or to advance in their present one.

Many popular beliefs of the nineteenth century were incongruous to

public funding of social reforms. Social standing was sharply delineated between the wealthy and the working class. Authoritarianism was an essential element of the prevailing social ideology. A common belief was that some were destined to be givers of orders which others were bound to obey (Reader 1964: 7). Another popular idea was that an individual's position in life was solely a result of his or her own actions. While Victorian morality placed a high premium on personal responsibility it ignored the concept of public responsibility.

Only a crisis was able to create an atmosphere for accepting public obligations, in addition to individual rights and responsibilities. That crisis was the hazard of epidemic outbreaks of cholera. As industrial cities grew, contagious disease became a major concern (Reader, 1964:5). The benefits to be derived from better sanitation facilities and health services were clearly sufficient to warrant the cost. Acceptance of taxation for these services was the first step in recognizing other social reforms that also deserved public funding. The role of crisis in promoting social/institutional change is an important one. It seems that changes in institutions, like changes in technology, tend to develop only out of an urgent need.

### Technology and Social Service Delivery

The essence of a social worker's role is the identification of human problems, assignment of priorities, and the efficient servicing of as many persons as resources allow. Scientific advances, particularly in information processing, are not without impact upon the delivery of social services. Yet, with the exception of advances in medical technology, the efficiencies to be gained from computers and communications breakthroughs are not unique to this profession. The ability to build data bases of available services and identify budget restraints may enhance the social worker's ability to pick and fund a service package, while word processing may ease the burden of record keeping and verification. But these clerical effects will probably have much less impact upon social problems and their solutions than older technologies, such as television, telephones, and even the automobile.

While opportunities for social advancement have increased over time, perceptions of differences in social conditions have sharpened. This might be attributed to better public communication systems. As the media have brought available opportunities to the attention of the common person,

public demand for greater social and economic equality has heightened. One could go so far as to say that the New Deal of the thirties, the civil rights movement of the fifties, and the war against poverty of the sixties all stemmed partly from the impact of communications upon the public awareness.

On the other hand, a major theme of this paper is that management technology also played a part in the formation of present social structure and modern social service delivery systems. As more and more segments of the economy began to reap the benefits of large scale operations, corporations were able to support a much larger base of fixed, long-term investment. Economically speaking, the high fixed investment base allowed firms to minimize product costs in many industries, but with the unpleasant side effect of increased volatility in the business cycle. Thus, cyclical unemployment was increasing in magnitude just as communications media were increasing the public's awareness of social and economic disparities. The New Deal economic policies are best viewed as having grown out of both an increase in unemployment and the public's awareness of social inequities.

What about the civil rights movement? How could management techniques or organizational structure have had anything to do with that? The scientific work management techniques developed in the early twentieth century were swiftly followed by the idea of participative/humanistic management. One line of thought that took hold was the simple idea that workers are happier and more efficient when they operate as a cohesive group (Seashore, 1954; Mayo, 1945; Van Zelst, 1952; Behling & Schriesheim, 1976). During the fifties, the scarce labor markets during the economic upswing demanded that companies hire without regard to race, sex, or ethnic origin. At the same time, the idea of efficiency through group cohesion explains why females and the racial/ethnic minorities are the first to be laid-off during economic downturns.

Increases in perceived social problems have redoubled the variety and the quantity of services the public has demanded, but the availability of funds is a constraining factor. Recent cutbacks in federal funding for social programs have produced fierce competition for financial resources among potential service providers. It is not surprising that management-by-objectives (MBO) has become a recurring concept in recent social work administration literature. The current crisis in

funding for social programs has set the stage for potential advances in administrative technology for public programs.

### Accountability for Social Programs

The general idea of MBO may prove useful in the search for advances in social work administration, but one should not expect all the methods of a for-profit manager to be automatically applicable in the not-for-profit sector. Yet the management cycle of plan-operate-evaluate-plan is the same for business and nonbusiness entities. Similarly, the successful implementation of this cycle for both sectors must rest upon an effective management information system which provides data needed to allocate resources to alternative ends and to evaluate performance. While these general needs for information are the same, the specific types of information needed depends heavily upon the environment. The chief environmental differences are as follows:

1. A differing degree of involvement with markets,
2. The sources of capital, and
3. The constituents served.

For business organizations, the market mechanism provides a measure of the utility and satisfaction of goods and services provided (revenues) and received (expenses). This equating of the market price with the intrinsic worth of the product applies only for private goods in which the service recipient is the direct purchaser, as self-interest assures that no more than a product's worth will be paid. Nonetheless, the market mechanism fails for public goods, which include social services, because of the indirect connection between those who pay for the services and the recipients. Net profit, consisting of revenues (benefits) minus expenses (costs), is in general an acceptable measure of the net value of services provided only for business enterprises. Cost accounting procedures, as currently applied to not-for-profit entities, are able to capture only the single aspect of cost efficiency. No objective measure of program benefits in the nonbusiness sector is currently available within generally accepted accounting principles.

The ability to express a multitude of objectives by a single unit of measure, the dollar, has obvious benefits. It promotes comparability between periods and economic entities. Thus, historically, financial accounting techniques have proven useful as a measure of economic

performance, but the traditional accounting system is unable to tell the whole story even for business enterprises.

The technology of an economic system imposes a structure on its society which not only determines its economic activities but also influences its social relationships and well-being. Therefore a measure limited to economic consequences is inadequate as an appraisal of the cause-effect relationships of the total system, as it neglects the social effects. (Mobley, 1970: 767)

One economist considers the primary social costs of business to be as follows:

1. The social costs resulting from the impairment of human factors of production.
2. The social costs of air pollution.
3. The social costs of water pollution.
4. The social costs of the depletion and destruction of animal resources.
5. The social costs of the premature depletion of energy resources.
6. The social costs of technological change.
7. The social costs of soil erosion, soil depletion, and deforestation.
8. The social costs of unemployment and idle resources. (Knapp, 1950: 13)

To varying degrees more and more business enterprises have begun to supplement voluntarily their financial accounting measures of economic performance with data on their social impact. Abt Associates, Inc. even went so far as to invent a social income statement and social balance sheet. These reports disclose social costs and benefits to the company, shareholders, staff, clients, the general public, and the community.

Most accountants are skeptical of the ability to measure the total social consequences of a specific entity in dollars, because of the complex set of interactions present in the environment. For that reason, the usual approach is to supplement financial accounting measures of results with qualitative, non-financial measures of social performance. Since even business enterprises recognize the need to present both dollar and

non-dollar denominated information, perhaps it is time for both business and non-business organizations to seek some other primary measure or measures of performance.

Swiss (1985) points out that single-minded attention to maximizing the alternative objectives of equality, responsiveness, efficiency, or effectiveness will necessarily short change the remaining objectives. But how can one build an easily interpreted multi-denominated measure of performance? Perhaps mathematical modelling is the necessary tool. Discriminant analysis effectively combines and scores a series of inputs which are expressed in different units of measure.

Building a discriminant model which could effectively separate efficient/effective/responsive programs from the also-rans would require a high degree of nationwide cooperation and/or administration. Building an appropriate model necessitates a coordinated research effort, which would seek input from practicing social work administrators and practitioners in order to determine statistically the best combination of performance cues. Once such a model is generated it would reduce greatly the need to expend large sums on political lobbying by providing an objective, systematic comparison of similar programs. A distinct advantage of the discriminant scoring approach over other forms of federal administration is that while a central planning board might set the minimum score for funding, local administrators could still choose to meet that score by the mix of equality, responsiveness, efficiency, and effectiveness scores most appropriate to their local community.

Humanistically-oriented social workers may be a bit taken back by the idea that an understanding of certain aspects of higher level mathematics may someday be necessary for them to compete successfully for funding. Fortunately, the details can be left to a professional administrator. As publicly funded social programs have become institutionalized, their operations have come to require a high degree of task specialization and standardization for accountability systems, similar to those of for-profit organizations. Medical branches of social services are already adept at breaking down the service delivery, administration, and fund raising activities into separate organizational operations.

## Conclusion

Technologically oriented societies out of necessity rely on an increased division of labor. Furthermore, this means that social service organizations will become increasingly dependent upon highly technical management strategies for their survival. Without a revolution, which seems unlikely today, "high-tech" management is something that social workers will have to accommodate. Yet as noted throughout this paper, the social rationalization which is essential to technology can be disruptive. If modern social service programs are not to be thoroughly dehumanized by technical innovations, some coping strategies will have to be formulated.

1. Organizational structures can be adopted that encourage a sense of community among workers. For example, Rensis Likert has identified the "linking-pin" model as a replacement for bureaucracy. In this sense, the necessary "support" is engendered among workers that is essential for reducing the prevalence of "burn-out" in an organization.

2. Employee assistance programs can be inaugurated. If organized properly, these enable workers to identify and remedy their problems without management interference. In this sense, most problems can be identified early in their development, so that a simple remedy is possible.

3. In-service training should be a part of any change strategy, thereby reducing the likelihood of what some writers call the "adoption trauma" from plaguing an organization. Most often, however, training is initiated after all changes have occurred. Such a delay may have deleterious consequences.

4. Quality of working life (QWL) groups should be incorporated into social service programs. Accordingly, quality circles and other forms of planning groups allow staff workers to participate directly in any change. This type of involvement increases their knowledge about how an organization operates, thus reducing the anxiety and stress associated with innovation. Furthermore, workers' skills are increased, thereby giving them an increased sense of pride.

5. All changes should be made in terms of a comprehensive plan and a reasonable timetable. New devices, for example, should not be rushed on-line before most of their "bugs" are eliminated. Rational planning, in other words, takes a lot of the pain out of change. This type of planning,

additionally, includes all the necessary back-up procedures to avert a total system failure, if one component should not operate as planned.

In sum, technology does not have to be as disruptive to an organization as was once the case. Nowadays, a host of new management strategies exist which can reduce the problems associated with technological innovation. Since technology is not likely to dissappear, managers of social service programs must devise ways to cope with its presence. Yet because of social workers' general aversion to management, opportunities may be missed for the rational and, thus, beneficial use of technology.

### References

- Behling, Orlando, and Chester Schriesheim, Organizational Behavior: Theory, Research, and Application. (Boston: Allyn and Bacon, Inc., 1976).
- Bensman, Joseph, and Bernard Rosenberg, "The Meaning of Work in Bureaucratic Society," in Identity and Anxiety, edited by Maurice R. Stein, Arthur J. Vidich, and David Manning White, (New York: The Free Press, 1960), pp. 181-197.
- Boulding, Kenneth E. , "The Fallacy of Trends: On Living with Unpredictability," National Forum, (Summer 1984), pp. 19-20.
- Committee on Social Measurement, American Institute of Certified Public Accountants, The Measurement of Corporate Social Performance. (New York: ACIPA, 1977).
- Fromm-Reichmann, Freida, "Psychiatric Aspects of Anxiety," in Identity and Anxiety, edited by Maurice R. Stein, Arthur J. Vidich, and David Manning White, (New York: The Free Press, 1960), pp. 129-144.
- Hannan, Michael T., and John Freeman, "Structural Inertia and Organizational Change," American Sociological Review, vol. 49, (April 1984), pp. 149-164.
- Kranzberg, Melvin, "Technological Revolutions," National Forum,

- (Summer 1984), pp. 6-10.
- Knapp, W., The Social Costs of Private Enterprise, (Cambridge, Ma.: Havard University Press, 1950).
- Lurie, Abraham and Gary Rosenberg, editors, Social Work Administration in Health Care, (New York: The Haworth Press, 1984).
- May, Rollo, The Meaning of Anxiety, (Ronald Press, 1950).
- Mayo, E., The Social Problems of an Industrial Civilization, (Cambridge: Havard University Graduate School of Business, 1945).
- Mobley, S. C., "The Challenges of Socio-Economic Accounting," The Accounting Review, (October 1970, p. 767.
- Reader, W. J., Life in Victorian England, (New York: G. P. Putnam's Sons, 1964).
- Seashore, S. E., Group Cohesiveness in the Industrial Work Group. (Ann Arbor: University of Michigan Press, 1954).
- Statement of Financial Accounting Concepts No. 4: Objectives of Nonbusiness Organizations, (Stamford, Ct.: Financial Accounting Standards Board, 1978).
- Statement of Financial Accounting Concepts No 1: Objectives of Financial Reporting by Business Enterprises, (Stamford, Ct.: Financial Accounting Standards Board, 1978).
- Swiss, James E., "Efficiency and Reality," Society (January/February 1985), pp. 64-70.
- Taylor, F. W., The Principles of Scientific Management, (New York: Harper and Row, Publishers, 1947).
- Thibaut, J. W. and H. H. Kelley, The Social Psychology of Groups, (New York: John wiley and Sons, 1959).
- Van Zelst, R., "Sociometrically Chosen Work Teams Increase Production," Personnel Psychology 5 (1952), pp. 175-185.

Williamson, Oliver E., "The Organization of Work: A Comparative Institutional Assessment," Journal of Economic Behavior and Organization 1 (1980), pp. 5-38.

Willoughby, R. R., "Magic and Cognate Phenomena: An Hypothesis," in Carl Murchenson (ed.), Handbook of Social Psychology. (Worcester, Mass., 1935), p. 498.