71-23,751

FINE, Barry Dov, 1942-
COMPARISON OF ORGANIZATIONAL MEMBERSHIP AND SELF-EMPLOYMENT.

The University of Michigan, Ph.D., 1970
Psychology, industrial

University Microfilms, A XEROX Company, Ann Arbor, Michigan

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED

COMPARISON OF ORGANIZATIONAL MEMBERSHIP AND SELF-EMPLOYMENT

by
Barry Dov Fine

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Psychology)
in The University of Michigan
1970

Doctoral Committee:

Professor Stanley E. Seashore, Chairman
Doctor Ernest Harburg
Professor Robert L. Kahn
Professor Daniel Katz
Assistant Professor J. B. Ritchie

ABSTRACT

COMPARISON OF ORGANIZATIONAL MEMBERSHIP AND SELF-EMPLOYMENT

by

Barry Dov Fine

Chairman: Stanley E. Seashore

Many American workers idealize self-employment as an attractive alternative to organizational membership, and numerous investigators have indicted work organizations as having ill-effects on their members, implying that nonorganizational work settings are more compatible with personal needs. However, a review of research on self-employed workers found little evidence to support the contention that self-employment and organizational membership differ in their impact upon individual workers.

In the present study employees of organizations and self-employed workers were conceived of as differing in organizational membership. Using open systems concepts, a member was defined as one who works in a job setting where subsystems are differentially manned, i.e., the different functions of organization are performed by different individuals, called members. A nonmember is a worker who must man all or most subsystems by himself. Operationally, a member was defined as one who works for someone else who employs 10 or more other persons, and self-employed workers who employ no more than 9 others were classified as nonmembers. Survey data from a national sample representative of the United States work force were used to compare 1,092 members and 183 nonmembers.

Nonmembers are higher than members in age, proportion of men, proportion of whites, proportion with unsteady jobs, and proportion in white-collar and farm occupations. Members have more education and a higher proportion of members are blue-collar workers. There was little evidence that members and nonmembers have different work values. Measures of job characteristics showed that the members have friendlier coworkers, greater job security, and shorter, more convenient hours of work; the nonmembers reported greater job enrichment and challenge, skill utilization, job autonomy, authority, availability of resources needed to do their jobs, and comfort of physical working conditions. Nonmembers also reported higher annual income and more frequent contacts with persons outside their own enterprises.

With regard to psychological outcomes, members scored lower in job satisfaction and higher in role strain, a measure of response to role conflict and ambiguity, and generally higher in indices of mental health. However, these differences in psychological outcomes were slight. Furthermore, when demography and job characteristics were controlled by means of multiple classification analysis, members' means on the outcome measures were favorable in comparison to nonmembers' means. This finding was interpreted as evidence that organizational membership has a positive net effect on psychological outcomes. The difference between organizational and nonorganizational work settings in the degree to which they require the individual to invest his own energy in maintaining the setting may account for these results.

ACKNOWLEDGMENTS

I am grateful to my committee for accepting my barely reasonable deadlines as their own. More important for my learning was their allowing me to pursue my problem entirely on my own, with as much of their help as I chose to seek and accept. I feel a particular debt to Stan Seashore, who chaired this committee and served as my advisor throughout my years at Michigan. He has always been able to widen the scope of any problem I brought to him by suggesting alternative ways of thinking about it that had escaped me; but, he has never deprived me of my learning opportunity by making a decision for me.

Robert P. Quinn, director of the study that provided the data I used, helped at various stages by making available other resources besides the data, and by criticizing my research and pointing out weaknesses in it. I appreciate the understanding shown by those working around me in tolerating more than the usual amount of irritability from me as I felt the pressure of impending deadlines. The assistance of Margaret McCullough and the excellent and dependable typing of Alice Sano both contributed to the quality of the final product.

The material in this project was prepared under Grant Number 91-24-70-49 from the Manpower Administration, U.S. Department of Labor, under the authority of title I of the Manpower Development and Training Act of 1962, as amended. Researchers undertaking such projects under

Government sponsorship are encouraged to express freely their professional judgment. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor.

Some of my original thinking about the problem researched here and part of the literature search were done with the financial support of Public Health Service Fellowship Number 1 F01 MH 41,073-01 (BEH) awarded by the National Institute of Mental Health.

The motivation to pursue a doctorate surely can be traced to my parents, though it will be put to use actualizing values I acquired from other sources. In addition to the usual filial debt, I owe part of my interest in the self-employed to my experience working with my father during his entrepreneurial years.

It is fitting that my wife, Rivka, be acknowledged last. She has come last on many occasions during my long trek on the road to a doctoral degree. It is no exaggeration to state that she has sacrificed for its attainment more than it is worth to either of us.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	vi
LIST OF APPENDICES	ix
Chapter	
I. THE EFFECTS OF MEMBERSHIP	1
An Unused Comparison Group	5
A Definition of Membership	6
Appropriation of Features of Work-in-general as Organizational Characteristics	10
Aims of This Study	14
II. THE SELF-EMPLOYED IN SOCIAL RESEARCH	16
Invisible Men	16
Reasons for Exclusion of Self-employed	17
Argument for Including Self-employed Workers in Organizational Research	20
Demographic Characteristics	23
Economic Behavior	24
Mobility	27
Old and New Middle Class	31
Professionals in Organizational Settings	39
Job Satisfaction and Mental Health	41
Summary	44
III. METHODOLOGY	47
The Sample	47
Measures	48
Definition and Measurement of Membership	49
Demographic Variables	51
Work Values	52
Job Characteristics	53
Psychological Outcomes	55

Chapter		Page
	Statistical Analyses	59
	Comparing Members and Nonmembers in Terms of Work Values and Work Settings	59
	Controlling Job Setting and Demography in Comparing Members and Nonmembers with Respect to Psychological Outcomes	60
	The Sample of Matched Pairs	62
IV.	RESULTS	64
	Demography and Membership	64
	Work Values and Work Settings	64
	Differences in Other Measures of Job Characteristics	70
	Psychological Outcomes: Bivariate Analysis	74
	Comparison of Nonmember Employers and Nonmember Loners	75
	Multivariate Analysis of Psychological Outcomes	77
	Some First-order Interactions	85
	Comparison of Matched Pairs	90
V.	DISCUSSION	92
	Summary of Findings	92
	Validity of Measures	94
	Interpretation of Results	95
	Usefulness of Membership Dichotomy	95
	Effect of Membership	96
	Membership: Maintenance-free Employment?	97
	Self-employment: Immunity to Unsavory Conditions?	99
	Collar Status and Self-employment	100
	Typology of Self-employment	100
	Evolution of Self-employment	101
	Limitations of the Present Study	102
	Suggestions for Future Research	103
APPENDICES		105
REFERENCES		139

LIST OF TABLES

Table		Page
1.	Number of Others with Whom the Respondent Works, by Type of Employment	51
2.	Factor Analysis of Mental Health Items	57
3.	Correlations Among the Four Mental Health Factors	58
4.	Weights in the Discriminant Function Derived from the Work Values Items	65
5.	Post Hoc Classification of Members and Nonmembers by Membership Categories on the Basis of the Work Values Function Shown in Table 4	66
6.	Cross-validation of Discriminant Function Derived from Work Values Items	66
7.	Weights in the Discriminant Function Derived from the Job Setting Items	68
8.	Post Hoc Classification of Members and Nonmembers by Membership Categories on the Basis of the Job Setting Function Shown in Table 7	69
9.	Cross-validation of Discriminant Function Derived from Job Setting Items	69
10.	Annual Income Before Taxes, by Membership	71
11.	Job Characteristics of Members and Nonmembers	72
12.	Comparison of Members and Nonmembers on Dichotomous Measures of Job Characteristics	73
13.	Psychological Outcomes of Members and Nonmembers	74
14.	Job Characteristics of Members, Nonmembers Who Employ Others, and Nonmembers Who Work "Alone"	76

Table		Page
15.	Psychological Outcomes of Members, Nonmembers Who Employ Others, and Nonmembers Who Work "Alone"	78
16.	Unadjusted and Adjusted Mean Differences Between Members and Nonmembers in Psychological Outcomes Holding Constant Confounding Demographic Variables and Job Characteristics Singly and in Combination	81
17.	Job Satisfaction and Role Strain of Members and Nonmembers Controlling Variables that Interact with Membership	87
18.	Job Characteristics of Matched Members and Nonmembers . .	91
19.	Psychological Outcomes of Matched Members and Nonmembers.	91
20.	Job Characteristics Sorted According to Which Membership Subclass Scored Higher	93
21.	Age by Membership	106
22.	Sex by Membership	106
23.	Race by Membership	107
24.	Steady Job by Membership	107
25.	Education by Membership	108
26.	Collar Status by Membership	109
27.	Duncan Decile by Membership	109
28.	Reliability of Enriching Job Requirements Index	124
29.	Reliability of Hard Work Index	124
30.	Reliability of Job Autonomy Index	125
31.	Reliability of Adequacy of Resources Index	125
32.	Reliability of Job Satisfaction Index	126
33.	Reliability of Role Strain Index	127
34.	Reliability of Somatic Complaints Index	128
35.	Reliability of Depression Index	129

Table

Page

36. Reliability of Performance Debilitation Index 129

37. Reliability of Zest Index 130

LIST OF APPENDICES

Appendix		Page
A.	Demography of Members and Nonmembers	106
B.	Card-sort Measures of Work Values and Work Settings .	110
C.	Mental Health Self-report Form	113
D.	Interview	115
E.	Inter-item Correlations and Reliability Estimates of Multi-item Indices	123
F.	The Matched Samples of Members and Nonmembers	131

CHAPTER I

THE EFFECTS OF MEMBERSHIP

Much of the literature on organizations supports the contention that membership in organizations brings unwanted results to individuals. Psychologists are especially inclined to focus their attention on the individual, but other investigators of organizational phenomena have also implied that organizational membership has negative consequences for individuals. Weber (1947) considered bureaucracy both indispensable for society's continued functioning and inescapable for the individual:

> When those subject to bureaucratic control seek to escape the influence of the existing bureaucratic apparatus this is normally possible only by creating an organization of their own which is equally subject to the process of bureaucratization. . . . Without it [the existing bureaucratic apparatus], a society like our own--with a separation of officials, employees, and workers from ownership of the means of administration, dependent on discipline and on technical training--could no longer function [p. 338].

Weber did not specify why individuals might seek to escape from bureaucratic structures. Working at the sociological level of analysis, he largely neglected to examine the effects of bureaucracy on individual participants. He did imply, however, that work in nonorganizational settings was free of the kind of control over individual behavior experienced by members of bureaucratic organizations:

> The capitalist entrepreneur is, in our society, the only type who has been able to maintain at least relative immunity from subjection to the control of rational bureaucratic knowledge. All the

> rest of the population have tended to be organized in large-scale corporate groups which are inevitably subject to bureaucratic control [p. 339].

Merton (1957) has explained why workers gravitate to organizations:

> Bureaucratization makes readily visible what was previously dim and obscure. More and more people discover that to work, they must be employed. For to work, one must have tools and equipment. And tools and equipment are increasingly available only in bureaucracies, private or public. Consequently, one must be employed by the bureaucracies in order to have access to tools in order to work in order to live [pp. 68-69].

The choice of words in these quotations strongly implies the operation of powerful forces that coerce the unwilling into employee status and subjugation to a kind of control from which workers had been free in the past. This change of work milieux from some prebureaucratic setting to employment in large-scale organizations is viewed as a fall. The popular images of the "organization man," the generally negative connotation of the term bureaucracy, and the abundance of normative prescriptions for organizational changes designed to restore to the individual member his autonomy and sense of self-worth, are all phenomena that share the theme that organizations have wrought undesirable consequences for the individual.

Some psychologists have described in more explicit terms how organizations affect individual members. Perhaps the foremost is Argyris (1957, 1964) who has written most eloquently about the incompatibility of individuals and organizations, and its consequences. His first proposition states: "There is a lack of congruency between the needs of individuals aspiring for psychological success and the demands of the (initial) formal organization" (1964, p. 40, parentheses

in original). He summarized his views as follows:

> The formal organization . . . and the administrative control system typically used in complex formal organizations may be viewed as part of a grand strategy to organize human effort to achieve specific objectives . . . . The strategy creates a complex of organizational demands that tend to require individuals to experience dependence and submissiveness and to utilize few of their relatively peripheral abilities. The degree of dependency, submissiveness, and so on, tends to increase as one goes down the chain of command and as the job requirements and managerial controls direct the individual; they decrease as one goes up the chain of command and as the individual is able to control the job requirements [p. 58].

In his introduction to The Organization Man, Whyte (1956) stressed that the people described in his book "are not workers, nor are they the white-collar people in the usual, clerk sense of the word. These people only work for The Organization. The ones I'm talking about belong to it as well. . . . Only a few are top managers or ever will be" (p. 3, italics in original). Whyte's description is focused on middle managers and the impact of the organizations they "belong to" upon them--their education, their careers, their nonwork life. Emphasizing that membership in organizations is a major factor contributing to the decline of individualism, he expressed his contempt for organizations in the following sentence: "Of all the forms of wanton self-destruction . . . there is none more pathetic than that in which the human individual demands that in the vital relationships of life he be treated not as an individual but as a member of some organization" (p. 66).

Presthus (1962) has likewise described the organization as having undesirable effects on individuals in general:

> Today, however, big organizations tend to view man instrumentally. Their acquisitive demands restrict his discretion; they subordinate his values and aspirations to the major purposes of the

> organization. . . . Man, in effect, is made for the organization. He may succeed and prosper within it, but the organization always defines the terms of success. Yet, given his dignity as a human being and his capacity for reason, man ought not to be viewed as an instrument [pp. 25-26, italics in original].
>
> Their [big organizations] impersonal, long-range objectives, patent control mechanisms, size, and tendency toward absolutism may have dysfunctional, anxiety-producing results for their members. Such by-products, the unanticipated consequences of the bureaucratic situation, become most clear when organizational claims are set against democratic ideals of free expression, individual worth, and spontaneity [p. 17].

Revising the Marxian view that it is the propertylessness of the worker in the capitalist societies that most basically contributes to his alienation, Blauner (1964) stated:

> Today, most social scientists would say that alienation is not a consequence of capitalism per se but of employment in large-scale organizations and impersonal bureaucracies that pervade all industrial societies [p. 3].
>
> Inherent in the techniques of modern manufacturing and the principles of bureaucratic industrial organization are general alienating tendencies [p. 166].

For Mills (1951) the special victim of bureaucratization is the white-collar worker:

> In the eighteenth and nineteenth centuries, rationality was identified with freedom. The ideas of Freud about the individual, and of Marx about society, were strengthened by the assumption of the coincidence of freedom and rationality. Now rationality seems to have taken on a new form, to have its seat not in individual men, but in social institutions which by their bureaucratic planning and mathematical foresight usurp both freedom and rationality from the little individual men caught in them. The calculating hierarchies of department store and industrial corporation, of rationalized office and governmental bureau, lay out the gray ways of work and stereotype the permitted initiatives. And in all this bureaucratic usurpation of freedom and of rationality, the white-collar people are the interchangeable parts of the big chains of authority that bind the society together [p. xvii].

The above are examples of rather explicit statements about the negative consequences of organizational membership. A far greater

proportion of the literature on organizations implies that organizational membership leads to negative outcomes for individuals, but does not discuss this explicitly. The value judgment is left to the reader. When organizations are described as posing constraints to behavior, fostering dependence, restricting autonomy, imposing hierarchical control on members, exchanging inducements for contributions, producing stresses that put strain on members, reducing spontaneity of behavior, and encouraging conformity, many might well conclude that organizations are having undesirable effects on their members who, for a variety of reasons, have no real choice but to maintain their membership. A further implication is that these outcomes are unique to organizational settings and would not exist in a world without organizations. Thus, explicitly and implicitly a large part of the literature is consistent with the conclusion that membership in organizations leads to undesired outcomes for individuals.

An Unused Comparison Group

The effects of work organizations per se on their members cannot be studied rigorously without reference to a comparison group of workers who are not employed in organizations. Without such a group of nonmembers it is difficult to determine unequivocally whether membership in work organizations has less desirable outcomes than does work in nonorganizational settings. The many studies which have investigated members only and have purported to show the effects of organizations on their members can be criticized for having neglected to provide a standard of comparison that could establish that nonorganizational work

settings are at all different in their effects on workers. The only necessarily organizational aspect of many studies in "organizational psychology" is that their subjects are all members of organizations. Often, the variables whose effects are studied need be regarded as "organizational" only by the limited perspective of the investigator, and could be studied just as well using nonmembers as subjects. Such a population of nonmembers exists and can provide workers to serve as "control" groups in organizational studies. They are the 10 percent of the work force who are self-employed.

A Definition of Membership

Perhaps the most definitive difference between the work settings of the self-employed working alone and the work settings of members of work organizations is that in the former the process of organizing is performed entirely by a single individual. All functions are performed by one agent located within the skin of a single, identifiable human being. He alone must perform tasks that in organizations are handled by production, supportive, maintenance, adaptive, and managerial subsystems (Katz & Kahn, 1966), each of which is typically populated by different individuals, called members. In order to study a lone self-employed worker as an organization it would be necessary to partition a single individual, or his behavior, into distinct parts and speak of each part separately, and of the relations among the parts. While this could conceivably be done, it would mask an important distinction.

When the different tasks of organization are performed by different persons, each may be regarded as a member of a social unit called

"an organization." When only one person performs all the functions of organization, that person is not a member of a social unit called "an organization." Thus, he may be labeled a "nonmember," and his work setting "nonorganizational." The latter statement in no way implies that the nonmember's work setting is unorganized or chaotic, nor does it preclude his having relationships with other social units such as suppliers, customers, and government. A crude way of summarizing the difference between members and nonmembers would be to state that the person who works in a setting where subsystems are populated by different individuals is "in an organization," while of the self-employed person working alone it may be said that "the organization is in him." Thus, the former is a member, but the latter is not.

"Work setting" as used here does not refer to any particular physical place. A self-employed nurse may provide her private patients with bedside care while they are hospitalized, and a sales representative of an organization may spend most of his working time interacting with self-employed entrepreneurs at their nonorganizational places of business. As defined here, the nurse is a nonmember and the salesman a member. Work setting is regarded not as a geographic location, but rather as the social framework of an individual's work behavior. The difference between members and nonmembers is not in physical work setting but in the worker's relationship to his work environment.

Many definitions of "organization" would include the work settings of both members and nonmembers. For example, Katz and Kahn (1966) have derived from open systems theory a very general definition of "social organizations" that would require certain system properties and

subsystems, i.e., the five listed above and an "ideology." Scott and Blau (1962) have defined "formal organizations" as a subset of social organizations including only those that have been purposefully contrived in order to achieve certain ends. Both these definitions could include the enterprises of the self-employed working alone. March and Simon (1958) felt no need to "trouble ourselves about the precise boundaries to be drawn around an organization or the exact distinction between an 'organization' and a 'nonorganization'" (p. 1). Their list of examples of formal organizations includes "the corner grocery store" along with the United States Steel Corporation and the Red Cross. Finally, in a recent study entitled "Organizations in a Hostile Environment," three-quarters of the "organizations" investigated were small businesses with fewer than ten employees (Aldrich, 1969).

Thus, the definition of "an organization" used in the present work is somewhat atypical, and the empirical study reported below may be regarded, in part, as an attempt to assess the usefulness of the definition and of the resulting member-nonmember dichotomy. An alternative would be to regard what are here labeled "nonorganizational work settings" as organizations that differ from large-scale organizations in size, from complex organizations in complexity, or from formal organizations in formality. However, the work setting of the lone self-employed worker is neither a small organization, nor a simple organization, nor an informal organization; it simply is not an organization. As a consequence of all subsystems being populated by the same single individual, several of the most crucial characteristics of organizations are not present in such work settings. There is no departmentalization,

no hierarchy of authority and hence no supervision, no division of labor, no intraorganizational interpersonal relations, no integration function. While these characteristics do not necessarily define what is or is not an organization, their absence renders most theory and research on organizations irrelevant to lone self-employed workers.

When a self-employed worker hires a single employee, there will likely be some differentiation in that the employee will be subordinated and will probably perform somewhat different functions than will his self-employed boss. Nonetheless, the work setting does not become an organization, with different persons populating each of the various subsystems. The addition of more and more employees will eventually transform the work setting into a social unit with differentially-manned subsystems that could appropriately bear the label "an organization."

The classification of the employees of the self-employed as members or nonmembers is more problematic. If a lone self-employed worker is not a member of an organization, and if hiring one employee does not transform the work setting into an organization, then the single employee of a self-employed worker is not a member of a work organization either. However, the single employer is likely to be similar to the organization member in that he populates only one subsystem, whereas the self-employed worker who employs someone usually continues himself to perform most of the acts of organization. Thus, the work setting of the employee of a nonmember is in some ways like that of a nonmember and in some ways like that of a member, and this raises the possibility that membership should be conceived of as a continuum rather than as a dichotomy.

Appropriation of Features of Work-in-general As Organizational Characteristics

The lack of a clear conceptual distinction between organizational and nonorganizational work settings has made it difficult to test the contention that work organizations have ill-effects upon their members, apart from the effects of work per se. Another result of this conceptual unclarity has been the widespread tendency to treat characteristics of work settings in general as organizational variables. An example of a characteristic usually attributed to organizations that can be found in nonorganizational work settings is impersonality. Organization members are said to react negatively to the impersonality inherent in bureaucratic structure. However, impersonality is not limited to bureaucratic organizations. The relationship between the self-employed professional and his client is in some respects impersonal by design. Patients allow their physicians to practice certain diagnostic and treatment procedures upon them that would take on entirely different--and personal--meaning in a nonprofessional social context. The physician may remain personally detached from his patient and thereby preserve his professionalism. Impersonality is also a feature of the relationship between the shopkeeper and his customer. Conventions of courtesy and fixed prices make many interactions between shopkeeper and customer nearly automatic and largely depersonalized, each party to the relationship being merely instrumental to the other in the exchange of goods or services; all this with no bureaucratic organizational structure. Indeed, Bonjean and Grimes (1970) found that impersonality was more consistently and more significantly associated with measures of alienation

among self-employed businessmen than among organizationally-employed managers and workers. Thus, impersonality and its effects have been found among persons who work in nonorganizational settings.

Weber cited the control of behavior of office incumbents by rules and regulations as a defining characteristic of bureaucracy. If one considers the control of behavior of the self-employed, it is apparent that rules and regulations determine a great deal of their work behavior. Few means of livelihood are free of constraints established by public agencies and professional or trade associations. There are binding rules and regulations that limit autonomy by determining what hours a shop may be open, what treatments a physician may use, levels of prices or fees, where various livelihoods may be practiced, and other aspects of self-employed work.

A final example of an "organizational" characteristic found in nonorganizational work settings is the tendency of the employment situation to enforce conformity in workers. Obviously, there are great pressures on the self-employed to conform to a rather narrow range of behaviors while at work. Dependence on a loyal clientele for future livelihood serves as a powerful incentive to meet client expectations even with respect to nonwork behaviors. One suspects that expectations of clients and customers can induce in the self-employed the public display of political views and even religious affiliations, as has been observed among organization members (Dalton, 1959).

The argument here is complementary to that of Katz (1968), who has observed:

> Independence exists within most social arrangements. Be they large-scale organizations, such as hospitals, schools, or prisons, or small-scale interactions among a few persons, social arrangements contain not only controlled and predictable activities, but also activities that are relatively autonomous [p. 4].
>
> Organizational structure includes relatively controlled and relatively autonomous spheres [p. 49, italics in original].

Thus, Katz noted a bias in the literature that has obscured the autonomy inherent in organizations.

An analogous bias has veiled the constraints on workers' behavior in nonorganizational settings. Self-employment, like organizational employment, includes relatively controlled and relatively autonomous spheres of activity. In the past self-employment has been idealized by both workers and scientific investigators because of the absence of a bureaucratic control structure. Whether or not there is greater autonomy and less control in self-employment in contrast to organizational work settings, and whether there are differences in individual well-being in the different settings, should be regarded as empirical questions rather than as matters to be resolved by definition. Perhaps much of what has been attributed to organizations should be attributed instead to work in general, to urbanization, to industrialization, to technology, to the human condition, or to all of these. All these other societal conditions affect the modern worker in greater or lesser degree irrespective of his work setting. That many ills are attributed to organizations instead of to work itself is perhaps a manifestation of the tremendous value placed upon work by Western tradition. Norms against the deprecation of work are strong; norms against the deprecation of organizations are very weak, if they exist at all. To the extent that properties attributed to organizations also characterize the

work settings defined here as nonorganizational, theory and research have been focused too narrowly upon organizations and their effects, and not enough upon work--in all settings--and its effects. If, on the other hand, it could be shown that "nonmembers" are significantly better-off than employees of organizations, then the argument that organizations have ill-effects on their members would be strengthened, and the need for organizational improvement would become all the more urgent.

Weber's (1947) definition of organization implies a comparison between organizations and lone self-employed workers:

> . . . a profit making organization (Erwerbsbetrieb) is spoken of wherever there is continuous permanent co-ordinated action on the part of an entrepreneur. Such action is in fact unthinkable without an "organization," though, in the limiting case, it may be merely the organization of his activity, without any help from others [p. 222, parentheses and italics in original].

Students of organizations have not taken seriously the notion of the individual entrepreneur working alone as a limiting case for the study of organizational variables. A move in this direction was taken by Hall (1963), who demonstrated the applicability of the concept of bureaucracy to small organizations. He compared seven small organizations, ranging in size from ten to 33 members, to ten larger organizations ranging in size from 65 to 3,096 employees, and found that the small organizations were not significantly different from the large organizations on four of the six dimensions of bureaucracy measured. Though the large organizations were significantly more bureaucratic with regard to hierarchy of authority and rules, no significant differences were found for division of labor, procedures, impersonality, and technical qualifications. Hall thus found that several dimensions of bureaucracy previously regarded as features of large-scale organizations

are characteristic of small organizations too. A question raised in the present study is whether much of what has been regarded as characteristic of organizations, large and small, applies also to nonorganizational work settings.

To summarize the general argument, it can be stated that by restricting the population studied to organization members, organizational psychology has deprived itself of a useful comparison group, i.e., the self-employed. Implicitly and explicitly, conclusions have been drawn about the effects of organizations on workers without comparing them to nonorganizational work settings and their effects on workers.

Aims of This Study

The study described below was undertaken in order to ascertain empirically whether or not membership in work organizations has consequences for individuals that differ from those of nonorganizational work. The dependent variables measured were psychological outcomes at the individual level and include job satisfaction, role strain, and dimensions of mental health. If membership in work organizations has negative effects on individuals, and if these effects are successfully avoided by workers who have "escaped" to self-employment, then members should be less satisfied with their jobs and less mentally healthy. If there are no differences between members and nonmembers, or if members show greater satisfaction and health, then the literature on the effects of work organizations on their members may need reinterpretation.

The next chapter will discuss some reasons for the almost total exclusion of the self-employed from studies of work, and will cite

illustrative examples of studies that would have benefited from their inclusion. The remainder of that chapter will review some of the studies that have included self-employed workers.

CHAPTER II

THE SELF-EMPLOYED IN SOCIAL RESEARCH

Invisible Men

The self-employed are the invisible men of the psychology of work. Whether the field is called industrial, organizational, occupational, or business psychology, it is typically limited to that majority of the work force whose labor is employed by others. For most writers the self-employed simply do not exist. For example, Murrell (1970) has delineated the emerging field of industrial gerontology by saying that "industrial gerontology will be concerned with older workers at all levels in an industrial organization, both those employed on [sic] administration and those on the shop floor" (p. 72). Self-employed workers were excluded from consideration despite the fact that older workers are disproportionately self-employed. Also writing about problems of the aged, Fine (1970) sought to shift the emphasis from one's job to one's career: "Careers are not jobs. They involve jobs--but they are a great deal more. In careers the focus is on the worker and his relationship to an organization. In jobs the focus is simply on getting a job of work done" (p. 43, italics added). The implication is that the concept of career does not apply to workers who are self-employed. While Weber (1947) stated that the bureaucracy provides a career for the official, with "a system of 'promotion' according to seniority or to achievement

or both" (p. 334), it does not follow that no career is possible in non-bureaucratic settings.

Discussing occupational choice, Vroom (1964) has pointed out that people not only choose occupations but also choose organizations.

> Typically a person selects his occupation before deciding on an organization. He decides to become a doctor before choosing a hospital with which to affiliate or decides to become an engineer before joining a particular corporation. . . . Occupational and organizational choices are not independent of one another. Choice of occupation of lawyer, for example, limits the organizational choice to those institutions employing lawyers [p. 50].

Vroom did not consider the option of choosing no organization, as solo lawyers do, and as about 10 percent of the nonfarm work force do.

Reasons for Exclusion of Self-employed

There are many reasons why the self-employed have been so consistently excluded from studies of work. Perhaps the foremost is the fact that these workers have been perceived as a continually shrinking proportion of the work force, whose importance has diminished with their numbers in face of the growth in the number and size of organizations. There has indeed been a secular decline in the proportion of the work force that is self-employed, but this is in large part accounted for by the passing of the independent farmer. Furthermore, as Mayer (1947) has cautioned,

> the persistence and durability of small business as a group, as an institution, must not be confused with the economic stability of the individual small enterprise. Much . . . confusion . . . results from the fact that these two phenomena are not clearly distinguished. While the total number of small enterprises and the total volume of their business activity shows relatively little change, the composition of the group changes rapidly [p. 336].

In recent years the percentage of self-employed workers in the nonagricultural work force has been consistently close to 10 percent.

Phillips (1962) has shown that, contrary to the trend among the self-employed as a whole, "the percentage of the nonagricultural self-employed in the labor force has declined little, if any, and their numbers have risen sharply from the depression and wartime lows" (p. 20). Phillips cited Department of Commerce estimates that show that active proprietors of unincorporated nonagricultural enterprises comprised almost 10 percent of the civilian labor force both in 1929 and in 1960, despite fluctuations associated with the depression and the war in the intervening years.

In attempting to reconcile different estimates of the number of nonfarm self-employed workers, Leveson (1968b) pointed out that many proprietors of small businesses who have elected in recent years to shift to corporate status for purposes of taxation and limited liability are similar in most other respects to unincorporated proprietors. Nonetheless, most estimates of the number of self-employed workers omit the small corporate proprietors. Leveson concluded, "Reductions in self-employment as a percent of all employment have been greatly overstated in recent years as a result of the growing importance of the corporate form of organization" (p. 48). Thus, the image of the fading entrepreneur is inaccurate since in recent years the decline has evidently leveled off, and may have reached an asymptotic level. Mayer's conclusion that "in terms of economic survival small business as a group appears to be remarkably persistent and durable" (p. 335) is still credible today.

A second reason for not studying the self-employed is that they are not as accessible as organization members. Members of work

organizations can be made available to an investigator en masse, making data collection much more efficient than would be the case in studying a similar number of self-employed workers scattered over a much wider geographical area and not deliverable to the researcher in large, convenient batches. Wicker (1969) has pointed out that studies that attempt to validate attitude measures by comparing the responses of persons assumed to be at opposite ends of an attitude continuum have limited generality since "known groups" are used. Persons of middling attitude and those who are not members of organized groups are omitted since they are unavailable to investigators. Thus, exclusion of nonmembers is not unique to organizational psychologists.

A third reason is substantive. Vroom (1964) explained that one reason for the relative dearth of research on job content as a determinant of job satisfaction is a tendency for psychologists to favor studying the effects of social relationships such as those between a superior and his subordinates or among peers. The same substantive preferences would lead psychologists to favor studying the interpersonally richer milieux of organizations and to neglect the self-employed. Indeed, many substantive problems of interest to psychologists can be studied only in organizations. These include the effectiveness of different means of integrating organizational units, and the relationship of work group size to performance and attitudes.

Finally, since much organizational research is initiated by the client-subject, and since research tends to be oriented towards the sources of its financial support, the self-employed, with few resources

to spare for research and development, draw little or no attention from support-dependent researchers.

Argument for Including Self-employed Workers in Organizational Research

A specific example of the many investigations that would have benefited from the inclusion of self-employed workers as a comparison group is Argyris' (1960) study of the effect of formal organization structure on members. He compared two departments differing in technology and in the skill level of their employees. The two departments were equivalent in degree of both directive leadership and managerial control, and they shared the same "environmental culture of the organization." Argyris presented data that "confirm the hypothesis that the technology has an impact upon predispositions and activities of human beings." He used the different levels of technology to operationalize the construct "formal organization structure," and concluded that his data show the effects of such structure.

One can ask just what it is that makes this an organizational study. Of course, it was conducted in order to test the investigator's theory of organizations. The title labels it a study of "individual actualization in complex organizations." Furthermore, the subjects were all employees of an industrial organization. However, technology, the study's independent variable, is certainly not a manifestation of "formal organization structure" alone. Self-employed dentists and self-employed gardeners do not normally operate within a formal organizational structure, and yet they use quite different technologies. Whatever findings result from a study designed like Argyris' are applicable

to workers in organizational and nonorganizational work settings alike. Had Argyris included two groups of self-employed workers, each group using a different technology, he might have found differences between them as well as between the two groups of members. One can disagree with Argyris' statement that "in studying the problems of industrial mental health, it may be that man may not be separated from the organization. The unit becomes the individual-organization" (p. 235). Indeed, our knowledge would be increased if more were known about how the mental health of workers employed by organizations differs from the mental health of self-employed workers not subject to formal organization structure. While one can agree with Argyris that "Without organizations, the researcher on organizations would have nothing to study," the converse is not true; studying organizations alone will not bring us to full understanding of them. Individual actualization in complex organizations must be compared to individual actualization in nonorganizational settings in order to understand fully the impact of organizations on members.

Another example of the limited value of research that omits the self-employed is in the study of the effects of organizational level on attitudes and behavior. Organizational level and occupational level are obviously correlated. Workers with the least skill tend to be concentrated at the lowest level of the organization, and occupational status or prestige increases as one ascends the organizational hierarchy. Thus, these two variables are confounded in most research involving either one of them. For example, Porter and Lawler (1965) gave this reason for eliminating studies of occupational level from their review of the

literature on the effects of organization structure on behavior and attitude:

> In surveying the literature pertinent to organizational levels and their impact on, or relationship to job attitudes and behavior, we encounter several difficult boundary or definitional problems. The first such problem concerns the question of whether studies of occupational levels should be included in the review. For our purposes, since the focus is on organizational structural variables, such occupational level studies will be generally omitted on the basis that they ordinarily investigate levels in a societal or cultural setting rather than levels within an organizational setting [pp. 25-26; italics in original].

Implicit in their statement is the definition of an organizational study as one which includes only members of organizations. By eliminating the self-employed from consideration, the effects of the organizational variable are harder to isolate. To the extent that job attitudes are correlated with occupational level among self-employed workers, all studies of organization members that have obtained findings showing a relationship between organizational level and job attitudes are suspect, since differences in occupational level can account for the relationship.

An ironic example of the underutilization of the self-employed as a comparison group is the research of Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) on organizational stress. Although the self-employed were overrepresented in their national sample, comprising 17.4 percent of the respondents, they, along with the female respondents, were eliminated from the analysis in order to facilitate comparison of the national sample data to findings obtained from members of selected organizations as part of a more intensive study of many of the same variables. Thus, the investigators sampled the self-employed and then eliminated them from analysis. An appendix to their report provides percentage

distributions on several dependent variables separately for self-employed and wage-and-salary workers. These data will be presented later.

The remainder of this chapter will discuss some of the diverse literature on the self-employed. Studies included were found by means of a systematic search, not of a defined set of journals, but of the sources with which the author is most familiar and other sources discovered by cross-referencing. A host of works scanned for such key words as "self-employment," "entrepreneur," "membership," "businessman," and "proprietor." The many studies conducted by economists and business administration specialists on the sources of failure of small business enterprises were not reviewed, since social-psychological variables are rarely measured in such investigations.

Demographic Characteristics

Leveson (1968a) examined the demographic characteristics of the nonagricultural self-employed, using 1960 Census data. In comparison with the nonfarm labor force as a whole, women and blacks are underrepresented among the self-employed. For both men and women the percentage self-employed increases monotonically with age. For men the relationship between education and self-employment is curvilinear; a greater percentage of the least educated and of the most highly educated are self-employed. For women the relationship between education and self-employment appear to be erratic. The foreign born are more likely to be self-employed than are the native born, though this is in part explained by their higher ages. The self-employed are unequally

distributed among industries and occupations. The percentage self-employed is lower in urban areas than in other areas, and is higher in the South than in other regions. Variations in industrial composition explain only part of these geographical differences. Leveson concluded that the evidence does not support the notion that self-employment is a haven for disadvantaged groups. This is primarily because of the percentage self-employed rises with education even within age groups, and because the percentage of self-employed blacks is low. Leveson's findings clearly demonstrate that the self-employed are not a representative cross section of the work force. Demographic differences will have to be controlled in studies comparing self- and other-employed workers in terms of social-psychological variables.

Economic Behavior

A well documented aspect of the economic behavior of the self-employed is that as a group they work more hours than wage-and-salary employees. For example, in their survey of how Americans spend time in productive activities, Morgan, Sirageldin, and Baerwaldt (1966) found that the predictor that explained the greatest proportion of variance in the number of hours worked annually by heads of families was whether or not the head was self-employed. The 16 percent of the heads in the sample who were self-employed businessmen or farmers averaged nearly 600 hours more working hours per year, or about 12 hours more per week, than wage-and-salary workers. Self-employment as such was less important than actual ownership of a business or farm, suggesting that "ownership and entrepreneurial opportunity, rather than the freedom to choose one's hours, is what makes the difference" (p. 21).

The only other difference found between self- and other-employed heads was that the self-employed and those not in the work force obtained lower scores than the remainder of the sample on an index of concern with progress. This index was created by combining four other indices measuring ambition and aspiration, planning and time horizon, achievement orientation and receptivity to change. The authors suggested that this result might be an artifact produced by the scoring method used, or might indeed reflect a real tendency for self-employed businessmen to be more resistant to change than wage-and-salary workers. The lower score for the self-employed in concern for progress is consistent with the findings of political sociologists, reviewed later, that this segment of society is more susceptible to the appeal of the politics of the radical right. Morgan and his colleagues reported a negative finding that they termed "startling": families who own a business or farm did not differ from the remainder of the sample in an index of caution and risk avoidance. Similarly, owners were not unlike non-owners in receptivity to change nor in social participation.

Whereas Morgan and his coauthors included farmers in their self-employed category, Leveson reported data on hours worked by self-employed and wage-and-salary workers in nonagricultural industries. He found that the nonfarm self-employed exceed the wage-and-salary workers by an average of eight hours per week, as compared to 12 hours reported by Morgan and his coworkers, the difference being attributable to the exclusion of farmers. Phillips (1962) reported nonagricultural data almost identical to those reported by Leveson. Further analysis by Phillips and by Leveson showed that nearly one in five of both self- and

other-employed workers work fewer than 35 hours each week; the higher average hours worked by the self-employed results from the fact that 45 percent of them work more than 48 hours per week, compared to only 13 percent of the wage-and-salary employees who work as many hours.

With regard to income, the Census data analyzed by Phillips indicated that among year-round full-time male workers in 1958 and in 1959, median annual money earnings were higher for the self-employed than for either private wage-and-salary workers or government employees. However, women who were self-employed earned considerably less than women who earned wages or salary in either private industry or government. Similarly, Leveson (1968b) found that hourly earnings of the nonfarm self-employed in 1959 were generally higher than those of nonfarm wage-and-salary workers. In order to control demographic differences Leveson computed adjusted hourly earnings for the self-employed, removing the effects of race, age, sex, and education. The results indicated that the differences between self- and other-employed workers in these demographic characteristics accounted for about two-thirds of the original difference. However, the actual hourly earnings of the self-employed still exceeded even their adjusted hourly earnings by an average of about 10 percent. A breakdown by occupation showed that actual self-employed hourly earnings surpassed the adjusted earnings in some occupations, notably professional, technical, and kindred workers and clerical and kindred workers, but fell short of the adjusted earning levels in other occupations, particularly among operatives and kindred workers and service workers. It appears from Leveson's analysis that while the self-employed on the average earn more than would be predicted from their

demographic characteristics, those at higher occupational levels earn more by being self-employed, and those self-employed in lower level occupations earn less by virtue of their self-employment. The gain at higher occupational levels more than offsets the loss at lower levels, resulting in an aggregate 10 percent bonus for the self-employed as a whole.

Mobility

Describing social mobility in Germany in the late nineteenth century, Weber wrote:

> At an earlier period every worker could be said to have been primarily interested in becoming an independent small bourgeois, but the possibility of realizing this goal is becoming progressively smaller. From one generation to another the most readily available path to advancement for both the skilled and semi-skilled workers is into the class of technically trained individuals. . . . Through the banks and corporate enterprises members of the lower middle class and the salaried groups have certain opportunities to rise into the privileged class [p. 427].

Recent empirical work has shown that organizations offer blue-collar workers dim prospects for upward intragenerational mobility and that self-employment holds relatively greater, though still limited, promise for working class advancement. Chinoy's (1955) study of automobile workers yielded dramatic evidence of the lack of opportunities in organizations for upward mobility among blue-collar workers. Forty-eight of the sixty-two workers he interviewed maintained their belief in the "American dream" by entertaining notions of escape from the factory to advancement through the ever-shrinking opportunities in private enterprise:

> Most talk of leaving (the automobile factory) dealt with the traditional avenue of success, some kind of small business

> venture. Of the forty-eight who had thought of quitting, thirty-one suggested "a business of my own" as their goal. Six (other) workers wished to become independent farmers [p. 82; parentheses added].

Few of these men, however, took any concrete steps towards implementing their entrepreneurial goals. These goals were interpreted by Chinoy as "Utopian day dreams" that provide psychological escape from present factory lives.

Lipset and Bendix (1963) reported labor-mobility data for a sample of workers from Oakland, California which indicate that self-employment is in fact a more traveled avenue of mobility among manual workers than was suggested by Chinoy's much smaller sample of auto workers. They found that the greatest intragenerational mobility from manual to nonmanual jobs occurs among those who switch to self-employment. Forty-one percent of those who owned businesses at the time they were interviewed had been employed in manual occupations on their previous job. No other nonmanual occupational category had absorbed nearly so high a percentage of manual workers. Furthermore, among those in nonmanual occupations, the self-employed are surpassed only by lower level white-collar workers in the percentage of their total career time they have spent in manual occupations and in the percentage of workers who ever held manual jobs. The authors pointed out that such shifting may not always result in a change of status and income, and hence does not provide a ready estimate of how much genuine social mobility is involved.

Lipset and Bendix speak of "old" and "new" types of mobility. Manual workers move up via self-employment, while mobile persons in the white-collar occupations are mobile in a bureaucracy:

> . . . since a good proportion of (proprietors) come from the manual occupations, it is probable that their only choice is between manual labor and proprietorship. . . . It is in part a by-product of the predominance of large scale organizations that those who head them have usually had a bureaucratic career. The "industrial bureaucrat," not the small independent businessman, is the one most likely to advance to the peak of the economic structure, both socially and economically. For these reasons the data on self-employed businessmen are of special interest. . . .
>
> Although only about 10 per cent of the American population [sic] are presently self-employed businessmen, it is obvious that a much larger part of the labor force has owned a business in the past, given the large turnover in this category . . . over one-fifth of the members of the Oakland sample who are currently engaged in manual work were at some time in business for themselves [pp. 176-77].

Thus, for blue-collar workers self-employment appears to be not only a dream embodying traditional American ideals, but also an actual, though risky, means of attaining upward mobility denied them in large organizations.

The opinion that a shift from employee status to self-employment is a step upward in the social hierarchy is held not only by blue-collar workers. Many social scientists view self-employment as lending greater prestige to a given occupation. Presthus (1962) has pointed out that "students of mobility tend to undervalue farm proprietorship, while accepting movement from unskilled or skilled work into business proprietorship as a valid index of upward mobility" (p. 213, italics in original). Many of the standard occupational status codes lump together all the self-employed, or all nonfarm proprietors, despite the tremendous variability within any such class of workers. Furthermore, the self-employed are often ranked high in occupational status despite the fact that many so classified are barely eking out a living.

A typical example of this practice of making self-employment higher in social status by definitional fiat is Reiss' (1955) study of

occupational mobility among five different levels of professional workers. A move to self-employment was categorized separately as "upward to self-employment" and shifts out of self-employment were classified separately as moves "downward from self-employment." No justification for this procedure was given by the investigator. Lipset and Bendix defined self-employed businessmen as nonmanual workers despite the fact that a proprietor may work with his hands most of the time. Thus, presumably, a carpenter in the employ of a construction firm would be classified as a manual worker, whereas a self-employed carpenter would be considered nonmanual. Again, self-employment is arbitrarily defined as having higher status than organizational employment. It is impossible to determine what proportion of the "nonmanual" business owners in their Oakland sample actually worked with their hands. Indeed, Mueller (1969) found that 67 percent of proprietors and self-employed businessmen in her national sample operated machinery or equipment on their jobs. This percentage exceeds that of all the other groups classified as nonmanual, and is an additional reason to suspect that many self-employed blue-collar workers plying manual trades have been erroneously categorized as nonmanual.

The studies of mobility reviewed in this section were not based upon national samples, and therefore may lack generality. Nonetheless, self-employment appears to be an avenue of mobility for blue-collar workers, though many fail in their attempts to achieve permanent advancement via this route. There is a tendency among students of social mobility to attribute high occupational prestige to the self-employed.

Old and New Middle Class

The literature on the old versus new middle class treats the entrepreneurial-bureaucratic dichotomy as an important aspect of the changes in values and behavior that have accompanied modernization. For many writers self-employment has been associated with the entrepreneurial orientation of the old middle class and employment in organizations with the bureaucratic orientation of the new middle class. The literature on the negative effects of bureaucratic organizations upon individual members notwithstanding, some students of the old and new middle class tend to regard the growth of bureaucracy as a curse not upon those employed by organizations, but upon those entrepreneurs who have survived from the prebureaucratic past and are in competition with big organizations. Barely able to hold their ground, they are increasingly alienated from the world of capital, technological innovation, rationalized production, and from society as a whole. They are seen as being made less well-off by the proliferation of organizations of which they are not members, and which render them marginal.

Some research has employed the strategy of comparing self-employed and wage-and-salary workers in order to study the differences between old and new middle class. Miller and Swanson (1958) showed that there were predictable differences in child rearing practices between families classified as individuated-entrepreneurial and those classified as welfare-bureaucratic. Although self-employment of the husband was a sufficient condition for classifying families as entrepreneurial, families were classified as entrepreneurial also if the husband gained at least half of his income in the form of profits, fees, or commissions,

if he worked in an organization having only two or fewer levels of supervision, or if either husband or wife was born on a farm or born outside the United States. Thus, the heads of some unknown proportion of the "entrepreneurial" families were employed by large organizations. Miller and Swanson emphasized that their conception as well as their operationalization of the entrepreneur includes much more than self-employment:

> When we speak of entrepreneurs in this book we do not have in mind only persons who are self-employed or whose incomes depend heavily on the outcome of the risks they take. Our conception is much broader. We want to include under the label of entrepreneur all persons who, relatively more than the population at large, may be expected to have their lives strongly affected by individuated-entrepreneurial values . . . we call people "entrepreneurial" when they are more likely than others in our sample to have experiences that lead them to . . . entrepreneurial values [pp. 73-74; italics in original].

It is thus clear that Miller and Swanson studied not the effects of bureaucratic organizations on their members but rather intergenerational transmission of values through child rearing practices in relation to type of social integration setting of families. Their inclusion of some families with organizationally employed husbands in the entrepreneurial category reduces the relevance of their work to the present discussion of the effects of membership.

Bonjean (1966) compared managers, hourly-paid employees and independent businessmen in terms of their scores on "sociopersonality characteristics." Residents of the community studied were classified as businessmen according to three of Miller and Swanson's five criteria for distinguishing between entrepreneurs and bureaucrats (self-employment, working in an organization with two or fewer levels, and major income from profits, fees or commissions). Measures analyzed included an

alienation index and three alienation subscales, plus anomia, self-actualization, self-esteem, self-estrangement, and status concern. The results showed that businessmen ranked between the managers and workers on all but two characteristics (they experienced the greatest amount of normlessness and had the lowest self-esteem) but in general more closely resembled the workers than the managers. The only characteristic on which the businessmen differed significantly from the workers was the powerlessness dimension of alienation; the workers reported significantly greater powerlessness. Workers and independent businessmen were more likely than managers to show social isolation, normlessness, anomia, low self-esteem, and general alienation. In addition, the businessmen displayed the least social participation and social involvement, both managers and workers ranking generally higher on these measures.

Bonjean's main objective was to test the hypothesis that industrialization and bureaucratization have had a leveling effect on social structure, and that the concept "middle mass" of mass society theory provides a more valid description of present day social structure than does traditional social class stratification theory. Secondarily he pointed out that "this sampling design permits an analysis of the relative effects of class and bureaucratic work setting on these same dependent variables" (p. 150). Had the managers and workers been consistently similar to each other but different from the businessmen, this would "suggest that bureaucratization is a leveling agent and that traditional indicators of social class no longer discriminate among those characteristics under investigation . . ." (p. 151). Consistent with his major objective, Bonjean considered similarities and differences among the

three status occupation groups both in socioeconomic variables and in the sociopersonality characteristics and social participation as evidence for the mass or the class theory. However, in order to assess the effects of work setting on alienation and social participation, the effects of socioeconomic differences must be controlled prior to comparing those who work in organizations to those who are self-employed. The only differences between the three samples that Bonjean controlled were age, proportion with Spanish-surname (which indirectly controlled religion), and education. Thus, socioeconomic status and bureaucratic-nonbureaucratic work settings were confounded. The scores for businessmen fall in between those of the managers and workers on all five of the socioeconomic variables reported, indicating that the sampling design yielded two groups of organization members that differed from each other substantially in socioeconomic status and a third group of self-employed nonmembers that embodied the full range of socioeconomic status among businessmen in the community studied. This same pattern--businessmen scoring somewhere between the two bureaucratically employed samples--again appeared in seven of the nine measures of sociopersonality variables, though it did not hold for the social participation measures. This repetitious patterning is suggestive of a relationship between socioeconomic status and sociopersonality characteristics that might hold irrespective of work setting, thus limiting the value of Bonjean's analysis for concluding anything about the effects of work setting (i.e., organizational membership) on sociopersonality characteristics.

In another analysis of the same data, Bonjean and Grimes (1970) investigated the association between five dimensions of bureaucracy and

six measures of alienation among the three occupational status samples. They found no support for the generalization that there is a direct relationship between bureaucratization and alienation. Relationships between dimensions of bureaucratization and alienation were for the most part not significant for each of the three broad occupational groups, though the relationships were most pronounced among the hourly-paid workers. Among businessmen all but one of the correlations between aspects of bureaucracy and dimensions of alienation were in the direction predicted by the generalization hypothesis and several were statistically significant. The relationships between bureaucracy and alienation were more often in the predicted direction and significant for the independent businessmen than they were for the salaried managers. These findings cast doubt upon the widely accepted generalization that something inherent in organizations alienates those who work in them. The relevant question appears to be which aspects of bureaucracy have which alienating effects upon which subclasses of workers? Evidently dimensions of bureaucracy have not only less predictable effects on higher level members than on lower level members, but also less association with alienation among upper-level organization members than among independent businessmen who do not even work in organizational settings.

Nelson (1968) compared workers of the old and new middle class in terms of their anomie. He employed a two dimensional conceptualization of the old and new middle classes based on ownership and relationship to bureaucracy. He split his sample of Minnesota store managers first into owners and managers, depending on whether the head of the store owned the business or managed it for someone else. The sample of

nonowning managers was further split into managers of small, independent stores and managers of moderate- and large-sized bureaucratic organizations. Similarly, business owners were split into two bureaucratic categories--independent businessmen of the "mom-and-pop store" variety (nonbureaucratic) and owners of businesses that operated under a corporate franchise (bureaucratic). He thus used a 2 X 2 design to test the relative effects of bureaucratic affiliation and owner-manager status on anomie among heads of stores. The initial findings indicated that, while owners showed significantly greater anomie than managers under both levels of bureaucratic affiliation, bureaucratic affiliation itself made no difference in anomie scores. Further analysis revealed that the difference between owners and managers were most pronounced at lower income levels, and were nonexistent for owners with incomes in excess of $10,000. Even these differences were reduced to nonsignificance when the differences between owners and managers in their mobility commitments were controlled. The owners were more committed than the managers to their present economic positions, and less willing to move from their present community, relatives, and friends. Nelson's finding of an interaction between ownership and income in producing anomie again raises the question of how Bonjean's findings would have been altered had his sample of businessmen been split into high and low categories comparable in socioeconomic status to the managers and workers respectively.

Trow's (1958) study of support for Senator Joseph McCarthy's methods of investigation among men in the New England town of Bennington can be regarded as a study of political alienation among different classes. He found that, controlling for differences in education,

support for McCarthy was greater among men who held both anti-union and anti-big-business attitudes than among men with any other combination of attitudes towards those two "most characteristic economic institutions of our society." Trow noted that these men "are often angrily confused and deeply resentful of a world that continually offends their deepest values. . . . This particular well of resentment and indignation has no effective and institutionalized channels of expression" (p. 276). In the Bennington sample small businessmen were disproportionately more likely than either manual or salaried men both to hold these double-negative views and to support McCarthy. Trow explained:

> Salaried employees . . . are in general <u>not</u> alienated from the dominant trends and institutions of modern society; these trends and developments of concentration, specialization, rationalization and bureaucratization have created the class of salaried employees and are its natural habitat. But, while accepting the general shape and direction of modern society, the salaried employees in Europe responded violently to short-run crises in capitalist society--to inflation, depression mass unemployment, and their consequent insecurities of livelihood and social status. . . .
>
> By contrast, small businessmen react not so much to short-run crises in the economy as to its long range tendencies and direction of development--against society itself rather than merely to failures of its economy. The tendencies which small businessmen fear . . . proceed without interruption . . . ; thus they are <u>always</u> disaffected . . . [p. 280; italics in original].

Trow's description is consistent with other social class theories that conceive of the self-employed entrepreneur as a vestige of an earlier era who is alienated from modern society because his position is threatened by dominant trends of industrialization and bureaucratization. The quotation also implies that salaried workers are comfortable in their bureaucratic settings.

Lipset (1960) reviewed studies of middle class support for fascist political movements in Germany, Austria, France, Italy and the

United States and found that fascism in all these countries has had exceptionally high appeal to the self-employed urban and rural middle classes, due in large part to the fact that these classes experience the insoluble frustrations of those who feel cut off from the main trends of modern society. Lipset described this tendency toward political fascism in a manner consistent with the old and new middle class literature:

> Not only were these five national movements disproportionately backed by small independents, but in each country they secured much more support from those living on farms or in provincial small towns and cities. Here are the declining "liberal" classes living in declining areas. The petit bourgeosie of these sections not only suffer deprivation because of the relative decline of their class, they are also citizens of communities whose status and influence within the larger society is rapidly declining. From time to time, depending on various specific historical factors, their discontent leads them to accept diverse irrational protest ideologies--regionalism, racism, supernaturalism, anti-cosmopolitanism, McCarthyism, fascism [pp. 172-73].

Summarizing the research reviewed in this section, the self-employed are viewed as belonging to the old middle class, which is alienated from modern society and receptive to the appeal of rightwing political extremism, while new middle class members of work organizations are by implication not alienated from society, due to their membership in the powerful organizations that increasingly render the old middle class economically marginal. There is evidence that members of the old middle class are not alienated unless they earn low incomes. This is not dissimilar from findings obtained from members of the new middle class. None of these studies has shown that membership in organizations has any effects upon alienation, the main dependent psychological variable studied. Finally, the responses given by independent businessmen to the measuring instrument used by Bonjean indicate that

dimensions of bureaucracy can be measured as characteristics of non-organizational work settings.

Professionals in Organizational Settings

Pelz and Andrews (1966) have pointed out that much scientific and professional work is now conducted in organizational settings. While their research included only scientists working within organizational settings, some of the research on the effects of bureaucracy on professional workers has used the member-nonmember comparison. In his study of the role of bureaucratization as a barrier to professionalization, Wilensky (1964) compared salaried lawyers in the employ of law firms and solo lawyers. He found that bureaucracy "enfeebles the service ideal more than it threatens professional autonomy . . . where comfortable organizational routines take command, the salaried professional . . . may lose sight of client needs more quickly than his solo brother" (p. 148). "Anchored in neither organization nor colleague group, the sensitivity of the solo professional gravitates naturally to the customer" (p. 155).

Engel (1968, 1970) studied the effects of degree of bureaucratization on the professional autonomy of physicians. She compared physicians employed by two health care organizations characterized by different levels of bureaucratization and a third sample of solo practitioners who were self-employed in nonbureaucratic settings. She found that the highest level of professional autonomy was reported by physicians in the moderately bureaucratic setting; those in both nonbureaucratic and highly bureaucratic settings reported less autonomy. Engel

explained this inverted U-shaped relationship between bureaucratization and professional autonomy in terms of availability of resources. According to her interpretation, the solo practitioner does not possess the vast resources needed for the most advanced diagnostic and treatment procedures, and the highly bureaucratic organization may possess such resources but block access to them by member physicians. No data on resource accessibility were presented.

Scott (1966) has noted that all professionals in organizations may not be equally subject to bureaucratic control.

> It appears that the higher the general prestige of the professional group and the more central their skills to the functioning of the organization, the more likely they are to be successful in their attempt to control the conditions under which they work. . . . The division of spheres of authority typically found in hospitals, clinics, and universities in which professionals assume relatively complete control over professional matters and submit to representatives of management only in administrative matters is one indication of the extent to which highly prestigious and high centrality professional groups can gain control over the conditions under which they work [p. 275].

Professional workers bring their entrepreneurship with them into the organization as part of their professional work, and, as Vollmer (1966) has observed, "entrepreneurial activities and interests are facts to be reckoned with in a variety of modern organizational settings" (p. 278). To the extent that a relationship between occupational level and subjugation to bureaucratic control is generalizable to nonprofessional groups, the following interaction hypothesis is plausible: The effects of membership depend on the occupational level of the workers. For those at lower occupational levels self-employment can serve as a means of escaping bureaucratic control, while those working at higher

occupational levels are relatively free of such control even when employed by bureaucratic organizations.

There is nothing in these studies that shows ill-effects of organizational membership on professionals. It should be noted that in Engel's study neither group of member physicians reported less professional autonomy than did solo practitioners.

Job Satisfaction and Mental Health

The measures of job satisfaction that have been used so extensively with various organizational populations have not been applied to the self-employed for comparative purposes. None of the major reviews of the vast literature on job satisfaction has included a study of job satisfaction among self-employed workers (Brayfield & Crockett, 1955; Herzberg, Mausner & Snyderman, 1959; Smith, Kendall & Hulin, 1969; Vroom, 1964).

The aforementioned national survey data collected by Kahn and his coauthors (1964, Appendix B) are presented now. These data, obtained by means of questionnaire measures, reveal some differences between self- and other-employed workers, and suggest that men and women respond differently to self-employment. The largest and most consistent difference between self- and other-employed workers is in the percentage reporting some job-related worries in open-ended questions. While 80 percent of the self-employed workers reported job-related worries, only 52 percent of the wage-and-salary workers reported such problems. This difference is found among both men and women, and among males for every age category and for every educational level. (There were not enough self-employed women in the national sample to permit tertiary controls.)

The next most consistent difference is that while 55 percent of the wage-and-salary men reported having been absent from their jobs for at least one day during the year prior to the survey, only 31 percent of the self-employed men reported such absence. This difference holds across four out of five age intervals and among all five educational categories. Among women there is no parallel difference in absence. Although in industrial mental health research absence is usually taken as an indicator of strain, the low absence rate for self-employed men can be explained as a manifestation of their indispensability to their businesses rather than as an indication of less strain. Regarding health, roughly a quarter of the men and women in each job setting reported themselves in less than excellent health. Taken together these findings suggest that while the self-employed of both sexes experience relatively more job-related worries than do wage-and-salary employees, the self-employed men have less of a chance to escape from those worries via absence from the job.

"Job-related tension" was measured with a 15-item index, and mean scores were reported for self- and other-employed workers. The mean scores for men differ by only a tenth of a point. Among women the self-employed scored 2.0 while the wage-and-salary employees averaged only 1.5, providing evidence for greater tension among the former. Since the variances were not provided in the appendix, it is impossible to test these differences for significance. Another indication that self-employment may have more ill-effects on women than on men is shown by the percentage reporting that their job satisfaction has decreased since beginning their present job. Only 9 percent of the

wage-and-salary women reported such a drop in job satisfaction as compared to 39 percent for self-employed women; among men there was no appreciable difference. The data for self-employed women must be interpreted with caution since their number in these tables never exceeds 33.

In sum, perhaps the outstanding feature of these data is the similarity between self- and other-employed men. Only in job-related worries and absence from work do the self-employed differ. They are strikingly similar in health, job satisfaction, job-related tension, and sense of being "caught in the middle," a measure of role conflict. While women, like men, are more likely to report job-related worries if they are self-employed, women also experience more tension and less job satisfaction as a consequence of their self-employment.

An earlier national survey of mental health taken by Gurin, Veroff, and Feld (1960) obtained data consistent with the conclusion that the self-employed worry more about their jobs. They reported that managers, salesmen, and farmers more frequently than workers in other occupational groups spontaneously mentioned the job as a source of worries in response to a question about general adjustment. Gurin and his colleagues discerned that "these three occupations have in common an entrepreneurial focus and a dimension of self-direction which doubtless make these occupations a more salient concern for the men who work at them" (p. 228). Gurin and his colleagues did not analyze the self-employed separately.

Summary

Self-employment as such has not been investigated systematically and studies that have included self-employed workers have not built upon

one another. Thus, the search for information about the self-employed leads one to literature on bureaucratization, professionalization, social class, political sociology, and economic behavior. The discontinuity in this research is evident from the general lack of cross-referencing and the unfortunate fact that few of these studies have used the same dependent variables. Research on dependent variables at the individual level has lacked controls needed to eliminate the effects of demographic variables on these outcome measures, and thus has confounded demographic variables with bureaucratic-nonbureaucratic work setting. For example, it is not known whether self-employed workers are more susceptible to fascist political appeal than are wage-and-salary workers of the same income, age, education, sex, race, etc. Studies that have used such controls have usually either reduced or eliminated the differences between self- and other-employed workers.

The picture of the self-employed workers that emerges from the literature reviewed is one of a surviving class of entrepreneurs whose period of political and economic reign has passed and who are alienated from the new middle class dominant in industrialized society. At the same time, they are less alienated than hourly wage earners in bureaucratic organizations. They are disproportionately susceptible to fascist political ideology. As a group they work many more hours for somewhat higher annual income, though their income may be lower than that of their organizationally-employed counterparts, depending on their occupation. If he is a professional, the self-employed worker may be more open to influence from his clients than is his bureaucratically controlled counterpart in the employ of an organization, and his

professional autonomy may be roughly equivalent to, or somewhat more rational than, that of the organizationally-employed professional, depending upon the degree of bureaucratization of the latter's setting.

Another important subgroup of self-employed workers are those who are attempting to achieve intragenerational mobility when they lack the credentials required for advancement via organizational employment. Farmers are another distinctive subgroup among the self-employed. Clearly, the self-employed are a highly diverse category of workers that probably shows as much variation on most characteristics as the rest of the work force. Their diversity and uniqueness have undoubtedly contributed to their being treated as a nuisance in most research on the psychology of work. One suspects that a reason for frequently classifying the self-employed together in occupational prestige codes is that it facilitates their elimination from analysis.

It is interesting that while the alienation of the industrial employee is attributed to the stifling effects of bureaucratic organization upon him, the alienation of the small independent entrepreneur is attributed to his being denied what organizations can offer. There are many persuasive treatises on the victimization of subpopulations by organizations. There has been a tendency to attribute undesirable features of modern life to organizations in the form of plausible, though untested, assertions, when these effects might in actuality have their sources elsewhere. Bureaucracy may be a factor contributing to <u>everybody's</u> alienation through pervasive societal processes that operate irrespective of membership in work organizations.

While it may do violence to the traditional meaning of the word, "bureaucracy" defined as the extensive presence of certain characteristics in work settings may be as prevalent in the situation of the self-employed person working "alone" as it is in organizational work settings. Perhaps a great deal of what has been attributed to "bureaucracy" occurs in all work settings, and has thus been mislabeled and misconceived. To call certain empirical events "bureaucratic" when they occur in organizations, and to withhold that label when the same events take place in nonorganizational settings could lead to a diversion of attention from the real issues. Utilization of the self-employed as a comparison group could reveal what organizations are--and are not--doing to the individuals employed by them.

CHAPTER III

METHODOLOGY

The basic strategy of the analyses was to compare a sample of workers defined as members of work organizations to a sample of workers defined as nonmembers. This chapter will describe the sampling, the measures of key concepts, and the statistical analyses performed.

The Sample

The present investigation was a secondary analysis of data collected for a national study of working conditions, sponsored by the Workplace Standards Administration, the United States Department of Labor (Survey Research Center, 1970). The data were obtained from a representative sample of the employed work force of the United States. Workers were selected by means of the Survey Research Center's area probability sampling methods (Kish & Hess, 1965). The universe sampled was all dwellings in the 48 contiguous states and the District of Columbia. A person living in a randomly-selected household was included in the sample if he was 16 years old or older and was doing any work for pay for 20 hours a week or more. Interviews were administered to persons who normally work for pay but at the time of the interview were away from work due to strike, illness, inclement weather, vacation, or personal reasons. Since all eligible workers were interviewed in each

of the sampled households, all workers in the employed labor force had the same probability of being selected. Therefore, the sample was self-weighting, and no sampling weights were required in the analysis of the data.

The sampling began with 2,736 sample listings which yielded 1,951 eligible workers, of whom 1,533 were successfully interviewed. The response rate was 78.6 percent; 13.3 percent of those eligible refused to be interviewed, and 8.1 percent were not interviewed for miscellaneous other reasons. Most of the interviews were taken in November and December of 1969, and a few workers whom it had been hard to contact were not interviewed until January, 1970.

Measures

The interview and questionnaire instruments administered to the national sample had been pretested in a pilot study of 311 workers, diversified with regard to status and situs, who worked 20 hours or more each week, and lived in or near four industrial cities in Michigan. A major objective of the pretest was to find out which items were inappropriate for use with so diversified a collection of workers as a national sample. The items that were retained for use in the national survey had been understood by, and had been meaningful to, most pretest respondents, and had shown promise of comprising reliable indices. A further consideration guiding item selection was the legal requirement of obtaining approval of the instruments from the government agency sponsoring the research.

Most of the measures were interview questions asked orally by interviewers trained by the Survey Research Center. A sizable minority

of the questions was not asked of self-employed workers, and therefore were not used in the present analysis. The items that were used are reproduced in Appendix D. The indices formed by combining items and several single-item measures are described in the remainder of this section. The reliability estimates reported for the indices are alpha coefficients, based on the inter-item correlations which are tabled in Appendix E. Individual items are identified by means of a letter and number, referring to the appendix in which the item has been reproduced, and the question number in the appendix.

Definition and Measurement of Membership

Partitioning the entire sample into self-employed and wage-and-salary workers was the first step in defining membership. This was done on the basis of respondents' answers to the question (D-6): "Most of the time on this job do you work for yourself or for someone else?" While the reliability of this item and its validity as a measure of self-employment were not assessed quantitatively, several procedures employed subsequent to asking this question served as "consistency checks" to reveal misclassified respondents. For example, certain questions were asked only of the self-employed (e.g., "How many people work for you and are paid by you?") and certain other questions were asked only of wage-and-salary workers (e.g., "How hard or easy do you think it would be for you to get your employer to change your job assignment if you didn't like it?"). Improper response to the question about self-employment would have become apparent almost immediately to both the interviewer and the respondent as these obviously inappropriate

questions were asked. Furthermore, as the interviews were coded the responses were again checked for consistency.

Dichotomization of the 1,533 respondents on the basis of self-emplcyment yielded 206 self-employed workers and 1,327 wage-and-salary workers. In order to make this classification more closely approximate the member-nonmember dichotomy as defined in Chapter I, some respondents were eliminated from each category on the basis of the number of other persons they work with on their job (D-8; D-11).

A self-employed worker who hires a large number of employees should not be considered a nonmember of a work organization. Such a person is a member of a work organization, though he is likely to differ from other members of his organization in that he assumes the position of top executive officer. At the same time, workers employed by enterprises that hire fewer than ten employees are not likely to be members of work organizations as defined in Chapter I. Such small enterprises typically do not have multiple hierarchical levels, departmentalization, and several other features characteristic of organizations, and an individual worker is likely to perform more than a single subsystem function.

Table 1 shows that 23 of the self-employed workers employed ten or more other persons and that 235 wage-and-salary respondents worked for employers who hired fewer than ten persons. These 258 workers were regarded as unclassifiable in terms of membership and were eliminated from most of the analyses. Thus, those defined as members of work organizations included all wage-and-salary workers whose employers hired ten or more employees, and nonmembers were defined as all self-employed workers who did not employ more than nine other persons. This

Table 1

Number of Others with Whom the Respondent Works, by Type of Employment

Number of others with whom respondent works	Type of employment	
	Self-employed	Wage-and-salary
None	95	0
1-9	87	235
10-49	14	364
50-99	5	134
100-499	4	279
500-1,999	0	159
2,000 or more	0	129
Not ascertained	1	27
Total	206	1,327

definitional procedure resulted in a sample of 1,092 members, and a sample of nonmembers numbering 183. This can be regarded as the closest possible operational approximation of the conceptual dichotomy developed in Chapter I, given the unavailability of detailed role analyses of the workers sampled. Illustrative examples of members' and nonmembers' job descriptions can be found in Appendix F. Workers listed there were selected for a special purpose, described later, and therefore do not necessarily represent all members and nonmembers.

Demographic Variables

A variety of demographic variables were measured by means of standard interview questions. Sex and race were recorded on the basis

of interviewer observation. Since only nine nonmembers were black, race was not used as a variable in any of the analyses. A very high proportion of farmers are self-employed. Therefore "collar status" was measured by classifying occupations as either white-collar, blue-collar, or farm. This was done in part in order to facilitate controlling the proportion of farmers when comparing members and nonmembers. Occupational status was also measured by means of the Duncan Decile (Reiss, 1961).

Each respondent was asked whether his job was steady or not (D-38). Since most respondents had steady jobs, those reporting that their work was seasonal or that they experienced frequent lay-offs were combined into a single category of workers whose jobs were not steady.

Work Values

The items in Appendix B were administered by means of the "card sort" technique to measure work values. For a description of the card sort technique, see Appendix B and Hunt, Schupp and Cobb (1966). Each respondent was asked how important each job characteristic was to him on a 4-point scale. Items included in the present analysis measure values concerning relations with coworkers, job challenge, pay, autonomy in work-related decision-making, having interesting work, convenience of travel to work, job security, and physical surroundings of the job. Items concerning supervision, chances for promotion, and fringe benefits were omitted from the present analysis due to their irrelevance to self-employed workers.

Job Characteristics

Measures of aspects of the job situation were included in the present analysis for two major reasons. First, for purely descriptive purposes, such measures show how organizational and nonorganizational job settings differ. Secondly, these measures make it possible to control differences in job setting while studying differences in outcome variables.

An index labeled Enriching Job Requirements is comprised of five items that measure the extent to which the job challenges the worker to learn new things and be creative, thereby fostering his individual enrichment. Its reliability is .79 (Appendix E, Table 28). An index comprised of three items measuring the extent to which the job requires the respondent to work hard, to work fast, and to exert a lot of physical effort, has a reliability of .65 (Appendix E, Table 29). Two items measuring the extent to which the job allows the worker freedom as to how he does his work and allows him to make decisions on his own were combined into an index of Job Autonomy, with a reliability of .57 (Appendix E, Table 30). For the final job characteristic index, five items measuring the extent to which the worker felt that on his job he was given enough help, authority, time, information, and tools, were averaged to produce an index labeled Adequacy of Resources. Its reliability coefficient is .60 (Appendix E, Table 31).

The item stems in Appendix B were administered a second time in order to measure characteristics of work settings. The respondent was instructed to indicate on a 4-point scale how true each descriptor was of his job. In order to minimize the contamination of the work setting

measures by the work values measures, the former were administered at the very beginning of the interview, and the latter approximately an hour later towards the end of the interview session.

There is reason to question the validity of the second card sort as a measure of characteristics of work settings. Nearly all 25 item stems are evaluative. Similar items have been used to measure job satisfaction. Indeed, these very same items have been grouped into indices of satisfaction with aspects of the job (Survey Research Center, 1970). Thus, some caution is urged in interpretation of these items. They probably are not pure measures of either the job situation or job satisfaction, but some combination of both.

A single-item measure (D-34) used previously in research on organizational stress assesses the extent to which a worker has dealings with persons outside his company. The item operationalizes the concept of organizational boundary and a worker's relationship to it. Kahn and his coauthors (1964) found that workers with more frequent organizational boundary contacts experience more role conflict and greater role strain (called "tension" by Kahn and his colleagues) though the latter relationship was not linear. Another single-item scale employed was the total number of hours worked during the average week (D-40). It was used both as an interval scale variable and, in a collapsed form, as an ordinal scale of hours worked. Income was measured by asking each respondent to report his gross annual income from his job (D-92). A higher proportion of self-employed workers did not answer this question, either because of a greater unwillingness to reveal their income in a government-sponsored survey, or due to their being unable to give an

answer. Some may not know what their annual income is due to periodic fluctuations or poor bookkeeping.

The following job characteristics were measured by classifying respondents into one of two categories, forming dichotomous variables. Skill Utilization dichotomizes those who reported that they have skills that they would like to be using on their job but cannot, and those reporting no underutilization (D-22). Supervisory Role is a classification based on whether or not the worker supervises anybody else as part of his job (D-33). Regularity of Hours contrasts those who work the same hours each day and the same days each week with those who reported working either different hours each day, or different days each week, or both (D-41, D-42). Workers who experience problems or difficulties due to the hours they work were coded as having inconvenient hours (D-56). Work Hazards identifies those who reported exposure to physical dangers or unhealthy conditions on their jobs (D-58). Physical Comfort contrasts those who reported that the physical conditions where they work are sufficiently comfortable and pleasant to those who preferred improvement in these conditions (D-82). Finally, whether or not the worker reported a problem concerning travel to and from work was the basis for his score on Travel (D-90).

Psychological Outcomes

Job satisfaction was measured by means of an index of seven items whose content is not related to specific job characteristics. This measure was devised in order to maximize comparability of responses from a diverse sample of workers. The index can be regarded as a measure of the respondent's general attitude towards his total job situation.

It includes measures of overall satisfaction with the job, whether the worker would recommend his job to a friend, whether the job has measured up to his initial expectations, whether he would continue working if he didn't need the money, and the like. Its reliability is .71 (Appendix E, Table 32).

The Role Strain Index consists of five items that assess the extent to which the worker is bothered by conflict and ambiguity in his work. These items were taken from a longer scale dubbed Tension by Kahn and his collaborators (1964). The reliability of the abbreviated form constructed for the present analysis is .74 (Appendix E, Table 37).

Mental health was measured by means of a self-report paper-and-pencil questionnaire handed to the respondent at the conclusion of the oral interview. The pretest had included a pool of 46 mental health items previously employed by Lipman, Lovi, Rickles, Ulenhuth and Lazer (1967), Gurin, Veroff and Feld (1960), and Hunt, Singer and Cobb (1969). These pretest items yielded five orthogonal factors. The 27 items with the highest loadings on the five factors were included in the national survey. Those 27 items are reproduced in Appendix C. The national survey data were similarly factor analyzed. On the basis of the four orthogonal factors shown in Table 2, which resulted from a varimax rotation of the principal components solution, four indices of mental health were constructed. They were labeled Somatic Complaints, Depression, Performance Debilitation, and Zest, and have reliabilities of .84, .84, .71 and .57, respectively (Appendix E, Tables 34-37). The two items with the lowest loadings on the zest factor were not included in

Table 2

Factor Analysis of Mental Health Items

	Item	Factor 1	Factor 2	Factor 3	Factor 4	h^2
1.	Hands sweat	39				.21
5.	Soreness in muscles	69				.50
6.	Headaches	45				.31
9.	Numbness, tingling	72				.54
12.	Heart pounding	60				.42
15.	Weakness in body	69				.59
18.	Backaches	64				.46
21.	Heart, chest pains	58				.44
24.	Heaviness in limbs	70				.55
3.	Feel depressed		-67			.55
7.	Feel inferior		-53			.32
13.	Low in spirits		-64			.51
14.	Others don't understand me		-55			.40
20.	Feel lonely		-70			.54
22.	Hopeless about future		-61			.50
23.	Feel trapped		-60			.53
26.	Blame myself		-54			.45
27.	Feel blocked, stymied		-52			.45
10.	Have to work slowly			63		.43
16.	Forgetfulness			63		.51
19.	Difficulty making decisions			60		.53
25.	Trouble concentrating			59		.56
2.	Expect to succeed				52	.28
4.	Can work under pressure				51	.43
8.	Feel happy				65	.54
11.	Life is worthwhile				60	.45
17.	Can carry out expectations				65	.44
	Eigen value	.15	.15	.08	.07	.46

Note.--Only loadings of .40 or more are shown, unless an item's highest loading is less than .40. In the latter case only the highest loading is shown. Decimal points are omitted from the loadings. The items are reproduced in full in Appendix C.

the index because they had small correlations with the other three items that loaded on this factor (Appendix E, Table 37).

The first three mental health indices might better be called "mental ill-health," since they are measures of undesirable symptoms. Table 3 shows that these three indices are positively intercorrelated, but that the fourth, a factor of positive mental health, is only slightly negatively correlated with the other three. Therefore, a summary index containing the 21 items included in the first three indices was constructed and labeled Mental Health. The intercorrelations of all 21

Table 3

Correlations Among the Four Mental Health Factors

	Mental health factor	1	2	3
1	Somatic complaints			
2	Depression	.59		
3	Performance debilitation	.47	.59	
4	Zest	.08	-.18	-.09

items, not shown, yielded a reliability estimate of .94 for the Mental Health Index. The items were reflected for this summary index, so that a high score means fewer symptoms and therefore good health; a high score on the first three mental health indices means high somatic complaints, depression, or performance debilitation. A high zest score means good health.

Statistical Analyses

Comparing Members and Nonmembers in Terms of Work Values and Work Settings

Both the 21 work values items and the 21 work setting items were factor analyzed separately for members and nonmembers in search of dimensions that would serve as the basis for index construction. However, the factor structures that resulted indicated that the items clustered differently for members and nonmembers. Therefore, combining items into indices of work values and job situations and comparing members and nonmembers in terms of their index scores would have been inappropriate.

Instead, the work values and work setting variables were studied by means of discriminant analysis. This analysis finds that additive linear combination of the input variables that yields for each person a score that predicts, to a least squares criterion, the group to which he belongs. Such a linear combination is called a discriminant function. The discriminant analysis performed on the work values and job situation items was a stepwise procedure. The item that maximally discriminated the groups was entered first, and a weight was derived for that item by solving a set of normal equations for the slope of the straight line that classifies individuals as members and nonmembers with a minimum of squared error. The ability of the remaining variables to discriminate between members and nonmembers was then reassessed, and new F values were computed. Again, the item with the highest F value was selected and entered into the discriminant function. This stepwise procedure was terminated when no unincluded item had an F value exceeding 4.00, in order to avoid including items that were not adding significantly to the

ability of the function to discriminate between members and nonmembers. If a discriminant function can be derived that classifies individuals well. it may be concluded that the groups differ in terms of the items, and inspection of the weights reveals which group scored high and which low on each item entered. If a function with poor discriminative power results, one may conclude that there is no evidence that the groups differ in terms of the variables measured.

Controlling Job Setting and Demography in Comparing Members and Nonmembers with Respect to Psychological Outcomes

In order to estimate the net effects of the membership variable and to show how much influence it has on the dependent variables after taking into account the effects of other predictors that are correlated with membership, multivariate analysis is required. Respondents were not classified as members or nonmembers at random, but rather they comprised pre-formed, "natural" groups. The covariates, whose influence on the outcome variables should be removed in order to assess the net effects of membership, are correlated with the classification variable as well as the dependent variables. There is a growing erosion of confidence in analysis of covariance as an appropriate technique for use with data of this sort (Evans & Anastasio, 1968; Sprott, 1970; Lord, 1967, 1969; Werts & Linn, 1969).

An appropriate multivariate technique for this type of survey data is multiple classification analysis (MCA), which yields results similar to those obtained with dummy variable multiple regression, but has greater flexibility with respect to input data format (Andrews, Morgan & Sonquist, 1969). MCA can handle nominal scale predictors, such

as the membership dichotomy. It computes the relationship, which may be linear or nonlinear, between a number of predictors and a single dependent variable. Output from the MCA program at the Institute for Social Research includes estimates of the effects of each predictor on the dependent variable, both before and after adjusting for the effects of other predictors. The adjustment of dependent variable scores is based on a least-squares solution to a set of normal equations. For each subclass of each predictor, unadjusted and adjusted deviations are computed. These estimate, respectively, the gross effect of belonging to the subclass irrespective of one's standing on the other predictors, and the net effect of being in that subclass "holding constant" all other classifications in the analysis. These are estimates of "effects" as in analysis of variance, and have a similar interpretation.

The effects are actually the deviations of the subclass means from the grand mean of the dependent variable. When a predictor has only two subclasses, as is the case with the membership dichotomy, one subclass will have a positive effect and the other a negative effect. In order to simplify the presentation of results, the effects of membership were converted to differences between the means of the two subclasses of membership. Thus, instead of reporting that the effect of being a member is -.03 and the effect of being a nonmember is .17, this can be more concisely expressed as a .20 difference between members and nonmembers. Thus, in the present study MCA was used to estimate the gross, unadjusted difference between members and nonmembers on each dependent variable, and the difference adjusted for the effects of

various correlated predictors that confound the relationship between membership and psychological outcomes.

The Sample of Matched Pairs

MCA treats all predictors as though they were nominal scale variables and therefore requires that continuous predictors be collapsed into a relatively small number of categories. As a result, occupation could not be controlled using MCA as described above. Other variables held constant, members and nonmembers still differ in occupation. For example, there are relatively few self-employed teachers, and few, if any, business owners work for someone else. Occupational differences could account for differences obtained in measures of job characteristics and psychological outcomes. However, there are many distinct occupational categories. Collapsing these into a smaller number of categories for use as a predictor in MCA results in a measure of occupational status, or occupational division, or some other variable, but not occupation.

Control of occupation was therefore achieved by means of a procedure that can be called "secondary sampling." Some members and nonmembers in the national sample were selected for separate analysis on the basis of their similarity in terms of demography and occupation. The interviews of all respondents were sorted by the first three digits of their Dictionary of Occupational Titles (D.O.T.) occupational codes. A member was paired with a nonmember if both had been assigned the same occupational code and if they were of the same sex, of the same race, and no more than ten years apart in age.

Careful attention was lavished upon the respondents' own descriptions of their jobs. Their verbatim responses had been recorded to

questions about what their main jobs were, what kind of business that was in, and, specifically, what they did on their jobs (D-3 to D-5). Among respondents whose demographic characteristics met the matching requirements, those who had given the most similar job descriptions were matched. In some cases, despite their similarity on the demographic criteria and despite their having been given the same D.O.T. code by naive coders, a member and nonmember were not paired because the occupational descriptions were too divergent. On the other hand, several matches were made of workers whose job descriptions were very similar even though the naive coders had assigned them different D.O.T. codes. In those few cases the D.O.T. code originally assigned is shown so the reader can judge for himself the appropriateness of the match and the extent of "experimenter bias" in forming the pairs. This procedure resulted in the selection of 35 matched pairs. They are listed with full detail in Appendix F. The matched samples were compared using *t*-tests for correlated means.

CHAPTER IV

RESULTS

Demography and Membership

Bivariate tables contrasting members and nonmembers in terms of their demographic characteristics comprise Appendix A. Those data show that members are lower than nonmembers in age, proportion of men, proportion of whites, and proportion with unsteady jobs. Members reported more years of education. The trichotomized collar status classification revealed that nonmembers are overrepresented among farm and white-collar workers and underrepresented among blue-collar workers. The distributions on the Duncan Decile scale of occupational status show that the nonmembers are underrepresented at both the highest and lowest status levels, but on the whole have higher status than members.

Work Values and Work Settings

The results obtained from the discriminant analyses on the two sets of card sort items are presented in this section. Table 4 lists the work values items that sufficiently differentiated members from nonmembers to be included in the discriminant function. The coefficients calculated for each variable included in the function are also shown. Of the 21 items included in the analysis, only two distinguished between members and nonmembers sufficiently to attain an F value of 4.00

Table 4

Weights in the Discriminant Function Derived from the Work Values Items

Item	Coefficient	F
22. Enough time to get job done	.33020	5.96
25. Good hours	-.33487	5.22

Note.--These items are reproduced in full in Appendix B.

or greater, and were thus included in the discriminant function. Table 5 shows that when the function was applied to the 889 members and the 95 nonmembers whose scores on the 21 work values items served as inputs to the discriminant analysis, the function correctly classified 74 percent of the members but only 40 percent of the nonmembers. However, since the discriminant analysis takes advantage of sampling error in making such "postdictions," a more adequate test of the ability of the function to discriminate the groups is needed. Cross-validation of the function was attempted by withholding the data for a small random subset of members and nonmembers from the computation of the function, and applying the function to their scores. Table 6 shows the results of this cross-validation procedure. It is clear that the function failed to improve upon chance in classifying members and nonmembers correctly. Thus, the discriminant analysis has shown that, despite the significant differences between members and nonmembers on a couple of the individual work values items, taken as a whole these data provide little evidence that members and nonmembers are discriminable in terms of their work values.

Table 5

Post Hoc Classification of Members and Nonmembers by Membership Categories on the Basis of the Work Values Function Shown in Table 4

Classification assigned by the discriminant function	Membership category to which the respondent actually belonged			
	Members		Nonmembers	
Members	74%	(654)	60%	(57)
Nonmembers	26	(235)	40	(38)
Total	100%	(889)	100%	(95)

Chi-square = 7.22; df = 1; $p < .01$.

Table 6

Cross-validation of Discriminant Function Derived from Work Values Items

Classification assigned by the discriminant function	Membership category to which the respondent actually belonged			
	Members		Nonmembers	
Members	72%	(70)	86%	(18)
Nonmembers	28	(27)	14	(3)
Total	100%	(97)	100%	(21)

Chi-square = 1.03; df = 1; n.s.

Inspection of the two items included in the function indicates that having sufficient time to complete their work is more important to nonmembers than to members, and that having good hours is less important to nonmembers. The reciprocal nature of these two items is interesting, as it indicates that time is more important to nonmembers for what they

can accomplish on their jobs, and more important to members for nonwork.

Regarding the second set of 21 items, discriminant analysis revealed that the two groups can be discriminated in terms of their job settings. Table 7 shows which variables were included in the function and their coefficients. Tables 8 and 9 show that both the original samples and the cross-validation samples were classified by the function with a level of accuracy that exceeded chance. This finding confirms the contention that members and nonmembers work in different environments. According to the items entered in the discriminant function, these job settings differ in several ways. Organizational work environments are more favorable in terms of peer relations, job security, and hours while nonorganizational work environments exceed organizational environments in opportunity to develop special abilities, ease of travel to work, amount of freedom the worker has to decide how to do his job, level of difficulty of problems to be solved, and adequacy of authority available to the worker.

The discriminant analysis for the job setting variables was used further to determine the utility of the definition of membership used in the present study. Two hundred fifty-eight respondents were eliminated from the study because they were considered unclassifiable in terms of the membership dichotomy. To test the validity of this definition the discriminant function derived for members and nonmembers was applied to the scores of wage-and-salary unclassifiables to classify them as either members or nonmembers. The 23 self-employed unclassifiables were excluded from this analysis. Of the 210 unclassifiables (25 more were

Table 7

Weights in the Discriminant Function Derived from the Job Setting Items

	Item	Coefficient	F
3.	Coworkers are friendly	-.66234	14.92
4.	Opportunity to develop abilities	.52690	16.22
5.	Travel to work is convenient	.31265	6.75
11.	Free to decide how to do your job	.36580	6.43
13.	Job security is good	-.42671	11.22
14.	Problems to be solved are hard enough	.31463	6.10
17.	Enough authority	.45975	6.51
25.	Good hours	-.42425	11.16

Note.--These items are reproduced in full in Appendix B.

Table 8

Post Hoc Classification of Members and Nonmembers by Membership Categories on the Basis of the Job Setting Function Shown in Table 7

Classification assigned by the discriminant function	Membership category to which respondent actually belonged			
	Members		Nonmembers	
Members	69%	(614)	25%	(24)
Nonmembers	31	(275)	75	(71)
Total	100%	(889)	100%	(95)

Chi-square = 70.32; *df* = 1; $p < .001$.

Table 9

Cross-validation of Discriminant Function Derived from Job Setting Items

Classification assigned by the discriminant function	Membership category to which respondent actually belonged			
	Members		Nonmembers	
Members	73%	(71)	24%	(5)
Nonmembers	27	(26)	76	(16)
Total	100%	(97)	100%	(21)

Chi-square = 16.28; *df* = 1; $p < .001$.

eliminated due to missing data in one or more variables), 117 were classified as members and 93 as nonmembers. The 95 percent confidence interval for the proportion classified as members is $.49 \leq p \leq .63$ and for the proportion classified as nonmembers the interval is $.37 \leq p \leq .51$. Both of these confidence intervals include .50, the proportion that would be expected if the discriminant function were assigning these unclassifiables to membership categories at random. This should be compared with the cross-validation classification of members and nonmembers, where roughly three out of four of both members and nonmembers were correctly identified. Thus, the discriminant function equally assigns the wage-and-salary unclassifiables to the member and nonmember categories in terms of their job setting. This partially validates the operational definition of membership and justifies the label "unclassifiables." A similar attempt to classify unclassifiables as members or nonmembers on the basis of their work values was not attempted, since the discriminant function for work values could not even classify members and nonmembers efficiently.

Differences in Other Measures of Job Characteristics

Nonmembers earn more and less money than do members. Table 10 indicates that nearly twice as many nonmembers as members reported annual income from their jobs in excess of $10,000. At the same time a higher percentage of nonmembers earned less than $3,400. The median annual income reported by members was $7,000 and by nonmembers $7,525. While the lowest and highest decile incomes for members were $3,347 and $12,500, the comparable incomes for nonmembers were $1,900 and $20,000.

Table 10

Annual Income Before Taxes, by Membership

Income	Membership			
	Members		Nonmembers	
Under $3,400	11.3%	(116)	17.0%	(25)
$3,400-4,999	16.7	(172)	7.5	(11)
$5,000-7,499	28.5	(295)	22.4	(33)
$7,500-9,999	21.3	(220)	12.2	(18)
$10,000 or more	22.2	(229)	40.8	(60)
Not ascertained	--	(60)[a]	--	(36)[a]
Total	100.0%	(1,092)	100.0%	(183)

[a]Excluded from computation of the percentages.

Thus, there is a much greater spread in nonmember incomes, and as a whole they earn more than members.

Table 11 shows that the nonmembers significantly and substantially surpassed the members in adequacy of resources, job autonomy, and enriching job requirements. These three indices measure highly prized features of jobs, and the evidence suggests that nonorganizational work environments are more favorable than organizational settings. However, as indicated in Table 11, the nonmembers work harder, have more frequent boundary contacts, and average over ten hours more work per week. The findings in Table 11 were altered in only minor ways when the means were recomputed excluding all farm workers.

Table 12 shows that in addition to working more hours, a higher proportion of nonmembers have irregular work schedules. More of them

Table 11

Job Characteristics of Members and Nonmembers

Job characteristic	Members		Nonmembers		t
	M	SD	M	SD	
Adequacy of resources	4.15	.98	4.52	.88	-4.65*
Job autonomy	3.00	.91	3.53	.56	-7.66*
Enriching job requirements	2.85	.83	3.30	.73	-6.88*
Boundary contacts	1.25	1.23	2.08	1.00	-8.67*
Hard work	1.83	.80	2.20	.67	-6.06*
Hours worked per week	41.80	8.20	52.40	15.9	-13.54*

Note.--N=1,092 members and 183 nonmembers. Degrees of freedom vary slightly due to occasional missing data.

*$p < .01$.

Table 12

Comparison of Members and Nonmembers on Dichotomous Measures of Job Characteristics

Job characteristic	Members	Nonmembers	Chi-square
Regularity of work schedule			
Same hours each day and same days each week	875	122	16.51*
Other	214	61	
Supervisory role			
Yes	473	114	22.63*
No	618	69	
Physical conditions comfortable			
Yes[a]	749	159	28.14*
No	297	16	
Travel to work			
Worker has problem	431	24	46.26*
No problem	658	156	

[a]Includes workers who travel around on their jobs, and therefore do not spend most of their time in any one place.

*$\underline{df} = 1$; $p < .001$.

supervise others as part of their jobs. The members more frequently reported that their physical working conditions need improvement and that travel to work was a problem for them.

Psychological Outcomes: Bivariate Analysis

Table 13 contrasts members and nonmembers in terms of their mean scores on the outcome measures. Members reported less job satisfaction and greater role strain. With regard to the outcomes less directly associated with jobs, the nonmembers evidenced more somatic complaints and performance impairment. The remaining mental health indices revealed no differences between members and nonmembers. Farmers are

Table 13

Psychological Outcomes of Members and Nonmembers

Psychological outcome	Members		Nonmembers		t
	M	SD	M	SD	
Job satisfaction	3.61	.88	3.81	.79	-2.87**
Role strain	2.12	.74	1.96	.61	2.84**
Mental health	3.00	.51	2.92	.46	1.94
Somatic complaints	1.86	.60	1.97	.57	-2.22*
Depression	2.04	.58	2.05	.52	< 1
Performance impairment	2.11	.62	2.30	.60	-3.78**
Zest	3.62	.49	3.65	.52	< 1

Note.--N=1,092 members and 183 nonmembers. Degrees of freedom vary slightly due to occasional missing data.

*p < .05.
**p < .01.

less mentally healthy than are white- or blue-collar workers. When the means in Table 13 were recomputed omitting farm workers, the nonmembers' mean somatic complaints score dropped to 1.90, and their mean performance impairment declined to 2.23. The latter difference remains significant ($\underline{t} = 2.10$, $p < .05$) even when farmers are omitted. The significant differences in role strain and job satisfaction were not affected by the exclusion of farm workers.

Taken together the differences in Table 13 indicate that there is a tendency for members to show less job satisfaction, more strain and greater mental health. However, the differences are slight, and the correlation ratio, eta^2, never exceeds .01. The differences in psychological outcomes are thus smaller than the differences in job settings. Why don't members and nonmembers differ more in outcome variables? In a later section this question will be raised again by multivariate analysis.

Comparison of Nonmember Employers and Nonmember Loners

Ninety-five of those defined as nonmembers are "loners" in that they employ no one, while 87 nonmembers employ between one and nine other workers. The loner must man all subsystems, whereas the self-employed employer can delegate some subsystem functions to his employees. If the member-nonmember dichotomy summarizes what in reality is a continuum, then the work settings of nonmember loners should differ more from organizational work settings than should the work settings of nonmember employers.

Table 14 compares nonmember employers to nonmember loners in terms of their job characteristics and includes members' means as a basis of comparison. Evidence for the continuum would be a pattern in which the nonmember employers' means fall in between the means of members and loners. Only the first two characteristics in Table 14 demonstrate this pattern. The loners are more similar to the members than are the nonmember employers in the four remaining characteristics.

Table 14

Job Characteristics of Members, Nonmembers Who Employ Others, and Nonmembers Who Work "Alone"

Job characteristic	Members[a]	Nonmembers				t[b]
		Employers		Loners		
	M	M	SD	M	SD	
Adequacy of resources	4.15	4.39	1.01	4.66	.70	-2.06*
Job autonomy	3.00	3.39	.62	3.66	.47	-3.29**
Enriching job requirements	2.85	3.51	.53	3.10	.82	3.88**
Hard work	1.83	2.33	.62	2.08	.70	2.61**
Boundary contacts	1.25	2.39	.77	1.79	1.10	4.24**
Hours worked per week	41.80	55.10	15.40	50.30	15.60	2.02*

[a]These means are taken from Table 11.

[b]The t values are for the differences between the two nonmember groups only. N=87 members and 95 nonmembers.

*$p < .05$.
**$p < .01$.

Although the work setting continuum notion is not supported, the pattern of means in Table 14 offers further evidence of the validity of the dichotomous member-nonmember definition. For all six job characteristics the members' mean is less than that of both nonmember employers and loners. Thus, the same conclusion about differences between members' and nonmembers' job characteristics would have been drawn irrespective of which category of nonmembers had served as a comparison group.

Interesting in their own right are the differences between nonmember employers and loners. Loners reported greater resources and autonomy, but less enriching job requirements, less frequent boundary contacts, fewer hours of work, and easier work. The loners appear to have a lower volume of social interaction in their jobs. They have no role senders in their work settings, and have fewer contacts with outsiders. Hence, their autonomy is greater, what resources they have need not be shared with anyone, and, with fewer role senders, they need not work as hard or as long as the nonmember employers. These differences in work setting are reflected in the loners' low mean on the index of role strain, shown in Table 15. They reported less desirable outcomes than the nonmember employers on the other measures in Table 15, but the differences are slight. None of the comparisons in Tables 14 and 15 was altered appreciably when the means for nonmember employers and loners were recomputed omitting those who did not have steady jobs.

Multivariate Analysis of Psychological Outcomes

Job satisfaction, role strain, mental health, and zest were analyzed by means of multiple classification analysis in order to

Table 15

Psychological Outcome of Members, Nonmembers Who Employ Others, and Nonmembers Who Work "Alone"

Psychological outcome	Members[a]	Nonmembers				t[b]
		Employers		Loners		
	M	M	SD	M	SD	
Job satisfaction	3.61	3.90	.78	3.72	.79	1.52
Role strain	2.12	2.09	.65	1.84	.56	2.70**
Mental health	3.00	2.97	.44	2.87	.47	1.47
Somatic complaints	1.86	1.95	.54	2.00	.59	< 1
Depression	2.04	1.98	.47	2.11	.55	-1.61
Performance impairment	2.11	2.20	.60	2.40	.59	-2.17*
Zest	3.62	3.62	.56	3.69	.44	< 1

[a]These means are taken from Table 13.

[b]The t values are for the differences between the two nonmember groups only. N=87 members and 95 nonmembers.

*p < .05.

**p < .01.

discover the manner in which demographic variables and job setting characteristics moderate the effects of organizational membership upon these outcomes. In the bivariate analyses described above the index of mental health yielded results fairly similar to the three positively intercorrelated subscales whose items comprise it. These subscales were therefore omitted from later analyses. Since zest is a positive mental health factor not correlated with the negative factors, it was chosen for further study on the grounds that it measures something different from what the negative subscales measure (Bradburn, 1969).

The demographic variables and the measures of job characteristics were regarded as potential "confounders," i.e., they might be related both to membership and to the outcome variables. In order to examine the "effect" of membership on each dependent variable controlling 21 of these confounders, each confounder was paired with membership and both were used as predictors in an MCA analysis of each outcome variable. Each such analysis calculated the adjusted mean difference between members and nonmembers on the outcome variable, i.e., the effect of membership on the outcome "holding constant" the confounder paired with it. Four series of 21 membership-confounder pairings were run, one series for each of the outcome variables chosen for multivariate analysis.

A potential confounder can have one of three types of influence on the relationship between membership and each outcome variable. It can increase the relationship, in which case holding it constant would <u>reduce</u> the difference between members and nonmembers in their mean scores on the outcome. Such a confounder partially "explains" the

relationship between membership and the outcome. A second possibility is that the confounder is related to membership and the outcome in such a way that it "suppresses" the relationship, in which case holding the confounder constant would increase the difference between members and nonmembers on the outcome. The third possibility is that the third variable does not confound membership and the outcome variable at all, and holding it constant has no effect on the mean difference. The results of the MCA are presented in Table 16 for the four outcome variables.

Every entry in Table 16 is a difference obtained by subtracting a nonmember mean from a member mean. Thus, the entry -.20, the unadjusted mean difference for job satisfaction, is the difference between 3.61 and 3.81, the mean job satisfaction of members and nonmembers, respectively, that was shown in Table 13. The two columns under each outcome variable list the adjusted differences that result from holding constant the row variables. If the adjustment results in an "improvement" in the outcome for members relative to nonmembers, the adjusted difference is listed under column A. If the adjustment results in a relatively less favorable outcome for members it is entered in column B. For example, the first entry in column A under job satisfaction indicates that when age is held constant the adjusted mean difference between members and nonmembers in job satisfaction is -.11. Since the difference when no variable is held constant is -.20, their lower age partially "explains" members' lower satisfaction, and controlling it results in a relatively higher adjusted mean for members. Similarly, all the entries in column A are for confounders that explain the lower

Table 16

Unadjusted and Adjusted Mean Differences Between Members and Nonmembers in Psychological Outcomes Holding Constant Confounding Demographic Variables and Job Characteristics Singly and in Combination

Variable(s) controlled	Psychological outcome							
	Job satisfaction[a]		Role strain[b]		Mental health[a]		Zest[a]	
None	-.20[c]		.16[c]		.08[c]		-.03[c]	
	A	B	A	B	A	B	A	B
Age	-.11		.09				.02	
Sex	-.17							
Education			.14			.06		
Steady job			.14					
Collar status	-.12					.03	.01	
Income	-.14				.13			
Resources adequate	-.13		.00		.12		.00	
Job autonomy	-.07		.14		.11		.02	
Enriching job requirements	-.03			.23	.10		.01	
Hard work		-.23		.22		.06		
Hours of work	-.10			.23	.10		.01	
Supervisory role	-.14							
Coworkers friendly			.07					
Boundary contacts	-.14			.26			.02	
Skill utilization			.14					
Physical conditions comfortable	-.14		.12		.12		.00	
Hours good		-.28		.21				
Hours convenient		-.22		.20				
Travel problem			.12					
Job security		-.23						
Multiple-adjusted difference	.21	-.29	-.14	.32	.20	.00	.14	-.03

[a]A larger signed value means relatively higher satisfaction, health, or zest for members.

[b]A larger signed value means relatively more strain for members.

[c]Unadjusted mean difference, i.e., the difference between members' and nonmembers' means on the outcome variable when no confounder is held constant.

job satisfaction of members. These are variables that constrain member satisfaction.

The first entry in column B indicates that when the index of hard work is held constant, members' satisfaction declines relative to nonmember satisfaction, so that instead of averaging .20 points below the nonmembers, they now average .23 lower. Thus, hard work suppresses the relationship between membership and satisfaction. Were it not for their relatively easier jobs, members would have scored even lower than they did. Similarly, entries in any column B of Table 16 signify confounders favorable to members. Empty rows indicate that holding constant the row variable did not influence the effect of membership upon the dependent variable listed at the top of the column.

Unlike the other adjusted differences in Table 16, the last entry in each column shows the "multiple-adjusted difference" taking into account more than one confounder at a time. To compute the multiple-adjusted difference, all the confounders that had enough influence on the relationship to result in an adjustment of a particular outcome in a given direction were entered in an MCA run and held constant simultaneously. For example, the multiple-adjusted difference in column A under job satisfaction is the adjusted difference that resulted when the eleven confounders for which entries were made above were controlled simultaneously. This difference is +.21, and indicates that when those eleven confounders are simultaneously held constant members of organizations exceed the nonmembers in mean job satisfaction by .21 points. This is a relative "gain" of .41 points from their unadjusted scores, and is evidence that, when these confounders are controlled,

organizational membership has a positive effect on job satisfaction. The multiple-adjusted difference in column B shows that, even in combination, the suppressors have relatively little influence. Controlling the four suppressors simultaneously produces a multiple-adjusted difference of -.29. The gap between members and nonmembers in job satisfaction would widen from -.20 to -.29 were it not for members' easier work, better hours, more convenient hours, and greater job security. However, the multiple-adjustment alters the mean difference by only .09 points.

One can learn from the table which variables constrain member satisfaction. These include their higher proportion of blue-collar workers, of women, and of young people; their lower income, less frequent boundary contacts, and less comfortable physical conditions; the inadequacy of resources, restricted job autonomy, and less enriching job requirements; the lower proportion with supervisory roles, and the shorter work week. However, the table reveals little about what fosters member satisfaction. The greater convenience of their working hours, their job security, and their easier work are the only variables entered in MCA that contribute to relative member satisfaction. Either there are other variables that were not measured that contribute to relative member satisfaction, or membership itself "explains" why the multiple-adjusted difference in job satisfaction is favorable to members.

Since a high score on role strain is unfavorable, entries in column A under role strain adjust the difference down. This is consistent with the other A columns, since it is an adjustment favorable to members. Controlling the confounders that explain the higher strain reported by members, the multiple-adjusted deviation shows a .13 point

advantage (less strain) for the members. This is a relative change of .29 points from the unadjusted mean difference, and indicates that, when the variables for which entries were made in column A under role strain are controlled, members experience less strain than do nonmembers. When the six suppressors were held constant the difference between members and nonmembers doubled from .16 to .32. This is a relatively small adjustment, and indicates again that less is revealed about factors that operate to members' advantage.

The results for mental health are similar to those of satisfaction and strain, but are less dramatic. Taking into account several confounders it is possible to adjust the initial .08 deviation up by .12 points or down by .08 points to zero. A lower proportion of farmers, easier work, and more education are factors that contribute to members' relative mental health. Their lower income, less convenient hours, inadequate resources, restricted job autonomy, less enriching requirements, and shorter work week all constrain member mental health. Again, more was revealed about why membership restrains a good outcome than about how it fosters it, providing an opportunity to interpret the effects of organizational membership itself as positive.

The results for zest are similar. Holding constant the confounders that reduce relative member zest yields a multiple-adjusted difference in their favor, which may also be interpreted as the positive effect of organizational membership on a psychological outcome. No confounder suppressed the relationship between membership and zest, and no adjustment was made in column B.

Several general remarks about Table 16 are in order. First and foremost is that for each outcome more multiple-adjustment is made by controlling confounders that operate to members' disadvantage than to their advantage, suggesting that membership in work organizations in and of itself has beneficial effects on worker well-being. Second, some confounders moderate more relationships between membership and outcomes than do others. The job characteristics appear to moderate more relationships than do demographic variables. The multiple-item indices as a whole play a more important role, suggesting that inadequate measurement of some of the variables may have masked their effects. Thirdly, job satisfaction and role strain are more responsive to both membership and the confounders than are mental health and zest. This is not surprising, since job satisfaction and role strain were conceived as individual reactions to work situations. Finally, the confounders are not always consistent in their effects on the relationship between membership and outcomes. Thus, inadequacy of resources, restricted autonomy, and uncomfortable physical conditions are detrimental to members on every outcome, and their easier work is advantageous to them with regard to three of the outcomes. However, their lack of enrichment and their shorter hours of work are factors that are detrimental to their job satisfaction, mental health, and zest, but are to their benefit in terms of reduced role strain.

Some First Order Interactions

A limitation imposed by the assumptions underlying MCA is that it can detect only additive effects. Interacting predictors may account for a large proportion of the variance of a dependent variable, but

their interactive effects will not be detected by MCA. This analytic limitation could explain the lack of influence shown by some of the potential confounders. In order to search for interactions, the effects of a variety of demographic variables and work characteristics were examined separately for members and nonmembers with job satisfaction and role strain as the dependent variables. The results for those predictors that interact with membership are shown in Table 17.

Workers under 30 and over 65 years of age are substantially less satisfied with their jobs if they work in organizational settings. Nonmembers under 30 and more than 65 years old are as satisfied with their jobs as are middle-age workers of both membership subclasses. Generally, both job satisfaction and role strain increase with income for both members and nonmembers. The exception is nonmembers in the lowest income bracket, who are highly satisfied with their jobs. White-collar nonmembers are more satisfied than white-collar members and avoid the excessive strain experienced by members; blue-collar workers show no effect of membership on either psychological outcome.

The remaining interacting variables in Table 17 are dichotomous measures of conditions whose presence affects only members' satisfaction. Members who reported hazards, skill underutilization, physical working conditions that need improvement, or inconvenient working hours, were disproportionately low in job satisfaction and high in role strain. These same conditions either had no ill effects on nonmembers, or had weaker effects on them.

With the exception of collar status, each interacting variable in Table 17 represents some condition that brings unfavorable outcomes

Table 17

Job Satisfaction and Role Strain of Members and Nonmembers Controlling Variables that Interact with Membership

Interacting variable	Psychological outcome: Job satisfaction — Members M	SD	N	Nonmembers M	SD	N	t	Role strain — Members M	SD	Nonmembers M	SD	t
Age												
Under 30	3.36	.86	345	3.83	.63	15	-2.11*	2.26	.73	2.11	.80	< 1
30-44	3.68	.87	353	3.95	.79	54	-2.22*	2.16	.73	2.03	.49	1.26
45-54	3.76	.86	235	3.65	.88	54	< 1	2.03	.76	2.02	.76	< 1
55-64	3.84	.84	136	3.72	.70	37	< 1	1.90	.73	1.78	.51	< 1
65 and over	3.52	.91	18	3.95	.77	22	-1.61	1.87	.48	1.90	.72	< 1
Income												
Less than $3,400	3.40	.88	116	3.96	.68	25	-3.00**	2.07	.78	1.73	.50	2.13*
$3,400-4,999	3.40	.92	172	3.53	1.05	11	< 1	2.12	.78	1.80	.55	1.34
$5,000-7,499	3.59	.86	295	3.59	.71	33	< 1	2.05	.70	1.86	.70	1.43
$7,500-9,999	3.64	.88	220	3.74	.83	18	< 1	2.19	.75	1.91	.47	1.56
$10,000 or more	3.86	.81	229	3.92	.76	60	< 1	2.22	.73	2.13	.64	< 1
Collar status[b]												
White-collar	3.74	.84	505	3.90	.83	114	-1.93	2.23	.72	1.96	.60	3.72**
Blue-collar	3.50	.90	574	3.47	.74	33	< 1	2.04	.75	2.08	.69	< 1

Occupational hazard												
Yes	3.44	.88	423	3.79	.73	80	-3.39**	2.28	.75	2.05	.66	2.61**
No	3.72	.86	667	3.82	.84	102	-1.12	2.02	.72	1.89	.57	1.81
Skill utilization												
Underutilized	3.27	.82	301	3.65	.90	34	-2.57**	2.30	.74	2.02	.83	2.07*
Not under-utilized	3.74	.86	786	3.84	.76	149	-1.40	2.06	.74	1.94	.56	1.80
Conditions comfortable												
No	3.36	.90	297	3.69	.97	16	-1.39	2.35	.78	1.78	.47	2.92**
Yes	3.72	.85	489	3.81	.83	74	< 1	2.01	.70	1.96	.64	< 1
Inconvenient hours												
Problem	3.42	.84	310	3.69	.88	66	-2.41*	2.43	.73	2.10	.65	3.45**
No problem	3.69	.87	777	3.88	.72	116	-2.25*	2.00	.72	1.87	.58	1.85

Note.--The Ns in each subclass of each row variable are the same for both dependent variables and are not repeated for role strain.

[a]Farmers were eliminated due to the small number of farm workers in organizations.

[b]Excludes workers who travel around on their jobs.

*$p < .05$.

**$p < .01$.

to members, but influences nonmembers either less or not at all. Youth and old age, low income, hazards, inconvenient hours, underutilization, and uncomfortable physical conditions adversely affect members but have little or no effect on nonmembers. These findings invite speculation concerning compensating features of self-employment that immunize the nonmembers against the effects of these generally dissatisfying and stressful working conditions.

The interaction data are in accord with the study's major findings. Most of the conditions measured favor the nonmembers, and multivariate adjustment of scores on psychological outcomes indicates relatively more positive outcomes for members. The interaction data supplement these additive effects by revealing other conditions that detract from member outcomes but not from nonmember outcomes. If there were a multivariate technique like MCA that handled nonadditive effects, and if the interacting variables in Table 17 were used together with the variables that were included in the MCA above as predictors of satisfaction and strain, then the adjusted means for members would be even more favorable relative to the nonmember adjusted means.[1] As was the case for MCA,

---

[1]Sonquist (1970) and others have suggested the technique of creating "interaction variables" or "pattern variables" when interactions are detected. The new resultant variable has a separate subclass for each possible combination of subclasses of the interacting variables, and thus captures both the main effects and the interaction effects of the interacting parent variables. The new interaction variable is then entered into MCA as a predictor where its effects are treated additively without loss of the interaction effects of the parent variables. While this technique is generally useful when the aim of the analysis is to maximize the proportion of variance explained in the dependent variable, it was inappropriate in the present study, where the aim was to learn as much as possible about a particular predictor, i.e., membership. Creating interaction variables would have destroyed the original membership

the interaction analysis detected more conditions detrimental to the outcomes of members than of nonmembers, and little was learned about what fosters relatively favorable member outcomes. These data thus strengthen the basis for attributing to organizational membership a net positive impact on workers' psychological outcomes.

Comparison of Matched Pairs

The mean scores on measures of job characteristics and outcomes for the 35 members and 35 nonmembers matched on the basis of demography and occupation are presented in Tables 18 and 19. With the exception of hard work, the differences in Table 18 are similar in direction to those recorded for the larger samples in Table 11. The member-nonmember differences on all the psychological outcomes in Table 19 are similar in direction and magnitude to those shown in Table 13 for the larger samples. Most of the differences in Tables 18 and 19 have been rendered nonsignificant due to the small sample sizes rather than to reduced mean differences. It may be concluded that the differences described earlier on the basis of data from the larger samples are not attributable to occupational differences associated with membership. An exception may be hard work. The harder work of nonmembers might be due to their occupations rather than to their nonorganizational work settings.

---

classification variable and the systematic investigation of its additive effects by means of MCA would have been impossible.

Table 18

Job Characteristics of Matched Members and Nonmembers

Job characteristic	Members	Nonmembers	SD diff	t
Adequacy of resources	4.18	4.36	1.20	< 1
Job autonomy	3.18	3.44	.97	-1.54
Enriching job requirements	3.14	3.37	.76	-1.81
Hard work	2.07	2.01	.84	< 1
Boundary contacts	1.52	2.18	1.79	-2.14*
Hours worked per week	42.3	52.3	12.73	-4.62**

Note.--N=35 pairs, df = 34.

*p < .05, two-tailed test.

**p < .01, two-tailed test.

Table 19

Psychological Outcomes of Matched Members and Nonmembers

Psychological outcome	Members	Nonmembers	SD diff	t
Job satisfaction	3.63	3.87	1.14	-1.20
Role strain	2.12	1.99	.89	< 1
Mental health	3.12	2.95	.55	1.81
Somatic complaints	1.74	1.91	.73	-1.37
Depression	1.89	2.00	.64	-1.06
Performance impairment	2.06	2.31	.73	2.02*
Zest	3.79	3.69	.58	< 1

Note.--N=35 pairs, df = 34.

*p < .05, two-tailed test.

CHAPTER V

DISCUSSION

Summary of Findings

The demographic data, tersely displayed in Appendix A, are in close accord with findings from much larger samples (Phillips, 1962; Leveson, 1968a), and little more needs to be said about them. There was no evidence that members and nonmembers differ in work values, with the exception of how they value time. However, the same item stems detected substantial differences in characteristics of work settings. Table 20 lists the distinguishing job characteristics sorted according to which membership subclass scored higher on each. The members scored lower on most of the characteristics generally regarded as desirable. Psychological outcomes were essentially similar for members and nonmembers. High levels of statistical significance for a few differences in outcome measures are attributable to small differences and large samples. Statistically controlling several confounders of membership and outcomes resulted in adjustments that consistently improved members' outcome scores relative to nonmembers' scores.

The differences in job characteristics and in psychological outcomes between members and nonmembers who were matched in order to control differences in demography and occupation were generally similar to

Table 20

Job Characteristics Sorted According to Which Membership Subclass Scored Higher

Members scored higher	Nonmembers scored higher
Friendliness of coworkers	Enriching job requirements
Job security	Challenging problems to solve
Convenience of hours of work	Opportunity to develop abilities
	Skill utilization
	Job autonomy
	Freedom to make decisions
	Authority
	Proportion having supervisory role
	Resources to do job
	Annual income
	Boundary contacts
	Physical comfort
	Number of hours of work
	Convenience of travel to work

the differences shown by the larger samples. An exception was the harder work reported by nonmembers in the larger sample, which may be due to differences in occupation.

A search for interaction effects revealed that some demographic variables and working conditions constrain members' satisfaction and increase their strain, but have little or no effect on nonmembers. These include work hazards, uncomfortable physical conditions, skill

underutilization and inconvenient hours. Furthermore, workers under 30 or over 65 years old are relatively dissatisfied if they are members, but are spared this dissatisfaction if they are nonmembers. Finally, work in organizational settings reduces satisfaction and increases strain among white-collar workers, but has no effect upon blue-collar workers.

Among nonmembers, those who work alone were compared to those who employ others. Both of these subclasses of nonmembers differed from the members in a similar manner, and there was no evidence to support a membership continuum. Among the nonmembers, loners reported greater resources and autonomy, while employers reported more enriching job requirements, more frequent boundary contacts, more hours of work, and harder work. Regarding outcomes, the loners complained of less strain than either the members or the nonmember employers, possibly because of the paucity of role senders in their work settings.

Validity of Measures

When the card-sort items used to measure work settings were introduced, the reader was cautioned that, because of their evaluative stems, they may really measure job satisfaction. However, the discriminant analysis of those items revealed differences that were in general accord with the other measures of job characteristics, but not in accord with the 7-item job satisfaction index. If those items were a measure of satisfaction rather than of job settings, they would have revealed fewer differences, in accord with the small difference detected by the job satisfaction index. While not conclusive, these findings strengthen the basis for interpreting those items as measures of work settings rather than as indicators of job satisfaction.

The generally negative results obtained with the work values measures may be due to a lack of validity in those items. Alternatively, members and nonmembers may not differ in their work values. This would be contrary to common stereotypes of the self-employed, but consistent with the "startling" findings of Morgan and his colleagues (1966) that business and farm owners were similar to the remainder of their sample in caution and risk avoidance and in receptivity to change. There is not enough evidence to draw any conclusions about value differences. However, the Morgan finding and the results of the present study are a sufficient basis for doubting stereotyped notions about the values of self-employed workers. Perhaps the self-selection problem is not as great as one might have suspected.

Interpretation of Results

Usefulness of the Membership Dichotomy

The present study has shown that it is possible conceptually and empirically to distinguish between organizational and nonorganizational work environments. The basis of the conceptual distinction used in the present study was the manning of subsystems, and the basis of the empirical distinction was self-employment and the number of workers in the work setting. The findings demonstrate that the concept and operation are useful in that they define two categories of workers that differ in other aspects of their work settings besides number of other workers present. Furthermore, the differences found in work settings confirm some common sense notions about how self-employment differs from organizational membership. Consistent with the literature cited in

Chapter I, the members reported more of the kinds of working conditions typically associated with decreased individual well-being.

Effect of Membership

Holding these conditions constant, organization members attained more favorable scores on all the outcome variables analyzed. This should not be interpreted as evidence that organizations are doing all they could to foster member well-being. On the contrary, the analysis revealed a long list of job characteristics that constrain psychological outcomes for members. The results indicate, however, that either due to the influence of other variables not measured in the present study, or by its very nature, organizational environment overcomes the mitigating effects of the constraining variables and provides members with outcomes that, all in all, differ only slightly from those of workers in nonorganizational settings.

There is a two-part myth about self-employment. The first part asserts that self-employment is free of unwanted bureaucratic control, and the self-employed man is his own boss. The lists in Table 20 summarize evidence that supports this part of the myth. The second part is that self-employment is "better," and worth striving to attain. The general similarity of members and nonmembers in their psychological outcomes deals a fatal blow to this part of the myth.

Suppose the summary lists in Table 20 were presented not as a contrast of organizational and nonorganizational work settings, but instead as a comparison of two organizations, A and B, respectively. Most organizational development specialists would want to help organization A become more like organization B. Most organizational

psychologists would predict that the members of organization B enjoy greater psychological outcomes. Such prescriptions and predictions would be based on the accumulated pool of knowledge produced by research in organizations. Yet, when the contrast is not between two organizations, but rather between members and nonmembers, the differences in outcomes are not as expected. Indeed, an anthropomorphic interpretation of the MCA results in the present study is that, on the basis of the differences between members and nonmembers in demographic variables and job characteristics, MCA "expected" considerably higher outcome scores from the nonmembers. The nonmembers did not meet this expectation, and MCA adjusted their scores accordingly. The extent to which MCA's expectation was not met is indicated by the adjustment in the difference between members' and nonmembers' means on a given outcome measure.

Why doesn't their favorable standing on measures of demographic variables and working conditions that are positively associated with psychological outcomes produce much higher outcome scores for nonmembers? Either there are unrecognized sources of positive psychological outcomes in organizational membership, or there are unmeasured constraints on outcomes in nonorganizational settings, or both. Future research can go beyond the present study and answer the above question empirically. In the absence of additional data, some speculation is offered.

Membership: Maintenance-free Employment?

The concept of entropy may be useful in understanding differences between members and nonmembers. As applied to organizations, negative entropy refers to the fact that the system counteracts its

tendency to run down by importing energy from its environment (Katz & Kahn, 1966). Conceiving of the work setting of the nonmember as a system, it is obvious that the single individual who mans all subsystems must shoulder the entire burden of striving to attain negative entropy. The continued existence of the enterprise of the self-employed worker demands his constant vigil and action. The data show that nonorganizational work environments are more demanding than are organizational settings. They require more hours of work and harder work. They more often require supervisory duties, learning of new skills, and creativity. Nonorganizational settings also allow, or require, greater autonomy and more frequent contacts with persons not part of the work setting. All in all these settings seem to demand--and get--greater investment of time and energy from those who work in them. Perhaps the different way in which nonmembers value time also reflects these demands. The failure of many entrepreneurs to maintain negative entropy is evident in the high rate of failures among small business enterprises (Hollander, 1967).

In contrast, organizational work settings, where different persons man different subsystems, have built-in mechanisms for maintaining the entire system. For most organization members system maintenance is unseen and automatic. The typical employee can leave his job physically and psychologically at the end of his shift, feeling little concern about whether there will be an organization to return to the next day. The essence of the member-nonmember dichotomy may thus revolve around whether or not an individual worker must invest his own energy in the effort to maintain the work setting. The differences in

job characteristics and the failure of the nonmembers to reap more favorable psychological outcomes could be the consequences of this difference in maintenance requirements. This interpretation is consistent with the conceptualization of the nonmember as an individual who mans all subsystems. Also, it suggests that organizational membership makes a positive net contribution to psychological outcomes by providing an ongoing work setting without requiring from the worker much effort to maintain it.

Self-employment: Immunity to Unsavory Conditions?

The interaction data can be interpreted as evidence that nonmembers are immune to certain stressful working conditions that erode member satisfaction. This could be a consequence of differences in ownership, risk of private capital, and a person's sense of working for himself. The concept of goal integration might be useful in this context. When the work behaviors required by the job are instrumental in attaining workers' personal goals, there is a high degree of goal integration. Studying a sample of members in a large organization, Barrett (1970) found a strong positive relationship between goal integration and work motivation, commitment to the organization, and job satisfaction. The interaction data in the present study suggest the hypothesis that, compared to members, nonmembers more often meet their personal goals by engaging in work-required behaviors, and therefore are not adversely affected by unfavorable working conditions. In short, an extraordinarily high degree of goal integration may be the source of nonmembers' immunity to the negative effects of foul working conditions.

Collar Status and Self-employment

The discussion about professionals in organizations (Chapter II) suggested the hypothesis that escape from bureaucratic control is more beneficial to workers at lower occupational levels than to those at higher levels. The findings were contrary to this hypothesis. White-collar workers benefited from nonmembership, but blue-collar workers did not. Perhaps only those with higher level occupations can exploit the opportunities for greater psychological outcomes provided by self-employment, while those at lower levels cannot.

Typology of Self-employment

The practice of treating all self-employed workers as a single category, while partitioning the wage-and-salary workers into categories treated separately, does violence to the heterogeneity of the self-employed. On most variables measured the nonmembers' scores were nearly as variable as members', and nonmembers demonstrated greater variation in income and hours of work. There may be fundamentally different types of self-employment. "Optional" self-employment could be a fitting label for the situation of those endowed with sufficient competence and initiative that they can succeed occupationally without an organization. Such workers may opt for self-employment and become enriched, pecuniarily and psychologically, from their work. "Forced" self-employment may be the lot of those rejected by organizations. Forced to fend for themselves in a fiercely competitive economy, and ill-equipped to do so, they barely subsist, and derive few psychological benefits from their work. Forced self-employment may be their only alternative to unemployment.

Another type of self-employment might include the temporary entrepreneurs who never advance beyond marginal profitability and are apt to return to employee status. This third type is probably similar to those working in forced self-employment in terms of psychological outcomes.

Another useful typology of self-employment would result from separating artisans from businessmen. Artisans ply a skilled trade and get paid for their services. Businessmen exchange goods and services for profit but do not themselves work in a skilled trade. A jeweler who makes and repairs jewelry is an artisan, and one who buys and sells jewelry for a profit is a businessman. Artisans and businessmen may differ from members in different ways.

Evolution of Self-employment

It is possible that a comparison of self- and other-employed workers of 50 years ago would have shown different results. The abiding myth of the superiority of self-employment may have originated at a time in American history when it was well founded in empirical reality. Lipset and Bendix (1963) have described the changing implications of proprietorship thus:

> The self-employed businessman . . . is today a very different person, both socially and economically, from his counterpart of two generations ago. Then he could hope and work for the real economic success which could result from the building up of a large enterprise out of a small beginning. . . . Success in proprietorship today usually consists in the stabilization of an enterprise at a given social and economic level, because the opportunity for building large enterprises out of very small ones are relatively meager, though they certainly have not disappeared [p. 177].

The myth has persisted beyond the economic and social conditions that spawned it, and today is probably a projection of what many workers long for in their own jobs. Chinoy (1955) showed that workers rarely

actualize their dream of becoming self-employed. The present study shows that those for whom the dream comes true benefit little in terms of psychological outcomes.

Limitations of the Present Study

The usual problems of secondary analysis plagued the present research. Difficulties whose mention might aid other investigators of self-employed workers are mentioned below.

In accordance with its major objectives, the national survey measured well those working conditions likely to affect most workers' well-being, but neglected to measure features of self-employment that may be important determinants of nonmember well-being. Many measures were not analyzed in the present study because they applied only to members; no measure was discarded because it dealt exclusively with problems of the self-employed. The suitability of the survey instrument for research on the work force as a whole is a limitation for investigation of particular subgroups. This limitation is especially severe when the subgroup is as unique as the self-employed. Item content was also restricted due to nonmethodological considerations. Thus, religious background, a variable of great theoretical relevance to self-employment and entrepreneurship, was not included in the survey due to the reluctance of government sponsors to approve items that may be an "invasion of privacy." Finally, more and better measures of work values are available, or could be devised, than the *ad hoc* measures used in the national survey. While not central to research on working conditions, work values need to be measured better than they were here if the aim is deeper understanding of self-employed workers.

Since the sample was representative and self-weighting, the self-employed comprised a small proportion of the respondents. Therefore, membership was a highly skewed, dichotomous variable. The results obtained from the statistical techniques used in the analyses may be subject to some distortion because of this skewness. A related limitation was the relatively small number of self-employed workers sampled, precluding the possibility of analyzing occupational groups separately for differential effects of membership.

Suggestions for Future Research

Further research comparing self-employed and wage-and-salary workers should oversample the self-employed, include enough self-employed workers to permit comparisons within occupational groupings, and measure typically neglected variables relevant to the self-employed.

In this investigation the self-employed were defined as non-members. Future research could attempt to apply the bureaucratic model to self-employed workers. For example, the lone self-employed worker could be conceived of as part of an "organization" comprised of clients or customers, suppliers, government officials, and others. Such a conceptualization could broaden the range of variables on which self-employed and wage-and-salary workers can be compared. For example, demands made by supervisors on employees, and the demands made by government officials on entrepreneurs could be compared if both were conceived of as directives backed by bureaucratic authority.

As indicated in an earlier section, more meaningful subcategories of self-employed workers could be isolated. In addition,

subcategories of organization members could be compared to each other in terms of their similarity to the self-employed. Perhaps there are organization members who are similar to nonmembers in terms of all or most measures of work settings. Comparing such a subset of members to nonmembers in terms of psychological outcomes could serve as a replication of the statistically-controlled comparison in the present study.

APPENDICES

APPENDIX A

DEMOGRAPHY OF MEMBERS AND NONMEMBERS

Table 21

Age by Membership

Age	Membership			
	Members		Nonmembers	
20 or less	7.2%	(78)	1.1%	(2)
21-29	24.6	(267)	7.1	(13)
30-44	32.5	(353)	29.7	(54)
45-54	21.6	(235)	29.7	(54)
55-64	12.5	(136)	20.3	(37)
65 and over	1.7	(18)	12.1	(22)
Total	100.0%	(1,087)	100.0%	(183)

Chi-square = 96.21; $\underline{df}$ = 5; $p < .001$.

Table 22

Sex by Membership

Sex	Membership			
	Members		Nonmembers	
Men	62.5%	(682)	84.2%	(154)
Women	37.5	(409)	15.8	(29)
Total	100.0%	(1,091)	100.0%	(183)

Chi-square = 32.53; $\underline{df}$ = 1; $p < .001$.

Table 23

Race by Membership

Race	Membership			
	Members		Nonmembers	
White	88.4%	(957)	93.4%	(171)
Black	11.2	(121)	4.9	(9)
Other	0.5	(5)	1.6	(3)
Total	100.0%	(1,083)	100.0%	(183)

Chi-square = 9.85; df = 2; $p < .01$.

Table 24

Steady Job by Membership

How steady job is	Membership			
	Members		Nonmembers	
Steady employment	92.5%	(998)	77.8%	(140)
Seasonal	4.6	(50)	21.1	(38)
Frequent lay-offs	2.9	(31)	1.1	(2)
Total	100.0%	(1,079)	100.0%	(180)

Chi-square = 65.44; df = 2; $p < .001$.

Table 25

Education by Membership

Highest level of education achieved	Membership			
	Members		Nonmembers	
Some grade school[a]	7.2%	(79)	8.2%	(15)
Completed grade school	7.8	(85)	10.9	(20)
Some high school	17.1	(186)	23.0	(42)
Completed high school	36.1	(394)	33.3	(61)
Some college	16.1	(175)	15.8	(29)
College degree	8.3	(91)	2.7	(5)
Graduate or professional training	7.4	(81)	6.0	(11)
Total	100.0%	(1,092)	100.0%	(183)

[a]Includes one member and two nonmembers who reported that they had no schooling whatsoever.

Table 26

Collar Status by Membership

Collar status	Membership			
	Members		Nonmembers	
White-collar	46.4%	(506)	62.3%	(114)
Blue-collar	52.7	(574)	18.0	(33)
Farm	0.9	(10)	19.7	(36)
Total	100.0%	(1,090)	100.0%	(183)

Chi-square = 200.03; df = 2; $p < .001$.

Table 27

Duncan Decile by Membership

Duncan Decile	Membership			
	Members		Nonmembers	
9	16.8%	(183)	8.7%	(16)
8	15.0	(164)	23.5	(43)
7	19.7	(215)	18.0	(33)
6	5.9	(64)	14.2	(26)
5	10.3	(112)	3.8	(7)
4	5.4	(59)	3.3	(6)
3	13.3	(145)	5.5	(10)
2	0.6	(6)	19.7	(36)
1	9.4	(103)	2.2	(4)
0	3.6	(39)	1.1	(2)
Total	100.0%	(1,090)	100.0%	(183)

Chi-square = 231.77; df = 9; $p < .001$.

APPENDIX B

CARD-SORT MEASURES OF WORK VALUES AND WORK SETTINGS

The respondent was handed a deck of 25 IBM cards, each of which had an item stem printed on it. Four more cards, each with a scale designation printed on it, were placed before him. The scale designations were "VERY IMPORTANT," "SOMEWHAT IMPORTANT," "NOT TOO IMPORTANT," and "NOT AT ALL IMPORTANT." The respondent was asked to place each card in one of four piles depending on how important the job characteristic listed was to him. After he finished sorting all 25 cards they were collected by the interviewer, preserving the four clusters. Later in the interview, another deck of 25 cards with the same item stems was handed to the respondent. This time he was asked to sort them on the basis of how true each was of his job situation. The four scale points this time were labeled "VERY TRUE," "SOMEWHAT TRUE," "NOT TOO TRUE," and "NOT AT ALL TRUE." The chief advantage of the card sort technique is that it provides data ready for computerized analysis, eliminating the costs and errors of coding and key punching. An added available feature, not used in the present study, is a program that builds indices directly from sorted cards (Hunt, Schupp & Cobb, 1966). The 25 item stems are reproduced below, along with the interviewer's instructions.

(WORK VALUES SORT--RED CARDS)

The next question involves things a person may or may not look for in a job. Some of these things are on this set of cards. (HOLD UP RED STRIPE CARDS.)

People differ a lot in terms of which of these things are more important to them. We'd like to know how important to you each of these things is. (LAY ALTERNATIVE CARDS DOWN WITH "VERY IMPORTANT" ON R'S LEFT.)

Please sort each card into one of the four groupings I have here, according to how important each thing is to you (HAND CARDS TO R. COLLECT CARDS WITH ALTERNATIVE CARDS AT BOTTOM OF EACH PILE. KEEP UNSORTED CARDS ASIDE.)

QUESTION CARDS IN THE ORDER IN WHICH THEY ARE GIVEN ARE:

1 I am given a lot of chances to make friends
2 *the chances for promotion are good
3 my co-workers are friendly and helpful
4 I have an opportunity to develop my own special abilities
5 travel to and from work is convenient
6 I receive enough help and equipment to get the job done
7 I am not asked to do excessive amounts of work
8 the work is interesting
9 I have enough information to get the job done
10 the pay is good
11 I am given a lot of freedom to decide how I do my own work
12 I am given a chance to do the things I do best
13 the job security is good
14 the problems I am expected to solve are hard enough
15 *my supervisor is competent in doing his job
16 my responsibilities are clearly defined
17 I have enough authority to do my job
18 *my fringe benefits are good
19 the physical surroundings are pleasant
20 I can see the results of my work
21 I can forget about my personal problems
22 I have enough time to get the job done
23 *my supervisor is very concerned about the welfare of those under him
24 I am free from the conflicting demands that other people make of me
25 the hours are good

*Excluded from analysis in the present study.

A new deck of cards was administered about an hour later near the conclusion of the interview, with the following instructions:

(WORK SETTING SORT--YELLOW CARDS)

Here are some cards that describe different aspects of a person's job. I'd like you to put each in the pile which best reflects how true you feel each is of <u>your</u> job. (LAY DOWN SOLID YELLOW ALTERNATIVE CARDS WITH "VERY TRUE" ON R'S LEFT; COLLECT CARDS WITH ALTERNATIVE CARDS AT <u>BOTTOM</u> OF EACH PILE. KEEP UNSORTED CARDS ASIDE.)

APPENDIX C

MENTAL HEALTH SELF-REPORT FORM

After the last interview question had been answered, the interviewer read aloud the instructions below to the respondent, and handed him a copy of the form that follows.

> Before we complete this interview I'd like to ask you one final set of questions. This is a list of things that describe how anyone can feel at certain times. I'd like you to check in the appropriate box how often each of these things happens to you or is true of you. I'd just like to remind you again that all information in this interview is voluntary and completely confidential.

HAND R SELF-REPORT FORM

How often is this true of you?	(1) Often true	(2) Sometimes true	(3) Rarely true	(4) Never true
1. My hands sweat so that they feel damp and clammy.	☐	☐	☐	☐
2. I expect to succeed in things I do.	☐	☐	☐	☐
3. I feel depressed.	☐	☐	☐	☐
4. I am able to work under a great deal of pressure.	☐	☐	☐	☐
5. I get a soreness in my muscles.	☐	☐	☐	☐
6. I get headaches.	☐	☐	☐	☐
7. I feel inferior to others.	☐	☐	☐	☐
8. I feel happy.	☐	☐	☐	☐
9. I get a numbness or tingling in parts of my body.	☐	☐	☐	☐
10. I have to do things very slowly in order to be sure I am doing them right.	☐	☐	☐	☐
11. I feel that life is worthwhile.	☐	☐	☐	☐
12. I feel my heart pounding or racing.	☐	☐	☐	☐
13. I feel low in spirits.	☐	☐	☐	☐
14. I feel others do not understand me.	☐	☐	☐	☐
15. I get a weakness in parts of my body.	☐	☐	☐	☐
16. I have trouble remembering things.	☐	☐	☐	☐
17. I can carry out things the way I expect to.	☐	☐	☐	☐
18. I get pains in the lower part of my back.	☐	☐	☐	☐
19. I have difficulty in making decisions.	☐	☐	☐	☐
20. I feel lonely.	☐	☐	☐	☐
21. I get pains in my heart or chest.	☐	☐	☐	☐
22. I feel hopeless about the future.	☐	☐	☐	☐
23. I feel trapped or caught.	☐	☐	☐	☐
24. I get heavy feelings in my arms or legs.	☐	☐	☐	☐
25. I have trouble in concentrating.	☐	☐	☐	☐
26. I blame myself for things.	☐	☐	☐	☐
27. I feel blocked or stymied in getting things done.	☐	☐	☐	☐

APPENDIX D

INTERVIEW[1]

1. Before we talk about your present job, I'd like to get some idea of the kind of job you'd most like to have. If you were free to go into any type of job you wanted, what would your choice be?

   ☐1 Same as R has now

   ☐3 R would want to retire or not work

   ☐5 R specifies some job other than present one

   SPECIFY JOB: _____

   ☐8 Don't know

3. Now let's talk more specifically about your present job. What is your main job?

   Occupation: _____

4. What kind of business is that in? _____

5. What do you do on this job? _____

   _____

   _____

6. Most of the time on this job do you work for yourself or for someone else?

   ☐1 Work for self

   ☐5 Work for someone else

---

[1]Includes only items used in the present study. Item numbers are those originally used in the field.

ASK Qs 7 THROUGH 10 ONLY IF R IS SELF-EMPLOYED.
IF R IS NOT SELF-EMPLOYED, SKIP TO Q11

7. Are there any people who work for you and are paid by you?

☐1 Yes
☐5 No

8. How many people work for you and are paid by you?

Number: _____

10. In general how well would you say that your job measures up to the sort of job you wanted when you took it? Would you say it is very much like the job you wanted, somewhat like the job you wanted, or not very much like the job you wanted?

☐1 Very much like
☐3 Somewhat like
☐5 Not very much like

IF R IS SELF-EMPLOYED, SKIP TO Q20

11. About how many people work for your employer at the location where you work--I mean all types of workers in all areas and departments?

☐1 1-9
☐2 10-49
☐3 50-99
☐4 100-499
☐5 500-999
☐6 1000-1999
☐7 2000 and over
☐8 Don't know

13. In general how well would you say that your job measures up to the sort of job you wanted when you took it--by job I mean working in the same type of occupation for your present employer? Would you say it is very much like, somewhat like, or not very much like the job you wanted when you took it?

☐1 Very much like
☐3 Somewhat like
☐5 Not very much like

22. Through your previous experience and training do you have some skills that you would like to be using in your work but can't use on your present job?

☐1 Yes
☐5 No

25. I'll read a list of things that might describe a person's job. For each thing I read I'd like you to tell me how much this is like your job.

A job that (READ "a" BELOW). Would you say this is a lot like your job, somewhat like your job, a little like your job, or not at all like your job?

REPEAT FOR "b" THROUGH "m"	(1) A lot	(2) Some-what	(3) A little	(4) Not at all
a. requires that you keep having to learn new things	☐	☐	☐	☐
b. requires that you do a lot of planning ahead	☐	☐	☐	☐
c. requires that you work very fast	☐	☐	☐	☐
d. allows you a lot of freedom as to how you do your work	☐	☐	☐	☐
e. requires a high level of skill	☐	☐	☐	☐
f. requires that you work very hard	☐	☐	☐	☐
g. requires that you exert a lot of physical effort	☐	☐	☐	☐
h. requires that you almost never make a mistake	☐	☐	☐	☐
i. allows you to make a lot of decisions on your own	☐	☐	☐	☐
j. requires that you be creative	☐	☐	☐	☐
k. allows you to do a variety of different things	☐	☐	☐	☐
l. requires that you do things that are very repetitious	☐	☐	☐	☐
m. requires that you be skilled in using your hands	☐	☐	☐	☐

26. Next I'll read off some things that you might get from your employer or those people you work with that could help you work your best. For each, tell me whether you feel you are being given enough or not enough for you to work your best. First . . .

READ "a" BELOW. Do you feel you are being given enough or not enough?

REPEAT FOR "b" THROUGH "e".

	(1) Enough	(5) Not enough
a. help or assistance from those you work with	☐	☐
b. the authority to tell certain people what to do	☐	☐
c. time in which to do what others expect of you	☐	☐
d. the facts and information you need	☐	☐
e. the machinery, tools, or other equipment you need	☐	☐

33. Do you supervise anybody as part of your job?

☐1 Yes
☐5 No

34. How often during working hours do you have to deal with outsiders who have business dealings with your company--like customers or distributors? Would you say nearly all the time, frequently, sometimes, or never?

☐1 Nearly all the time
☐2 Frequently
☐3 Sometimes
☐4 Never

36. All of us occasionally feel bothered by certain kinds of things in our work. I'll read a list of things that sometimes bother people, and I would like you to tell me how frequently you feel bothered by each of them.

	(1) Nearly all the time	(2) Rather often	(3) Some-times	(4) Rarely	(5) Never
a. the fact that you can't get information needed to carry out your job.	☐	☐	☐	☐	☐
b. not knowing just what the people you work with expect of you.	☐	☐	☐	☐	☐
c. thinking that the amount of work you have to do may interfere with how well it gets done.	☐	☐	☐	☐	☐
d. feelings that you have to do things that are against your better judgment.	☐	☐	☐	☐	☐
e. being unclear on just what the scope and responsibilities of your job are.	☐	☐	☐	☐	☐

38. Do you think of your job as one where you have regular, steady work throughout the year, is it seasonal, are there frequent lay-offs, or what?

☐1 Steady employment
☐3 Seasonal
☐5 Frequent lay-offs
☐7 Other (SPECIFY): _____

_____

40. The forty-hour week is a very common term. When people give the hours they work a second thought, however, and start counting the hours up, they sometimes find that they work somewhat more or somewhat less than forty hours. During the average week how many hours do you work, not counting the time you take off for meals?

_____ hours per week

41. Do you generally work the same days each week?

☐1 Yes

☐5 No

42. Do you generally work the same hours each day?

☐1 Yes

☐5 No

56. Could you tell me what problems or difficulties you run into concerning the hours you work, your work schedule, or overtime?

☐ No problems

_____

_____

58. Does your job at any time expose you to what you feel are physical dangers or unhealthy conditions?

☐1 Yes

☐5 No

82. Are the physical conditions at the place where you spend most of your working time as comfortable and pleasant as you would like or would you like them to be better?

☐1 As comfortable as R likes

☐5 Like it to be better

90. What things concerning your travel to and from work do you consider problems and would like to see changed if possible?

☐R has nothing he considers a problem

92. How much does your pay or income from your job figure out to be a year, before taxes and other deductions are made?

☐8 Don't know

_____dollars a year

137. If you were to get enough money to live as comfortably as you'd like for the rest of your life, would you continue to work?

☐1 Yes

☐5 No

140. All in all, how satisfied would you say you are with your job--very satisfied, somewhat satisfied, not too satisfied, or not at all satisfied?

- ☐1 Very satisfied
- ☐2 Somewhat satisfied
- ☐3 Not too satisfied
- ☐4 Not at all satisfied

141. How often do you get so wrapped up in your work that you lose track of the time--very often, pretty often, once in a while, or never?

- ☐1 Very often
- ☐2 Pretty often
- ☐3 Once in a while
- ☐4 Never

142. (PHRASE IN SAME SEX AS R) If a good friend of yours told you (he/she) was interested in working in a job like yours for your employer, what would you tell (him/her)? Would you strongly recommend this job, would you have doubts about recommending it, or would you strongly advise (him/her) against this sort of job?

- ☐1 Strongly recommend it
- ☐3 Have doubts about recommending it
- ☐5 Advise him against it

143. Knowing what you know now, if you had to decide all over again whether to take the job you now have, what would you decide? Would you decide without any hesitation to take the same job, would you have some second thoughts, or would you decide definitely not to take the same job?

- ☐1 Decide without hesitation to take same job
- ☐3 Have some second thoughts
- ☐5 Decide definitely <u>not</u> to take the job

144. How often do you leave work with a good feeling that you've done something particularly well--very often, pretty often, once in a while, or never?

- ☐ 1 Very often
- ☐ 2 Pretty often
- ☐ 3 Once in a while
- ☐ 4 Never

171. How old were you on your last birthday?

_____ years old

172. What was the highest grade of school you completed?

- ☐ 00 None
- ☐ 10 some grade school (grades 1 to 7)
- ☐ 20 completed grade school (grade 8)
- ☐ 30 some high school (grades 9 to 11)
- ☐ 40 has high school diploma (grade 12)
- ☐ 50 some college (grades 13 to 15)
- ☐ 60 has college degree (grade 16)
- ☐ 70 graduate or professional training

APPENDIX E

INTER-ITEM CORRELATIONS AND RELIABILITY ESTIMATES OF MULTI-ITEM INDICES

The formula used to compute index reliability estimates is a variant of Cronbach's coefficient alpha for the internal consistency of tests:

$$r_{kk} = \frac{k\ \bar{r}_{ij}}{1 + (k-1)\ F_{ij}}$$

r_{kk} is an estimate of the square of the expected correlation of scores on a collection of items with errorless true scores (Nunnally, 1967).

Table 28

Reliability of Enriching Job Requirements Index

Item	a	b	e	j
a. job requires you to learn new things				
b. job requires planning ahead	.50			
e. job requires a high level of skill	.44	.42		
j. job requires that you be creative	.41	.54	.44	
k. job allows you to do a variety of things	.45	.39	.31	.40
$\bar{r}_{ij}$ = .43				
r_{kk} = .79				

Note.--These items are reproduced in full in Appendix D, question 25.

Table 29

Reliability of Hard Work Index

Item	c	f
c. job requires very fast work		
f. job requires very hard work	.49	
g. job requires a lot of physical effort	.23	.42
$\bar{r}_{ij}$ = .38		
r_{kk} = .65		

Note.--These items are reproduced in full in Appendix D, question 25.

Table 30

Reliability of Job Autonomy Index

Item	d
d. job allows freedom as to how you work	
i. job allows you to make decisions on your own	.40
r_{kk} = .57	

Note.--These items are reproduced in full in Appendix D, question 25.

Table 31

Reliability of Adequacy of Resources Index

Item	a	b	c	d
a. assistance from those you work with				
b. authority to tell people what to do	.27			
c. time to do what others expect of you	.32	.21		
d. facts and information you need	.29	.15	.25	
e. machinery, tools, other equipment	.27	.12	.17	.27
$\bar{r}_{ij}$ = .23				
r_{kk} = .60				

Note.--These items are reproduced in full in Appendix D, question 26.

Table 32

Reliability of Job Satisfaction Index

	Item	1	10,13	140	141	142	143
1	Would choice job be present one or different one?						
10, 13	Does present job measure up to original expectations?	.30					
140	All in all, how satisfied are you with job?	.35	.36				
141	How often get wrapped up in work?	.12	.12	.21			
142	Would you recommend job to a friend?	.16	.29	.40	.13		
143	Would you pick same job again?	.26	.37	.47	.13	.52	
144	How often get feeling of accomplishment?	.13	.18	.37	.29	.19	.21

$\bar{r}_{ij} = .26$

$r_{kk} = .71$

Note.--These items appear in full in Appendix D.

Table 33

Reliability of Role Strain Index

Item	a	b	c	d
a. lack of information needed to do job				
b. not knowing expectations of others	.40			
c. amount of work interferes with quality	.30	.34		
d. you have to do things against your better judgment	.36	.31	.38	
e. unclear about scope of job and responsibilities	.36	.47	.29	.35
$\bar{r}_{ij}$ = .36				
r_{kk} = .74				

Note.--These items are reproduced in full in Appendix D, question 36.

Table 34

Reliability of Somatic Complaints Index

	Item	5	6	9	12	15	18	21
5.	I get a soreness in my muscles							
6.	I get headaches	.34						
9.	Numbness, tingling in body	.45	.28					
12.	My heart pounds or races	.34	.29	.38				
15.	I get weakness in parts of body	.40	.33	.54	.46			
18.	Pains in lower back	.48	.34	.39	.34	.43		
21.	Pains in my heart or chest	.28	.27	.35	.45	.42	.34	
24.	Heavy feelings in limbs	.39	.29	.48	.39	.56	.38	.45
	$\bar{r}_{ij} = .37$							
	$r_{kk} = .84$							

Note.--These items are reproduced in full in Appendix C.

Table 35

Reliability of Depression Index

	Item	3	7	13	14	20	22	23	26
3.	I feel depressed								
7.	I feel inferior	.32							
13.	I feel low in spirits	.56	.34						
14.	Others don't understand me	.36	.28	.43					
20.	I feel lonely	.43	.34	.46	.33				
22.	I feel hopeless	.38	.26	.40	.32	.40			
23.	I feel trapped	.43	.30	.43	.35	.42	.53		
26.	I blame myself	.32	.21	.35	.34	.30	.28	.30	
27.	I feel stymied	.39	.30	.41	.37	.35	.37	.48	.43
	$\bar{r}_{ij}$ = .37								
	r_{kk} = .84								

Note.--These items are reproduced in full in Appendix C.

Table 36

Reliability of Performance Debilitation Index

	Item	10	16	19
10.	I have to do things slowly			
16.	I have trouble remembering	.29		
19.	I have difficulty deciding	.30	.44	
25.	I have trouble concentrating	.31	.45	.48
	$\bar{r}_{ij}$ = .38			
	r_{kk} = .71			

Note.--These items are reproduced in full in Appendix C.

Table 37

Reliability of Zest Index

	Item	2[a]	4[a]	8	11
2.	I expect to succeed in things I do[a]				
4.	I can work under great deal of pressure[a]	(.17)			
8.	I feel happy	(.16)	(.18)		
11.	Life is worthwhile	(.17)	(.11)	.36	
17.	I can carry out things as I expect to	(.21)	(.17)	.31	.25

For the last three items only:

$\bar{r}_{ij} = .31$

$r_{kk} = .57$

Note.--These items are reproduced in full in Appendix C.

[a]These two items were not included in the index.

APPENDIX F

THE MATCHED SAMPLES OF MEMBERS AND NONMEMBERS

The 35 matched pairs of members and nonmembers are listed below. Except where noted, both workers in each pair are white, of the same sex, ten or fewer years apart in age, and similar in occupation. Since individual judgment was exercised in matching occupations on the basis of the workers' verbal descriptions of their jobs, verbatim responses to questions D3-D5 are provided, with minor editing. Verbs were changed to the third person. The reader may judge for himself the degree of similarity of the occupations of the paired workers.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
1	075	Member	57	Female	Registered nurse in hospital; general duty nursing with geriatric patients; supervises intensive care unit.
	075	Nonmember	59	Female	Private duty nurse; private nursing of individuals in private homes.
2	075	Member	44	Female	Staff nurse in V.A. hospital; general nursing.
	075	Nonmember	47	Female	Registered nurse; private duty in hospital; bedside nursing.
3	092	Member	57	Female	Church sponsored day school kindergarten teacher; teaches, does purchasing, bookkeeping, takes care of classroom.
	359	Nonmember	55	Female	Day care center owner; takes care of children while mothers work.
4	149	Member	56	Female[1]	Art teacher; teaches art appreciation and art history in grades 7-12; is advisor to 11th grade students.
	149	Nonmember	58	Male[1]	Art instructor and artist; instructs individuals and groups.
5	163	Member	39	Male	Sales manager of retail appliance and tire concern; involved in retail and wholesale selling, buying, merchandising, keeping inventory, supervising the service department.
	163	Nonmember	44	Male	Part owner and general manager of welding repair shop; supervises and works in sales.

[1]This is the only pair whose members differ in sex.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
6	163	Member	36	Male	Regional sales manager of a company that manufactures building materials--broad line--roofing, gypsum products, soft board, etc. Travels to five districts and supervises district managers who in turn supervise salesmen.
	163	Nonmember	33	Male	Co-owner and manager of construction materials machines and service. Heavy equipment sales corporation. Supervises employees; deals with customers and sales over the phone.
7	163	Member	48	Male	General manager of marketing in household, toiletry, and patent drug business; supervises total marketing operation; hires and fires; travels as part of his work.
	163	Nonmember	48	Male	Owner of real estate and building business; supervises sales, manages rental property. Worries about borrowing money.
8	182	Member	29	Male	Field supervisor in structural building and remodeling business; supervises and coordinates jobs of lathers, plasterers, plumbers and carpenters.
	182	Nonmember	27	Male	Frame contractor in construction business; lays out plan, reads blue prints, figures costs of materials, supervises employees.
9	185	Member	38	Male	Manager; auto accessory division of retail department store; orders merchandise, directs and supervises sales personnel.
	185	Nonmember	38	Male	Owner of auto parts business.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
10	185	Member	38	Male	Receiving manager in retail store; matches invoices with purchases, prices merchandise.
	185	Nonmember	37	Male	Manager of men's clothing store; buys, sells, keeps books; general managing.
11	185	Member	63	Male	Vice-president of department store; in charge of job operations at all company stores, including warehousing, receiving, packing and security.
	185	Nonmember	68	Male	Owner of building material lumber yard; involved in all managerial functions, bookkeeping, loading trucks.
12	250	Member	48	Male	Insurance salesman; sells mutual funds and insurance for investment business.
	250	Nonmember	48	Male	Insurance agent; sells all types of insurance; also rents properties and acts as a rental agent.
13	250	Member	45	Male	State agent for insurance company.
	250	Nonmember	46	Male	Multi-line insurance agent; sells all types of insurance, mostly auto.
14	274	Member	56	Male	Salesman of interior decorations; aids customers in selecting wall schemes, furniture and draperies. (In response to another question, worker said, "I go out and do a lot of estimating and measuring and come back and work up an estimate.")
	789	Nonmember	47	Male	Owner of drapery shop; takes orders, buys materials, does bookkeeping; makes, delivers, hangs drapes.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
15	525	Member	63	Male	Relief and utility man in meat packing plant; does knifework; trims and cleans hogs.
	525	Nonmember	67	Male	Owner of slaighter house; kills cattle and hogs, wraps and freezes meat.
16	600	Member	41	Male	Machinist in aircraft industry; does anything in machine shop.
	600	Nonmember	45	Male	Machinist; sets up and works on machines to make parts, molds plastic. Runs a milling machine, lathe, drill press.
17	620	Member	35	Male	General truck mechanic in repair station; repairs trucks, cars, trailers.
	620	Nonmember	32	Male	Owner and manager of garage and service station; sells gasoline, repairs cars, answers service calls, inspects cars.
18	620	Member	39	Male	Mechanic for highway department; repairs trucks, heavy equipment.
	620	Nonmember	42	Male	Owner of machine and body shop; repairs cars.
19	620	Member	58	Male	Maintenance man; repairs and maintains all equipment for construction firm; trucks, tractors, lawn mowers.
	620	Nonmember	57	Male	Garage owner; makes all types of auto repairs.
20[1]	620	Member	50	Male	Auto mechanic; repairs automobiles, relines brakes.
	620	Nonmember	48	Male	Auto mechanic; repairs, replaces and rebuilds engines, transmissions and carburetors, etc.

[1]These two men are the only blacks in the matched samples. All other matched pairs are comprised of white workers.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
21	620	Member	47	Male	Truck mechanic for truck and trailer manufacturer; repairs trucks, tractors and trailers.
	620	Nonmember	49	Male	Part owner of machine shop; repairs motors, mostly car motors.
22	637	Member	42	Male	Air conditioning mechanic for aircraft industry; works on de-icing systems, air conditioning in airplanes.
	637	Nonmember	42	Male	Heating and air conditioning contractor; sells and installs equipment in existing (not new) structures.
23	720	Member	41	Male	Television technician; travels to peoples' homes to service televisions.
	720	Nonmember	41	Male	Owner of television repair service; does general television repair work.
24	780	Member	33	Male	Furniture upholsterer; makes patterns, cuts material, and upholsters furniture.
	780	Nonmember	28	Male	Custom upholsterer; rebuilds furniture, re-covers chairs and couches.
25	785	Member	59	Male	Tailor in clothing factory; does tailoring for ladies' coats and suits.
	785	Nonmember	64	Male	Cleaner-tailor; does tailoring, pressing and waiting on customers. Does alterations.
26	810	Member	29	Male	Sheet metal welder in an electrical products company.
	810	Nonmember	27	Male	Welder; does all-purpose welding.

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
27	824	Member	49	Male	Electrician; does preventive electrical maintenance, emergency repair, remodeling, and wiring.
	824	Nonmember	50	Male	Electrical contractor; repairs appliances, installs air conditioners and electrical heating systems.
28	840	Member	55	Male	Painter; paints buildings and does maintenance work.
	840	Nonmember	53	Male	Painter; does estimating, painting and papering.
29	860	Member	49	Male	Carpenter; works out of the union hall and does finish and rough carpentry, layout work, heavy construction, remodeling.
	860	Nonmember	49	Male	Carpenter; does finish work and additions to homes.
30	862	Member	50	Male	Plumber; working for a contractor doing all types of plumbing, mostly for commercial buildings and apartment houses.
	862	Nonmember	50	Male	Plumber; plumbing contractor who installs plumbing fixtures and drain pipes, water lines, and water mains.
31	862	Member	31	Male	Plumber; installs plumbing and heating pipes.
	862	Nonmember	36	Male	Plumbing contractor; repairs plumbing and installs plumbing in new buildings.
32	869	Member	39	Male	Plumber; works for a retail department store installing and servicing heating, plumbing, and air conditioning equipment; supervises help.
	869	Nonmember	49	Male	Plumber; does heating installations and service work on heating equipment; president of company; [employs five workers].

Pair number	D.O.T. code	Membership	Age	Sex	Occupation and main duties
33	905	Member	44	Male	Truck driver; drives for a construction company hauling ready mix concrete.
	905	Nonmember	42	Male	Truck driver; owns dump truck; hauls road and building construction materials.
34	906	Member	29	Male	Truck driver; works for a lumber company hauling wood shavings; loads and unloads, drives truck.
	905	Nonmember	26	Male	Truck driver; owns truck; hauls road building material to construction sites.
35	906	Member	61	Male	Truck driver for farm cooperative; delivers heating oil and diesel fuel to co-op members.
	905	Nonmember	63	Male	Truck driver; hauls gravel and oil.

REFERENCES

Aldrich, H. Organizations in a hostile environment: A panel study of small businesses in three cities. (Doctoral dissertation, The University of Michigan) Ann Arbor, Mich.: University Microfilms, 1969. No. 70-4,026.

Andrews, F., Morgan, J., & Sonquist, J. Multiple classification analysis: A report on a computer program for multiple regression using categorical predictors. Ann Arbor, Mich.: Institute for Social Research, 1967.

Argyris, C. Personality and organization. New York: Harper, 1957.

Argyris, C. Individual actualization in complex organizations. Mental Hygiene, 1960, 44, 226-237.

Argyris, C. Integrating the individual and the organization. New York: Wiley, 1964.

Barrett, J. H. Integrating individual goals and organizational objectives. (Doctoral dissertation, The University of Michigan) Ann Arbor, Mich.: University Microfilms, 1970. No. 70-21,613.

Blauner, R. Alienation and freedom: The factory worker and his industry. Chicago: University of Chicago Press, 1964.

Bonjean, C. M. Mass, class, and the industrial community: A comparative analysis of managers, businessmen, and workers. American Journal of Sociology, 1966, 72, 149-162.

Bonjean, C. M., & Grimes, M. D. Bureaucracy and alienation: A dimensional approach. Social Forces, 1970, 48, 365-373.

Bradburn, N. M. The structure of psychological well-being. Chicago: Aldine, 1969.

Brayfield, A. H., & Crockett, W. H. Employee attitudes and employee performance. Psychological Bulletin, 1955, 52, 396-424.

Chinoy, E. Automobile workers and the American dream. Garden City, N.Y.: Doubleday, 1955.

Dalton, M. Men who manage: Fusions of feeling and theory in administration. New York: Wiley, 1959.

Engel, G. V. The effect of bureaucracy on the professional autonomy of the physician. (Doctoral dissertation, University of California, Los Angeles) Ann Arbor, Mich.: University Microfilms, 1968. No. 68-16,603.

Engel, G. V. Professional autonomy and bureaucratic organization. Administrative Science Quarterly, 1970, 15, 12-21.

Evans, S. H., & Anastasio, E. J. Misuse of analysis of covariance when treatment effect and covariate are confounded. Psychological Bulletin, 1968, 69 (4), 225-234.

Fine, S. A. Older workers in pursuit of new careers. In H. L. Sheppard (Ed.), Toward an industrial gerontology: An introduction to a new field of applied research and services. Cambridge, Mass.: Schenkman, 1970.

Gurin, G., Veroff, J., & Feld, S. Americans view their mental health. New York: Basic Books, 1960.

Hall, R. H. Bureaucracy and small organizations. Sociology and Social Research, 1963, 48, 38-46.

Herzberg, F., Mausner, B., & Snyderman, B. The motivation to work. (2nd ed.) New York: Wiley, 1959.

Hollander, E. D. The future of small business. New York: Praeger, 1967.

Hunt, P., Schupp, D., & Cobb, S. An automated self report technique. Behavioral Science, Nov., 1966, 11, 497.

Hunt, S., Singer, K., & Cobb, S. Components of depression. Archives of General Psychiatry, 1969, 16, 441-447.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. Organizational stress: Studies in role conflict and ambiguity. New York: Wiley, 1964.

Katz, F. E. Autonomy and organization: The limits of social control. New York: Random House, 1968.

Kish, L., & Hess, I. The Survey Research Center's national sample of dwellings. Ann Arbor, Mich.: Institute for Social Research, 1965.

Leveson, I. Some determinants of nonfarm self-employment. Monthly Labor Review, May, 1968, 11-15. (a)

Leveson, I. F. Nonfarm self-employment in the U.S. (Doctoral dissertation, Columbia University) Ann Arbor, Mich.: University Microfilms, 1968. No. 68-11,721. (b)

Lipman, R., Lovi, L., Rickles, K., Ulenhuth, E., & Lazer, R. Selected measures of change in outpatient drug evaluation. Paper read at A.C.N.P. meeting, San Juan, 1967.

Lipset, S. M. Political man. Garden City, New York: Doubleday, 1960.

Lipset, S. M., & Bendix, R. Social mobility in industrial society. Berkeley, Calif.: University of California Press, 1959.

Lord, F. M. A paradox in the interpretation of group comparisons. Psychological Bulletin, 1967, 68 (5), 304-305.

Lord, F. M. Statistical adjustments when comparing preexisting groups. Psychological Bulletin, 1969, 72 (5), 336-337.

Mayer, K. Small business as a social institution. Social Forces, 1947, 14, 332-349.

Merton, R. K. Social theory and social structure. (Rev. ed.) New York: Free Press, 1957.

Miller, D. R., & Swanson, G. E. The changing American parent: A study in the Detroit area. New York: Wiley, 1958.

Mills, C. W. White collar: The American middle classes. New York: Oxford University Press, 1951.

Morgan, J. N., Sirageldin, I., & Baerwaldt, N. Productive Americans: A study of how individuals contribute to economic progress. Ann Arbor, Mich.: Institute for Social Research, 1966.

Mueller, E. Technological advance in an expanding economy: Its impact on a cross-section of the labor force. Ann Arbor, Mich.: Institute for Social Research, 1969.

Murrell, K. F. H. Major problems of industrial gerontology. In H. L. Sheppard (Ed.), Toward an industrial gerontology: An introduction to a new field of applied research and services. Cambridge, Mass.: Schenkman, 1970.

Nelson, J. I. Anomie: Comparisons between the old and new middle class. American Journal of Sociology, 1968, 74, 184-192.

Nunnally, J. C. Psychometric theory. New York: McGraw-Hill, 1967.

Pelz, D. C., & Andrews, F. M. Scientists in organizations: Productive climates for research and development. New York: Wiley, 1966.

Phillips, J. D. The self-employed in the United States. Urbana, Ill.: University of Illinois, 1962.

Porter, L. W., & Lawler, E. L. Properties of organization structure in relation to job attitudes and job behavior. Psychological Bulletin, 1965, 64, 23-51.

Presthus, R. The organizational society: An analysis and a theory. New York: Vintage, 1962.

Reiss, A. J., Jr. Occupational mobility of professional workers. American Sociological Review, 1955, 20, 693-700.

Reiss, A. J., Jr. Occupations and social status. New York: Free Press, 1961.

Scott, W. R. Professionals in bureaucracies--Areas of conflict. In H. M. Vollmer, & D. L. Mills (Eds.), Professionalization. Englewood Cliffs, N.J.: Prentice-Hall, 1966. Pp. 265-275.

Smith, P. C., Kendall, L. M., & Hulin, C. L. The measurement of satisfaction in work and retirement: A strategy for the study of attitudes. Chicago: Rand McNally, 1969.

Sprott, D. A. Note on Evans and Anastasio on the analysis of covariance. Psychological Bulletin, 1970, 73 (4), 303-306.

Survey Research Center. Survey of working conditions, 1969: Final report on univariate and bivariate tables. Unpublished report to the Workplace Standards Administration, United States Department of Labor, December, 1970.

Trow, M. Small businessmen, political tolerance, and support for McCarthy. American Journal of Sociology, 1958, 64, 270-281.

Vollmer, H. M. Entrepreneurship and professional productivity among research scientists. In H. M. Vollmer, & D. L. Mills (Eds.), Professionalization. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

Vroom, V. H. Work and motivation. New York: Wiley, 1964.

Weber, M. The theory of social and economic organization. (Translated by A. M. Henderson and T. Parsons.) New York: Free Press, 1947.

Werts, C. E., & Linn, R. L. Lord's paradox: A generic problem. Psychological Bulletin, 1969, 72 (6), 423-425.

Whyte, W. H. The organization man. New York: Simon & Schuster, 1956.

Wicker, A. W. Attitudes versus action: The relationship of verbal and overt behavioral responses to attitude objects. Journal of Social Issues, 1969, 25, 41-78.

Wilensky, H. L. The professionalization of everyone? American Journal of Sociology, 1964, 70, 137-158.