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I am submitting herewith a dissertation written by James W. Wooten entitled "The Social Relations of Retirement Decision-Making." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Sociology.

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THE SOCIAL RELATIONS OF RETIREMENT DECISION-MAKING

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

James W. Wooten

June 1982

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ABSTRACT

This study is an investigation of the influence of class, as defined by position in the social relations of production, on retirement decision-making. The research reported here applies Marxist class categories and dual labor market theory to social gerontology. Data for the research consist of a national sample (N=1113), aged 35-59, collected by Richard Barfield and James Morgan (1969). The results suggest that class position is an important determinant of expected retirement income, current income, expected economic situation at 65 years of age, and health status--all of which are attributed significance by Barfield and Morgan in retirement decision-making. At the same time, class position is more consequential in predicting expected retirement age than each of these predictors. When class position is added to Barfield and Morgan's model of retirement decision-making, the explained variance (R^2) in expected retirement age is increased from 8.5 percent to 12.6 percent and from 9.0 percent to 16.2 percent in a 50-59 aged subsample. The research supports an effort to synthesize critical sociological theory and social gerontology.

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CHAPTER I

STATEMENT OF THE PROBLEM

Rites of passage are social mechanisms facilitating termination of specific behaviors and the emergence of new role expectations. Social scientists view rites of passage as symbols of an individual's movement from one phase of the life cycle to the next. For example, to indicate the transition to new statuses, modern society uses numerous ritualized ceremonies--graduations, engagements, and so on. Such status shifts usually serve as aids in anticipatory socialization, so that a person maintains continuity throughout the life cycle as role obligations increase.

An exception to this focus on rites and transitions is when one is socially defined as an aged person. The transition into the elderly role is ambiguous; since the transition is a gradual experience, formal rites of passage are virtually non-existent. Similarly, passage into retirement is a significant departure from most previous status transitions. Social gerontologists often refer to retirement as a "roleless role" (Burgess, 1960; Shanas, 1972) in order to describe the loss of status for the individual. Rather than introducing the person to increasing role obligations, retirement is a status without socially meaningful obligations. Moreover, the cultural realm in which retirement decision-making occurs is quite ambiguous.

To examine the dynamics of retirement and retirement decision-making, social gerontologists have generated a substantial body of

theoretical speculation: disengagement theory, various versions of activity theory, and continuity theory. Indeed, there are other perspectives, but these are of particular significance in the field of social gerontology.

Since its proposal by Cumming and Henry (1961), disengagement theory has sparked a lively debate (Maddox, 1964). The theory asserts that disengagement is an inevitable process; the individual and society mutually withdraw from one another, insuring personal happiness and harmony in the social system as power is transferred to younger generations in an orderly fashion. As a normative process, disengagement is beyond individual control. Machinery evolves to identify target groups to be disengaged and to equip people with behavioral guidelines during the disengagement process. For example, rules emerged during the 1940's establishing mandatory retirement. Further, the aged are commonly segregated into subcultures, which encourages the development of orientations consistent with their new status.

Activity theory, in contrast, argues that aging is a continuous struggle by the person to remain middle-aged. It assumes that the norms and criteria for success are identical for all age groups. Maximum adjustment to retirement requires substituting one role for another. Disengagement theory notwithstanding, a moderately active lifestyle contributes to a greater degree of life satisfaction, a higher self-concept, and personal adjustment (Havighurst, et al., 1969; Palmore, 1970). During retirement, individuals should pursue substitutes for those satisfactions once associated with employment (Friedmann and Havighurst, 1954).

Continuity theory emphasizes a developmental approach focusing on the continuity between phases in the life cycle as well as the transitions from one stage to another (Bennett, 1970; Neugarten, 1972; Gubrium, 1974; Dowd, 1975). The aging process is analyzed by examining the interrelationships among psychological changes, habits, social supports for the maintenance of continuity, and actual experience. There is no sharp discontinuity of personal adjustment with age but actually an increasing consistency. Adaptation to the aging process is expressed in a variety of ways which integrate past coping styles with present environmental circumstances.

Each of these perspectives accurately portrays certain aspects of the aging process in general and the culture of retirement decision-making in particular.

Two criticisms can be made. First, these models share an interactionist bias which tends to treat all members of a category--in this case the aged--as though they are identical. This is a tenuous assumption because the aged are not a homogeneous aggregate; in fact, many of the social forces differentiating people during earlier periods of the life cycle continue, although altered somewhat, in the later stages of life as well. But equally damaging is the social gerontologists' central problematic: developing strategies to aid the elderly's adjustment to retirement. As a consequence of this "human services" orientation they have tended to neglect the social mechanisms which diminish the degree of control people have in retirement decision-making. Both of these limitations can be attributed in some degree to a shared functionalist mode of thought (disengagement and activity theories

embrace sociological functionalism while continuity theory is steeped in both sociological and psychological functionalism), which emphasizes stability and equilibrium (Parsons, 1972; Dehrendorf, 1958; Mills, 1959, Gouldner, 1970; Bottomore, 1974).

Aspects of all three of the theoretical perspectives are reflected in the most important and widely cited study of retirement decision-making, that of Barfield and Morgan (1969). The primary focus of their research is the isolation of salient factors in the decision to retire voluntarily. They delve into such areas as recreational patterns (activity and continuity theories), health status (disengagement theory), and economic supports for middle-aged life styles during retirement (activity and continuity theories). Their findings suggest that financial factors--especially expected retirement income--are of primary importance in the retirement decision. But Barfield and Morgan's analysis explains only a small fraction of the variance in expected retirement age, about 4 percent with expected retirement income alone and approximately 8 percent with their entire set of predictors. Consequently, it is surprising that they make many unqualified assertions about retirement decision-making based on such a low coefficient of determination. Barfield and Morgan thrust upon us an impressive amount of empirical wizardry. Moreover, in their strict adherence to the traditional models of social gerontology they fail to provide a framework which substantially increases our understanding of the processes involved in retirement decision-making. Surprisingly, they fail to investigate the impact of class variables.

Objectives of the Research

The purpose of this research is to tease out from Barfield and Morgan's data a full explanation of retirement decision-making.[1] The major thrust of this reexamination is the analysis of the effects of class location--position in the social relations of production--on retirement decision-making. Recent research (Wright and Perrone, 1977; Wright, 1978a; Koo and Hong, 1980; Kalleberg and Griffin, 1980) indicates the usefulness of class position as a predictor of income and job satisfaction. Possibly Barfield and Morgan's set of predictors are subsumed by one's position in the social relations of production.

Such a theoretical and empirical focus views economic and attitudinal predictors as intervening variables between class position and retirement decision-making. Hence, the immediate objectives of this research are:

1. To investigate the relationships between class position and other variables (expected retirement income, current income, expected economic situation at 65 years of age, occupational status, health status, sex, race, age, and education) in retirement decision-making.
2. To compare, using Barfield and Morgan's data, the adequacy of their model of retirement decision-making with one emphasizing class position.

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[1]The data utilized in this research were made available by the Inter-university Consortium for Political and Social Research. The data were originally collected by Richard Barfield and James Morgan under a grant from the Social and Rehabilitation Service and the Social

These objectives reflect the author's criticism of social gerontology's neglect of the social and economic forces which rend the aged population. The operationalization of class position used here incorporates the emphasis placed by Marx on the social nature of the productive process which, it is argued here, sets the parameters within which retirement decision-making takes place.

If the perspective guiding this research is a tenable one--that is, retirement decision-making is indeed affected by class position--we can legitimately speculate as to the nature of the social relations of retirement decision-making. This calls forth a third, more ambiguous objective, which relates to the central problematic of social gerontology. Although it is beyond the scope of this research to attempt a re-orientation of the discipline, it is hoped that the work presented here will awaken gerontologists and critical theorists to one another.

There is little consensus among sociologists as to what "critical" analysis involves. The term will be used here in an inclusive manner (cf. Bottomore, 1968). Critical analysis refers to any sociology which is critical of society and which attempts to establish the relationship between consciousness and social structure. All theory is implicitly embedded in systems of values. Critical theory is somewhat unique in that its value structure is explicitly stated. Critical analysis is an effort to use sociological analysis for

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Security Administration, U.S. Department of Health, Education, and Welfare. Neither the original collectors of the data nor the Consortium bear any responsibility for the analyses or interpretations presented here.

personal and social liberation. Rather than facilitating the aged's adaptation to circumstances which might be inimical to their welfare, the problematic of a critical social gerontology is identification and mitigation of structures which impinge upon a person's self-actualization and autonomy in social relations. But critical theory is unabashedly anti-empirical. To be sure, the ends to which critical theory directs itself cannot be empirically legitimated, no value system can be. Nevertheless, it is unnecessary to ignore, indeed vehemently "criticize" efforts to generate testable hypotheses. The empirical examination of the relationship between social structure and consciousness should be one component of critical theory's advocacy role. Surprisingly, critical theorists have not been advocates of the aged, nor have they spoken directly to the lack of personal autonomy in retirement decision-making.

Overview of the Research

In Chapter II Barfield and Morgan's findings are examined in detail. Other research is also discussed which both support and qualify their interpretations. Chapter III centers on methodological issues, particularly the measurement of class position. Multiple regression techniques are used to analyze the data in Chapter IV. A summary of the research findings is presented in Chapter V with a discussion of their possible theoretical implications and relevance to contemporary and future retirement patterns.

CHAPTER II

REVIEW OF THE LITERATURE

Retirement involves withdrawing from an occupational role and accepting the role of retired person. At one time social gerontologists agreed that both situational and attitudinal variables affect retirement decision-making, and that each exerts an equal influence in the decision-making process. But in their study of early retirement decision-making,[2] Barfield and Morgan argue that financial factors--primarily expected retirement pension income--are the most salient. Attitudinal variables display little influence, although they operate in expected directions. Table 1 is a summary of Barfield and Morgan's findings.

Clearly, economic considerations weigh heavily in the retirement decision. With respect to expected retirement income, Barfield and Morgan insist that a "threshold" level of retirement income--about $4,000 per year in 1966--exists which most people feel is necessary to insure an adequate post-retirement life style. The $4,000 figure is not an absolute one; in fact. since 1966 the "threshold" has shifted upward in response to inflation and rising standards of living. Other economic dimensions of retirement--number of dependents at expected retirement age and expected income from assets during retirement--are also substantial considerations in retirement plans.

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[2]Throughout this study, "early" is defined as "before age 65."

TABLE 1

PREDICTORS BY THEIR IMPORTANCE IN EXPLAINING PLANS FOR EARLY RETIREMENT: BARFIELD AND MORGAN ANALYSIS[a]

Predictor	Importance in Regression (Beta Squares)	Direction of (Net) Effect on Plans to Retire Before Age 65
Expected retirement pension income	.035	+ with increasing income
Other economic variables	.025	+ with more favorable position
Health status	.012	- with better health
Leisure activities	.007	+ with activities to pursue
Work orientation	.006	- with low emphasis on number of hours worked
Job satisfaction	.005	- with increasing satisfaction
Age	.005	- with increasing age
Current family income	.004	No discernible direction
Sex	.001	- for males
Race	.001	+ for Black/Latin Americans

[a]For 1,652 respondents in the labor force, age 35-59.

Another situational variable, the individual's health status, is significantly related to retirement plans; persons viewing their health as deteriorating are more likely to opt for retirement before age 65. Other situational variables, according to Barfield and Morgan, exert relatively little impact on plans for early retirement.

They report that persons who look forward to pursuing recreational activities--hobbies, sports, travel, etc.--are more likely to express plans for early retirement as well. Commitment to the "work ethic" is an ambiguous feature of retirement decision-making, but people who express dissatisfaction with their jobs are more responsive to early retirement. In addition, age is negatively correlated with early retirement plans. Barfield and Morgan's research also shows that people are somewhat responsive to perceived pressures from employers, unions, and colleagues concerning retirement. Surprisingly, family income, occupation, education, or whether the person occupies a supervisory job role display no systematic association with retirement plans.

In the following pages an examination will be made of what the social gerontological literature reveals about the impact of these variables on retirement decision-making.

Expected Retirement Economic Situation

Barfield and Morgan insist that the economic situation individuals expect during retirement is the most important influence on early retirement plans. Those who expect an advantageous financial

situation are more likely to express plans for early retirement. Other researchers (McGoldrick, 1978; Quinn, 1978) report similar findings. Expected retirement economic situation reflects pension and annuities income, the number of dependents expected at age 65, the potential of post-retirement work, and housing probabilities.

An examination of consumption patterns among the aged may be useful to understand the priority people give to economic considerations in retirement decision-making. Goldstein (1960), in a study of consumer expenditures among the elderly, reports that the 75-plus age category is in a precarious situation. Table 2 shows the expenditures per household by age and annual income of the head in the United States for 1960.

Goldstein's work is significant for the comparison it provides between persons aged 45-54 earning $5,000 per year with those 75 and over with an annual income of $1,000; over half of those in the 45-54 cohort had incomes of $5,000 or more in 1960 while the income of the vast majority of those 75 and over was around $1,000 (Atchley, 1977).[3]

In food expenditures, for example, the younger household with a larger income has a budget showing a 275 percent increase over the older household with a much lower income. Notice that the increase in food expenditures is even more dramatic (about 315 percent) between income levels in the 75 and over cohort. Consequently, most people can

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[3]This income ratio between the age groups held relatively constant until the early 1970's (Social Security Administration, 1972); consequently, Goldstein's data illustrate a situation which defined the aged's economic status during the time Barfield and Morgan collected their data.

TABLE 2

ANNUAL EXPENDITURES PER HOUSEHOLD BY AGE AND INCOME: UNITED STATES, 1960

Item	Age 45-54		Age 75 Plus	
	$1,000 Income	$5,000+ Income	$1,000 Income	$5,000+ Income
Food	$311	$1,460	$389	$1,615
Housing	224	755	316	750
Household operations	43	215	54	235
Furnishings	46	340	26	295
Clothing	81	615	41	560
Transportation	89	665	38	565
Medical care	73	245	73	370
Personal care	20	115	17	100
Recreation	27	280	21	290
Miscellaneous	85	310	25	220

Source: Adapted from S. Goldstein, Consumption Patterns of the Aged (Philadelphia: University of Pennsylvania Press, 1960), p. 118.

expect reduced nutrition levels with increasing age and potential health problems due to malnutrition.

Regarding health care, expenditures within income groups are more consistent than within age groups. For example, the health care expenditure in the $1,000 income group is $73 across age groups; however, the figure rises from $245 to $370 with increasing age in the higher income level. Since health problems increase as people get older, most of the elderly cannot afford the medical attention they require. It is important to note that neither Medicare nor Medicaid pay for preventive health care.

With respect to other life style indicators--disposable income for housing, household operations and furnishings, clothing, transportation, and so on--the average older family unit is in a much less envious position than its younger counterpart. Goldstein's data clearly reveal a situation in which age corresponds to a decline in financial status (Atchley, 1977).

Obviously, persons contemplating retirement are concerned with the impact diminished income will have on their lifestyle as retirees. Financial security determines, to a significant degree, the range of options available to people during retirement. As noted above, most older people are relatively poor. In 1973, among households in the United States, families with an annual income below $6,000, or individuals earning less than $3,000 per year, were in the lowest fifth of the population economically. The median income level for nearly all categories of the aged is far below that of the nation as a whole. For the entire elderly cohort, 60 percent live in poverty (Atchley, 1977).

Attempts to estimate the income requirements of the aged are dangerous since their requirements vary like those in the population as a whole. But Henle (1972) attempts to do so, calculating that elderly couples with no dependents must have a retirement income that is 75 percent of their pre-retirement income if they are to maintain their middle-aged life style. He notes, however, that about 80 percent of the older population rely solely on Social Security as an income source and that Social Security replaces only 45 percent of pre-retirement income for couples and only 30 percent for individuals. And even for the 20 percent of the aged who receive both Social Security and other pension incomes the replacement level rarely reaches 75 percent. Inflation erodes the purchasing power of all pension benefits forcing many people who do not have other income sources to delay retirement (Gamlin, 1976; Atchley, 1977; Gelb and Hunt, 1979; Yaffe, 1979; Simon, 1979; Ehrenberg, 1979; Dunhill, 1979; Holt, 1979).[4]

Retirement pensions generally fall within two categories: public pensions open to all workers and administered by the federal government, and private pensions administered by employers, unions, or

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[4]Interestingly, Mauch (1979) insists that inflation encourages early retirement. He argues that workers are disillusioned with the work ethic in the United States with its underlying principle that hard work will lead to financial success. For example, an individual making $20,000 per year and receiving an 8 percent wage increase to $21,600 a year will, after taxes and inflation, experience a net loss of $47. Mauch reasons that working under conditions of a negative initiative encourages early retirement. At the beginning of 1962, only 16.3 percent of the retired workers collecting Social Security retired before age 65. Yet in the midst of ending mandatory retirement in 1976, the percent of the workers who took early retirement rose to 56.5.

other organizations to their employees or members. Social Security is a public pension program. To qualify, a person must work on a covered job for a minimum of ten years and be at least 62 years of age. A spouse benefit allows retired couples 150 percent of the entitlement normally extended to individuals. By 1968, nearly all occupations--including self-employed jobs--were covered (Atchley, 1977).

In 1967, the average annual Social Security pension was $1,915.80 for married couples, $1,233.84 for single men, and $969.96 for single females (Social Security Administration, 1972). When one considers that 80 percent of retired Americans receive Social Security as their only source of income, it is obvious that these income levels were unable to provide the elderly with adequate resources by 1966 living standards.

Only 10 percent of the Social Security recipients also collect public assistance payments, even though government estimates suggest that 66 percent of those receiving only Social Security benefits live on incomes less than the minimum established by the federal government (United States Department of Health, Education, and Welfare, 1975). The failure of many eligible older people to claim public assistance may stem from a strong adherence to the ethic of individual responsibility. Public assistance is often viewed as an affront to their self-respect and evidence of their growing sense of dependency.

Many older people receive only the minimum Social Security benefit. Minimum benefits reflect work histories in that benefits are linked to earnings, employment stability, and seniority. The factors which produce minimum benefits also inhibit the accumulation of other

income sources to augment Social Security. An examination of Barfield and Morgan's data reveals an association between current income and expected retirement pension income (see Table 3).

Private pensions are designed to supplement Social Security benefits. During the fifties, private pension plans proliferated, due primarily to court rulings that pensions were legitimate issues for collective bargaining. Since 1960, however, there has been a slowdown in the growth of coverage. Noncovered workers are employed primarily in small businesses, most of which are non-union (Schulz, 1970).

Twenty percent of the retired households in 1967 received dual pensions--a Social Security pension and some type of private pension benefit. The average annual benefit was about $4,300 for married couples, $2,700 for single men, and $2,300 for single women (Atchley, 1977). These figures are above the level necessary to meet minimum requirements by 1967 living standards. But dual pension incomes are concentrated among well-paying occupations. The higher pre-retirement earnings make a second pension feasible since these jobs tend to be concentrated among occupations covered by private pension plans. They also result in higher Social Security benefits than for those who rely on Social Security alone. Persons covered by dual pensions tend to retire early (Atchley, 1976; Quinn, 1977; Rones, 1978).

For most people, however, inadequate income is the major problem associated with retirement (Holt, 1979). Retirement generally diminishes economic security since income is usually about half what it was prior to retirement. And income is not the only negative dimension

TABLE 3

ASSOCIATION (IN PERCENT) BETWEEN CURRENT FAMILY INCOME AND EXPECTED RETIREMENT PENSION INCOME: BARFIELD AND MORGAN ANALYSIS[a]

	Expected Pension and Annuity Income During Retirement							
Total Family Income	Less Than $1,000	$1,000-1,999	$2,000-2,999	$3,000-3,999	$4,000-4,999	$5,000-7,499	$7,500-9,999	$10,000 or More
Less than $3,000	49	25	3	1	1	*	-	-
$3,000-4,999	19	32	18	5	2	3	-	-
$5,000-7,499	8	19	29	26	19	13	8	2
$7,500-9,999	16	10	21	30	35	19	13	7
$10,000-14,999	5	9	17	27	31	37	42	27
$15,000 or more	3	5	12	11	12	28	37	64
Total	100	100	100	100	100	100	100	100

[a]For 1,652 respondents in the labor force, age 35 to 59.

*Less than 0.5 percent.

of the retirement experience; feelings of economic deprivation increase as well (Riley and Foner, 1968).

Retired people want to remain independent. Clark and Anderson (1967:425) state:

> The most unequivocal finding to come out of our social analysis of this sample is the singularity of the subjects in it. This singularity is interpretated by these subjects in many ways: it is autonomy prized as befitting "a good, upstanding American"; or it is shrinking from others for fear of rejection, or an invasion into sacred privacy for purposes of manipulation or the offering of unwanted "charity."

Financial independence is a necessary condition for maximizing the options available to the retiree. Lack of adequate retirement income is the most frequent factor forcing older people to be dependent.

To supplement retirement income and enhance adjustment, some people embark upon post-retirement careers. The potential for post-retirement employment encourages early retirement. Streib and Schneider (1971), in a longitudinal study of retirement, suggest that only 10 percent of retirees ever return to some type of salaried job. Several factors encourage re-entry into the labor force, but the greatest incentive for re-entry is inadequate retirement income. However, the economy is usually open only to those retirants who possess valued knowledge and/or skills.[5] The greatest opportunity to seek post-retirement employment is among the self-employed (Simon, 1979) and

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[5]The discrepancy between the desire to work after retirement and the capacity to do so is revealed by comparing Keene and Kazinetz's (1979) findings with those of Streib and Schneider. Only 10 percent of the retirees are able to find employment, but Keen and Kazinetz report that 51 percent of current employees would like to continue part-time work beyond the normal retirement age, and that 46 percent of the current retirees would like to find some type of employment.

executives, the latter group often used by employers as part-time consultants (Walker, 1975, 1976; Meuter, 1977; Rothschild and Salwen, 1980).

And so, virtually every facet of the retirement experience affecting retirement decision-making emerges from the person's expected retirement economic situation.

Health Status

Barfield and Morgan report that health is an important factor influencing the individual's decision to retire early. Relatively poor health seems to encourage early retirement plans, although they consider its impact to be somewhat erratic.

It is difficult to define health. Health and illness are relative states. In considering the interaction between age and health the evaluation of health status becomes even more problematic, since the elderly's health is more of a composite profile than that of younger people. When younger people become ill it is usually a result of external factors and infectious disease. But with increasing age the sources of poor health become essentially endemic (Wilder, 1971).

The health problems of the aged are chronic, long-term conditions such as diabetes, heart disease, and paralysis, that involve a number of bodily functions. These conditions tend to increase vulnerability rather than protective resistance.

Whenever older people are suffering from an illness of any type they are more likely to experience major restrictions on their activity than younger people. The incidence of chronic conditions increases

with age. During a two-year period, almost half (46 percent) of the elderly, as opposed to 11.4 percent for all other age groups, experienced limitations on their daily activities (Wilder, 1974).

According to Palmore (1964), poor health is the major reason which workers cite for voluntary retirement. In a nationwide study of early retirement policies in 180 companies during 1968, Manion (1972) reports that by far the most frequent reason given for voluntary retirement is poor health. Others (Quinn, 1977, 1978; Gelb and Hunt, 1979; Burkhauser, 1979) report less conclusive results.

Until recently, researchers felt that health was the most important factor in retirement decision-making. However, as retirement benefits have increased across the board, the salience of health is probably reduced somewhat. For example, Pollman (1971) examines the relationship between early retirement and health when an adequate retirement income is guaranteed. His data are derived from auto workers who retired in 1965 with retirement incomes of approximately $400 per month. Respondents ranked several motives in terms of their impact on retirement decision-making: inability to get along with fellow workers or supervisory personnel, desire for more leisure time, retirement income, job satisfaction, and health. The percentage of these former auto workers citing each factor as the primary reason for early retirement is as follows: adequate retirement income, 47.34 percent; poor health, 24.49 percent; desire for more leisure time, 19.49 percent; job dissatisfaction, 5.52 percent; and dislike for boss and fellow workers, 3.16 percent.

Pollman's research shows health to be an important factor in retirement decision-making, but certainly not the major reason. Only a fourth of the respondents cite poor health as their primary reason while almost 70 percent retire early because they anticipate financial security or because they desire more leisure time. Poor health is only a minor consideration when retirement income is expected to be adequate.

Rones (1978) concurs, suggesting that between the ages of 60 and 65 work-limiting health problems interact with the availability of Social Security and other retirement income sources to greatly affect the retirement decision. Rone's research supports Barfield and Morgan's contention that health is only a secondary consideration to the person's economic situation in retirement decision-making.

Leisure Activities

From their data, Barfield and Morgan conclude that persons who make provisions for leisure-time pursuits are more likely to plan an early retirement. In fact, their findings indicate most people do not expect a radical change from ordinary activities in their later years; a majority of the subjects express plans to continue their leisure-time activities after retirement. Similar findings are reported by Manion (1972).

But Barfield and Morgan fail to consider that leisure activities are conditioned by demographic, social, and personality variables. To begin with, Simpson, Back, and McKinney (1966) and Oliver (1971) suggest that patterns of leisure time participation developed in middle-age and

supported by jobs persist into the retirement years. They compare the work histories and leisure activities of retired males from upper-white-collar, middle-status, and semiskilled occupations. Simpson and her research team contend that if leisure activities are not developed prior to retirement they will probably never be initiated. For example, about 33 percent of the retired population increase their leisure-time activities and only about 20 percent experience a decrease.

The effect of occupation and the role of financial security in providing supports for the development of leisure-time pursuits can not be dismissed. Upper-white-collar people internalize occupational norms and an occupational culture oriented around symbols. Middle-status employees tend to develop skills easily transferred to leisure-time social situations because their work is people-centered and directed toward specific tasks and situations. Semiskilled workers develop pursuits oriented predominantly around things (Atchley, 1977). Like their upper-white-collar counterparts, semiskilled individuals also create occupational norms, but not because they have an inherent commitment to their jobs--semiskilled workers are not trained for anything other than job-related activities.

Miller (1965) argues that occupational identity pervades all other areas of an individual's life. All roles, including leisure roles, are mediated by the person's occupational identity and the type of social interaction generated within a given occupational culture. Miller maintains that in Western societies people are socialized to select occupational roles above all others as a source of identity.

Simpson, Back, and McKinney report that middle-status workers display the most continuity in life-style from pre-retirement to post-retirement. This implies that interpersonal skills learned by middle-status workers contribute to the development of leisure roles during middle-age which persist into the retirement years more than the symbol and thing orientations generated in upper-white-collar and semiskilled occupations, respectively.

From these findings, it appears the pursuit of leisure activities in retirement is more a function of the skills learned on the job rather than the internalization of any "work ethic." To be sure, this view may characterize earlier generations of the elderly in the United States, or even segments of the contemporary aged population. But Atchley (1971) and Thompson (1973) provide evidence that leisure roles during retirement are increasingly defined by society and retirees alike as legitimate behavior. Pfeiffer and Davis (1971) show that among middle-aged and elderly people at least 80 percent of each age group express satisfaction with their leisure-time or desire even more. Middle-status workers and retirees seem to be on the cutting-edge of this emerging legitimacy of leisure roles.

Cottrell and Atchley's (1969) research is relevant here. Their data indicate that the institutionalization of retirement is generating an attitude in which work is viewed as a temporary part of life. Other studies (Atchley, 1971; Atchley and Seltzer, 1971) examine the tendency of coworkers from the same age cohort to establish friendships on the job that persist into retirement. These studies reveal that the

tendency is particularly evident among middle-status workers. Consequently, a retired group of friends evolves whose relationships are based on roles outside the occupational role.

For the semiskilled person, the issue concerning the older person's competency in leisure roles raised by Miller (1965) may assume priority over questions of legitimacy. There is some evidence (Pfeiffer and Davis, 1971) to suggest semiskilled and less educated retirees are hesitant to engage in certain leisure activities because they feel incompetent in such roles; hence, the inability to perform can be a debilitating fear affecting their retirement decision-making.

Work Attitudes

Barfield and Morgan suggest that attitudes toward work in general and the individual's job in particular affect retirement plans, but only minimally. Workers who rank "working hours are short, lots of free time" last in a set of occupational criteria are more likely to delay retirement. The other criteria of occupational preference from which subjects could select were: "the work is important, gives a feeling of accomplishment"; "income is steady"; "there is no danger of being fired or unemployed"; "chances for advancement are good"; and "income is high." Furthermore, persons who express dissatisfaction with their present employment are more likely to plan early retirement. These workers, especially factory employees, desire retirement as soon as it becomes economically feasible.

The informal norms of the work situation influence retirement

decision-making. Most professionals tend to resist retirement in part because of their colleagues' attitudes. Historically, professionals view retirement negatively, probably because of their intense internalization of occupational norms (Simpson, Bach, and McKinney, 1966). Retirement research among executives in the 1970s, for example, presents a similar picture. Tavernier (1978) reports that an increasing number of managers are realizing that, in the later stages of their careers, job pressures are becoming too much for them. Some companies in Europe and the United States are experimenting with demoting "burned-out" executives to lower-level jobs at reduced pay. Tavernier's research indicates that a large proportion of older managers prefer demotion to early retirement.[6] Assembly-line workers, on the other hand, are less likely to glean their identity from the job and see work as an end in itself.

Age

In their research, Barfield and Morgan report a negative association between age and plans for early retirement. They attribute this finding to several potential factors. The difference between age

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[6]Other recent research depicts the retirement attitudes of executives as more ambiguous. Walker (1975) notes that 75 percent of the executive retirements between 1970 and 1975 took place before age 65. There are indications that the age level has been dropping. Most of these retirements occurred under informal programs designed to encourage early executive retirement. Approaches used in these programs include consulting arrangements, discretionary pension supplements, and cash termination benefits. Most large companies provide pension plans which include unreduced benefits before age 65 for executives.

cohorts may reflect genuine inter-generational shifts in attitudes concerning retirement, whether retirement seems less attractive as one ages, or whether from the perspective of younger people age 60 is still far away and does not seem "early."

A more plausible idea is that plans to retire early may be viewed as a reflection of the belief that the two purposes of earning income--to provide for consumption requirements and to prepare for retirement--can be attained by working thirty or forty years. When one considers that surveys (Katona, 1964) show such optimism to be more pronounced among young people, the negative correlation between age and early retirement plans can be understood. And, as Table 4 shows, the proportion of an age cohort planning early retirement is associated with the amount of expected retirement income, which is also negatively correlated with age.

Generally speaking, the older the person, the lower the Social Security pension. This is because little has been done to adjust for increases in real income since 1935, although cost-of-living increases have been used to counteract inflation. But the average pension of new recipients aged 65 in 1970 was approximately $1,772 compared to $1,073 for those aged 95 and over (Atchley, 1977). Consequently, it may be that the retirement income once felt to be adequate during a person's middle years is eroded and insufficient by the time he or she approaches retirement age. Once again, financial considerations are of paramount importance in the retirement decision.

TABLE 4

ASSOCIATION (IN PERCENT) BETWEEN AGE, EXPECTED RETIREMENT PENSION INCOME, AND PLANS FOR EARLY RETIREMENT: BARFIELD AND MORGAN ANALYSIS[a]

Age of Respondent	Expected Pension and Annuity Income During Retirement								Planning Early Retirement
	Less Than $1,000	$1,000-1,999	$2,000-2,999	$3,000-3,999	$4,000-4,999	$5,000-7,499	$7,500-9,999	$10,000 or More	
35-44	19	28	39	43	44	47	52	59	41
45-49	16	20	20	23	23	23	23	24	36
50-54	30	23	21	20	18	19	20	13	31
55-59	35	29	20	14	15	11	5	4	28
Total	100	100	100	100	100	100	100	100	100

[a]For 1,652 respondents in the labor force, age 35 to 59.

Other Variables

Three other variables--current income, sex, and race--are reported by Barfield and Morgan to show little impact on retirement plans.

The proportion of individuals expressing plans for early retirement does not vary in any systematic manner from income group to income group within the current family income predictor. It may be that current income is subsumed by the expected retirement pension income predictor (see Table 3, page 17, for the relationship between income and expected retirement pension income).

Similarly, the importance of sex is minimal, though women are slightly more apt to plan early retirement. This finding holds in spite of the fact that the proportion of females over 65 who experience chronic conditions is less than that for males (Wilder, 1971); that women receive substantially less Social Security benefits (Lauriat, 1970); and that poverty in old age is more pervasive among women than among men, especially in comparing widows to widowers (Lopata, 1973).

Blacks are more likely to plan for early retirement according to Barfield and Morgan. This is contrary to a social situation confronting most blacks that works against such a tendency. The Social Security benefits of blacks, both men and women, averaged $250 per year below that of whites in the 1970s. Blacks consistently receive benefits about $20 per month lower than the pensions for whites in the same category (Social Security Administration, 1972). Moreover, all aged blacks do not receive Social Security benefits. This is because

blacks are concentrated in noncovered jobs and because of their interrupted participation in and early withdrawal from the labor force. Among workers who collect Social Security benefits, 66 percent of the black men and almost 90 percent of the black women are located in the lowest economic category characterized by low previous earnings from which benefit levels are calculated. (These people do not receive second pensions either.) The comparable rates for white men and women are 33 percent and 66 percent, respectively (Thompson. 1974).

Aged blacks, however, do not appear to experience discontinuities in their lives to the same extent as their white counterparts. Some analysts feel that those who do survive as long as 70 years might be in better health than similarly aged whites. And family ties are an especially strong source of social support for elderly blacks; in fact, black families accord their older members more esteem than is the case in the general population (Jackson, 1972).

Summary

The literature reviewed here basically supports Barfield and Morgan's analysis and conclusions. Economic considerations pervade all dimensions of the retirement decision as people glean from the current group of retirees some clue as to what they might expect from retirement. What is lacking, however, is a theoretical explanation capable of drawing these diverse findings into some "meaningful" pattern.

CHAPTER III

RESEARCH STRATEGY

In this chapter, a research strategy designed to achieve the objectives presented in Chapter I will be outlined, a strategy which simultaneously uses sophisticated statistical techniques yet does not sacrifice theoretical considerations by embracing "abstracted empiricism." Our focus, then, is on generating testable hypotheses about retirement decision-making. To do so necessitates a thorough operationalization of the primary explanatory variable--class position, or position in the social relations of production--so as to avoid an atheoretical analysis like that of Barfield and Morgan.

The chapter begins with an analysis of Marx's class theory. There follows a presentation of contemporary developments in class theory, particularly highlighting the cleavage between sociology as practiced in the United States and critical sociology. Nico Poulantzas' and Erik Olin Wright's contributions are examined as excellent examples of critical class theory. Finally, a class model based primarily on a modification of Wright's schema will be constructed, but borrowing from Poulantzas as well, to operationalize class position for this study.

To conclude the chapter, the measurement of other variables will be discussed, data collection procedures will be described, and research hypotheses will be presented.

Marx's Mode of Class Analysis

Class is a salient feature in Marx's sociological analysis.[7] Probably the most famous quotation from Marx is found in the Communist Manifesto: "All history of all hitherto existing societies is the history of class struggle." In Marx's work, classes are the basic unit of social organization, perpetually engaged in conflict reflecting their opposing interests generated by the capitalist market. His view of past, and indeed future, societies embraces a revolutionary thesis; the central dynamic of history is the inevitable tendency toward the classless society.

Capitalism, with its unique blend of private property and division of labor, creates relations of domination and subordination, class formation, and class struggles in ever more overt patterns. The regime carries within itself the seeds of its own destruction. Marx and Engels (1959:18) argue:

> The development of modern industry, therefore, cuts from under its feet the very foundation on which the bourgeoisie produces and appropriates products. What the bourgeoisie therefore produces, above all, are its own gravediggers. Its fall and the victory of the proletariat are equally inevitable.

Capitalism provides impetus for the development of man's talents and abilities, but in the process alienates the producer from the means of

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[7] In summarizing Marx's class theory, the author has benefited from the work of Bottomore (1966), Aron (1968), McLellan (1971), and Giddens (1973). There are other good sources on Marx's conception of class as well, but these are excellent for their concise and lucid explication of the subtleties in Marx's thought.

self-esteem. Marx and Engels (1959:256) maintain that:

> This "estrangement" can, of course, be abolished given only two practical premises. For it to become an "intolerable" power, against which men make a revolution, it must necessarily have rendered the great mass of humanity "propertyless" and produced, at the same time, the contradiction of an existing world of wealth and culture, both of which conditions presuppose a great increase in productive power, and high degree of its development. And, on the other hand, this development of productive forces is absolutely necessary as a practical premise: first, for the reason that without it only want is made general, and with want the struggle for necessities and all the old filthy business would necessarily be reproduced; and second, because only with this universal development of productive forces is a universal intercourse between men established which produces in all nations simultaneously the phenomenon of the "propertyless" mass (universal competition), makes each nation dependent on the revolutions of the others, and finally has put world-historical, empirically universal individuals in place of local ones . . .

The classless society provides man his ultimate potential for freedom and autonomy. Classes, like the state, are only temporary dimensions of a decaying capitalist society beset by its own contradictions; each will disintegrate with the approaching proleterian revolution.

But Marx does not provide a systematic analysis of class, only sometimes contradictory glimpses into his thinking about this crucial subject. The closest he comes to a detailed presentation is an incomplete passage at the end of Capital. Here Marx identifies three large classes endemic to capitalist society: capitalists, landowners, and wage earners, who are supported by profit from their capital, ground rent from their property, and wages from their labor power, respectively.

In the Communist Manifesto, however, Marx uses a two class model--the bourgeoisie and proleteriat--to describe the eventual simplification of capitalist society's class structure. Here the

criterion he establishes for defining class location is one's relationship to the means of production. The bourgeoisie are owners of the means of production and employers of wage labor. The proleteriat, on the other hand, do not own the means of production and are forced to sell their labor power for a wage. He portrays the two-class, or abstract, model as a conflict situation. In a capitalistic society, classes tend to polarize; society breaks up into two hostile classes--the proletariat and the bourgeoisie. As the process of polarization between the classes increases the dialectic becomes blatant. The proletariat is pauperized and wealth is concentrated in the bourgeoisie minority. The gap in resources controlled by each class widens. Eventually a proletarian revolution terminates the existing social relations and a new society emerges with the formally oppressed class in power (Giddens, 1973).

Marx also refers to intermediate classes. To begin with, while pointing to England as an example of capitalist society in its most developed form, Marx admits that, empirically, classes do not appear in their pure form. The middle and intermediate strata obliterate class boundaries; eventually, however, they will be subsumed by the bourgeoisie and proletariat. For example, in the Communist Manifesto, he argues that the petty bourgeoisie and peasants will merge into the bourgeoisie and proletariat, depending on how many workers they employ or how much land they own. Elsewhere, Marx sees the emergence of a new middle class, standing between the bourgeoisie and proletariat, as the forces of production develop and as service industries proliferate. Farm

laborers are still another intermediate class, in this case located between the proleteriat and peasants.[8]

Sometimes Marx analyzes class without reference to a group's relationship to the means of production. In The German Ideology, intellectuals are an "ideological class," representatives and spokesmen for the bourgeoisie. And in the Communist Manifesto, small tradespeople and shopkeepers are a "lower middle class." The lumpenproletariat is another class, composed of criminals and vagabonds, with no historically significant role to play. Finally, in one passage Marx says that finance capitalists and industrial capitalists form two mutually exclusive classes.

Hence, one can glean from Marx's writings at least twelve classes and intermediate strata: the bourgeoisie, finance and industrial capitalists, land-owners, petty bourgeoisie, peasants, urban industrial workers (proletariat), farm laborers, intellectuals, a new middle class, a lower middle class, and the lumpenproletariat. The existence of these groups seems, at first glance, to cast doubt on the utility of a two class model.[9] To further complicate matters, his use of the term "class" is often inconsistent.

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[8]In Marx's analysis, the proletariat usually refers only to industrial workers. Although the basic two class model is used by Marx to analyze rural areas, and even though peasants share many interests with urban workers, he is unwilling to classify them with the urban proletariat since he views peasants as basically a politically reactionary group.

[9]Giddens (1973) notes that Marx uses the two class model in his polemical writings in an effort to build support for political action against the capitalist system. In his sociological investigations,

Actually, Marx employs the two class models rarely. In referring to middle classes, intermediate strata, and class fractions, he is attempting to understand a dynamic society, one in which many social groups disappear while others come on the scene as a result of new contradictions between the developing forces of production and various configurations the social relations of production may assume. As the forces of production develop, the petty bourgeoisie and peasants will gradually wither away, and other classes--the new middle class, for instance--will emerge to perform an important historical role. Nevertheless, Marx continues to predict that as capitalism advances and class struggle intensifies, the class structure will simplify as intermediate classes undergo proletarianization--the intermediate strata begin to disappear as an increasing proportion of its members are absorbed by the proletariat.

But Marx also has a subjective dimension in his definition of class. To be a class, a group must become conscious of itself as such, it must recognize its historical role to be played out in the class struggle, and it must also develop a hostile attitude toward other classes and their interests. In short, the group evolves from a "class-in-itself" to a "class-for-itself":

> In so far as millions of families live under economic conditions of existence that separate their mode of life, their interests and their culture from those of other classes

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however, one can see that Marx recognizes the ambiguity of social reality and the difficulty it presents for an analysis of class relations.

> and put them in hostile opposition to the latter, they form a class. In so far as there is merely a local interconnection among those . . . peasants and the identity of their interests begets no community, no national bond, and no political organization among them, they do not form a class. They are consequently incapable of enforcing their class interests in their own name . . . (quoted in McLellan, 1971:156).

He usually uses this subjective definition of class only in his political writings, however. Here, a class must be politically mobilized in order to pursue its interests through class struggle. This leads Marx to sometimes doubt whether even capitalists form a class, since during the nineteenth century capitalists were pitted against one another in a competitive struggle imposed by the "tyranny of the market." He also complains that the proletariat does not yet constitute a class because workers compete for jobs. The effect of this competition is to deflect their hostility from other groups; consequently, the struggle between proletariat and bourgeoisie is not on the political level. And, as an example of what is often viewed as Marx's inconsistency, McLellan (1971) points out that in the same work he says the proletariat is already a class in opposition to capital, but not yet a "class-for-itself."

Such ambiguity probably gives us the best glimpse into Marx's thinking about class. The proletariat is a class as far as its role in the productive process is concerned, but in terms of realizing its historical potential as a political force the group is not a class. The distinction between a "class-in-itself" and a "class-for-itself" is an important one, representing the economic base and the political sphere of action, respectively. In his more sociological works,

Marx's tendency is to abandon the subjective criteria for establishing class.

As we have seen, Marx identifies many classes and intermediate strata, and depending on his intent uses different criteria to define class. But the criterion he uses most commonly is that which is the primary concern here: relationship to the means of production--ownership vs. nonownership and purchase vs. selling of labor power--as the defining characteristics of classes engaged in the productive process.

Measuring Class: Alternative Approaches

Most of the significant contributions to contemporary class theory are found in the critical literature. The European influence is marked. It is often difficult for sociologists in the American tradition to even conceive classes as discrete entities, since class boundaries in American society are viewed as vague, weak, blurred, and transitory.

American sociologists do not see social stratification in terms of class boundaries and relationships. Although the United States exhibits a considerable amount of social stratification, most sociologists argue that inequalities for the most part assume the form of relatively continuous hierarchies of power, privilege, and prestige, all containing innumerable status gradations. American sociologists, then, have been somewhat suspicious of the utility of class as a concept, have misused it by identifying class with stratification strata

or status groups, or have even denied its usefulness for sociological analysis in any form (Pease et al., 1970; Solzman and Gamberg, 1973).

Until recently, sociologists have presumed the importance of comparisons between "traditional" and "modern" society as expressed by such abstract typologies as feudalism vs. capitalism, Gemeinschaft vs. Gesellschaft, or mechanical vs. organic solidarity. The application of these typologies is guided by an assumption that the most economically developed society presents an image of the evolution of other societies. Thus, the United States, as the most technologically mature society is the "type case" toward which other societies will move. The direction of this evolution is toward the presumed disappearance of classes as discrete entities.

In conjunction with a cultural bias which fosters a somewhat individualistic orientation, as opposed to a structural emphasis, in American sociology (cf. Mayhew, 1980), assumptions of "methodological individualism" (Lukes, 1975) are to be found at the root of American sociologists' rather careless treatment of the class concept. Supported by a misreading of Weber, class is often treated as synonymous with strata, comprised of individuals sharing similar resources and rewards. This perspective views strata as hierarchically arranged sets based on societal definitions of differential value. There is, however, no concensus as to which acquired characteristic (class, status, or power as the misinterpretation of Weber deduces) should be the basis of stratification theory. Runciman (1968) argues that a three-dimensional framework is unnecessary since there is a closeness of fit

between the three dimensions in both preindustrial and industrial societies. Blau and Duncan (1967) concur and consider occupational hierarchy as the underlying dimension of stratification. Consequently, the Duncan SEI, founded on occupational prestige ratings, yields a graded hierarchy of occupational ranks. The use of the Duncan SEI and similar measures characterizes most stratification research by American sociologists. Its methodological sophistication is apparent, but its theoretical poverty in terms of class theory has only recently been discussed (Horan, 1978).

This occupational stratification position mirrors a "post-capitalist" view of social development. It argues that although classes were basic to nineteenth century capitalism, they are no longer relevant today because of a tendency toward pluralism. The "post-capitalist" view posits the irrelevance of class in contemporary society for two reasons. The first is obsolescence of property and the rise of managerialism as the laws of power in the modern corporation. The significance of the managerial revolution, however, is debatable. Giddens (1973) notes that the background of the vast majority of executives, whether propertied or propertyless, derives from a narrow background of economic privilege. Also, the improved mobility chances since 1900 have been reserved primarily for the middle class, while opportunities for working class individuals to enter into elite positions have actually diminished. The notion of knowledge as power is debatable. It says little about who controls knowledge, how, or why. Weber, for example, notes that the "functional indispensability" of the expert gives him no more power today than was the case in preindustrial

societies when monarchs relied on experts to maintain their rule. Secondly, the "post-capitalist" view asserts that political power has become detached from property through the growth of parties and the extension of citizenship rights. However, such an assertion is an assumption which is not entirely verified.

What emerges is a view that class and class analysis are of declining relevance (Nisbet, 1959; Faris, 1960). This perspective reached its apogee in the fifties when scientists advanced a social theory that assumed the obsolescence and irrelevance of ideological political debate; the theory hailed the "end-of-ideology" (the key statements of prominent advocates, e.g., Daniel Bell and S. M. Lipset, are reprinted in Waxman, 1968).

The end-of-ideology thesis involves two basic premises. The first asserts the absence of ideological politics in the United States. It is, of course, not surprising that the United States has reached this end-stage if there has almost never been an ideological tone in American politics. The second premise involves the value-judgement noted earlier, that is, that the United States has reached, or is at least well on its way to reaching, the good society, and ideology can only function to hinder that process.

The end-of-ideology means the end of class struggle, the modification of advanced capitalism by welfare legislation, redistributist taxation, the consolidation of powerful unions, Keynesian full employment policies, and the acceptance of these features of welfare capitalism by all political parties--right and left. In short, the end-of-ideology thesis contends that the agent of social change no

longer resides in class struggle; rather, it is to be found in the silent successes of managerial expertise (Waxman, 1968).

The state of class theory, as is to be expected, is quite different among critical theorists, who engage in open debate concerning the nature and measurement of classes in capitalist society. The debate ensues because Marx's theory of class draws heavily on observations of the proletariat, the class par excellence. In nineteenth century Europe the proletariat was excluded from direct political power, lived in poor circumstances, and was the perfect example of an oppressed class. In contemporary society, however, the proletariat does not conform to these distinctive criteria. The debate among critical theorists as to the boundaries of the working class reflects the ambiguity of social reality.

For example, Poulantzas (1973) includes only non-supervisory manual workers in the working class. By this definition the working class is quite small, about 20 percent of the labor force in the United States. Wright (1976) locates about 50 percent of the labor force in the working class by noting that the class is composed of all employees who are not "semi-autonomous" or do not have supervisory roles.[10]

Poulantzas places primary importance on the productive process as the determining factor of class position, but he also considers "political" and "ideological" variables. The major emphasis is on productive and unproductive labor in the productive process. Thus,

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[10]See Goertzel (1979) for an informative review of these and other critical perspectives on class in contemporary capitalist societies.

Poulantzas identifies three sectors of production: a production sector which includes industries which produce or transport commodities; a circulation sector which sells, distributes goods, or processes money; and a reproduction sector which is not directly involved with goods or money but maintains or reproduces the social system (government, education, communication, etc.). Poulantzas also distinguishes among employers, self-employed, and employees. Managers are placed into the capitalist class even though technically they are employees.

Ideology, for Poulantzas, provides further distinctions. Ideology is the knowledge available to a group as a result of a class's position in the productive system. The key "ideological" cleavage is between manual and non-manual workers. Non-manual workers have the knowledge which affords them a degree of autonomy and authority over manual workers. The significant "political" element is positional authority or lack thereof.

Methodological problems arise in Poulantzas' analysis because he fails to provide explicit rules for applying the economic, political, and ideological variables. One is left to common-sense. Classification problems arise when engineers and technicians are considered, although Poulantzas divorces these individuals from the working class because of their knowledge. In his seminal work on neo-Marxist class theory, Wright (1976) rejects Poulantzas' distinction between productive and unproductive labor on the grounds that non-productive workers, because they are exploited by the social relations of capitalist production, have an interest in establishing a socialist alternative.

The basis of Wright's analysis is control; specifically, the social relations of capitalist production generate three intrinsically interlinked dimensions:

1. Social relations of control over the flow of monetary resources, i.e., control over the capital accumulation process.
2. Social relations of control over the physical means of production.
3. Social relations of control over the labor of others, i.e., control over supervision and evaluation within the productive process.

These systems of exploitative control form an internally structured unity.

According to Wright, the social relations of control produce three basic classes in the United States: capitalist, petty bourgeoisie, and proletariat. The traditional capitalist class is placed at the highest level on each dimension of control while the working class is at the bottom.[11]

At the highest level of abstraction--the mode of production--the class structure contains a perfect polarization on all three dimensions

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[11]The concept of class used here is a relational one and should be contrasted to gradational notions. In gradational notions, classes differ in the degree of various attributes such as income, status, education, and wealth. This is the approach used by American sociologists which was discussed earlier in this chapter. The names of classes thus express purely quantitative locations: upper class, upper middle class, middle class, and so on. Relational notions view classes within systems of domination/subordination (see Wright, 1978b).

of the social relations of production. Capitalists and workers constitute the only classes. On a more concrete level, however, other classes enter into the picture. As noted earlier, Marx certainly recognizes this in his analysis of intermediate strata. For example, no concrete capitalist society is characterized by the pure capitalist mode of production. Petty bourgeoisie individuals have always engaged in simple commodity production--production for the market by self-employed producers who do not employ workers--which continues to be viable in contemporary capitalism. In addition, the class structure is complicated because the three dimensions of control do not coincide perfectly in actual units of production.

A substantial portion of the labor force does not fall into these classes, but rather into "contradictory" locations within the system of class relations. Here again, three groups can be identified:

1. managers and supervisors who do not own the means of production and are thereby excluded from formal control, but who do exert a degree of real control over the productive process;
2. small employees who derive part of their income from the exploitation of labor--although they are unable to accumulate capital--and part from their own labor; and
3. semi-autonomous employees, professionals, or craftsmen whose knowledge confers a degree of autonomy in the productive process similar to that of the petty bourgeoisie, yet like the working class they are employed and dominated by capital.

These contradictory class locations are not, says Wright, intermediate strata or middle classes. They are contradictory in the sense of being located simultaneously in two classes, thus sharing the basic interests of both classes. Of course, these interests often are inconsistent with one another.

From this framework, Wright calculates that 40-50 percent of the work force is located in the working class, about 2 percent in the capitalist class, and approximately 48 percent in the petty bourgeoisie and contradictory class locations. Figure 1 is a schematic representation of Wright's class structure model.

Measurement of Class: Some Theoretical Modifications

Poulantzas' and Wright's contributions sharpen our understanding of the intricacies demonstrated by modern class systems in capitalist society. To be sure, their work highlights the superficial theoretical quality of American class theory.

Poulantzas' work is highly complex. It is so subtle and ambiguous that it becomes empirically unwieldy. His work enables us to glean the uniqueness of each concrete historical situation, but does not aid in the construction of an empirical agenda from which to derive testable hypothesis (Goertzel, 1979).

Wright's model, on the other hand, is straightforward. It is a quantifiable model, yet complex enough to incorporate most important theoretical distinctions in the literature. One strength Wright demonstrates is an appreciation for the complexity of contemporary social reality while preserving Marx's objective criteria for defining

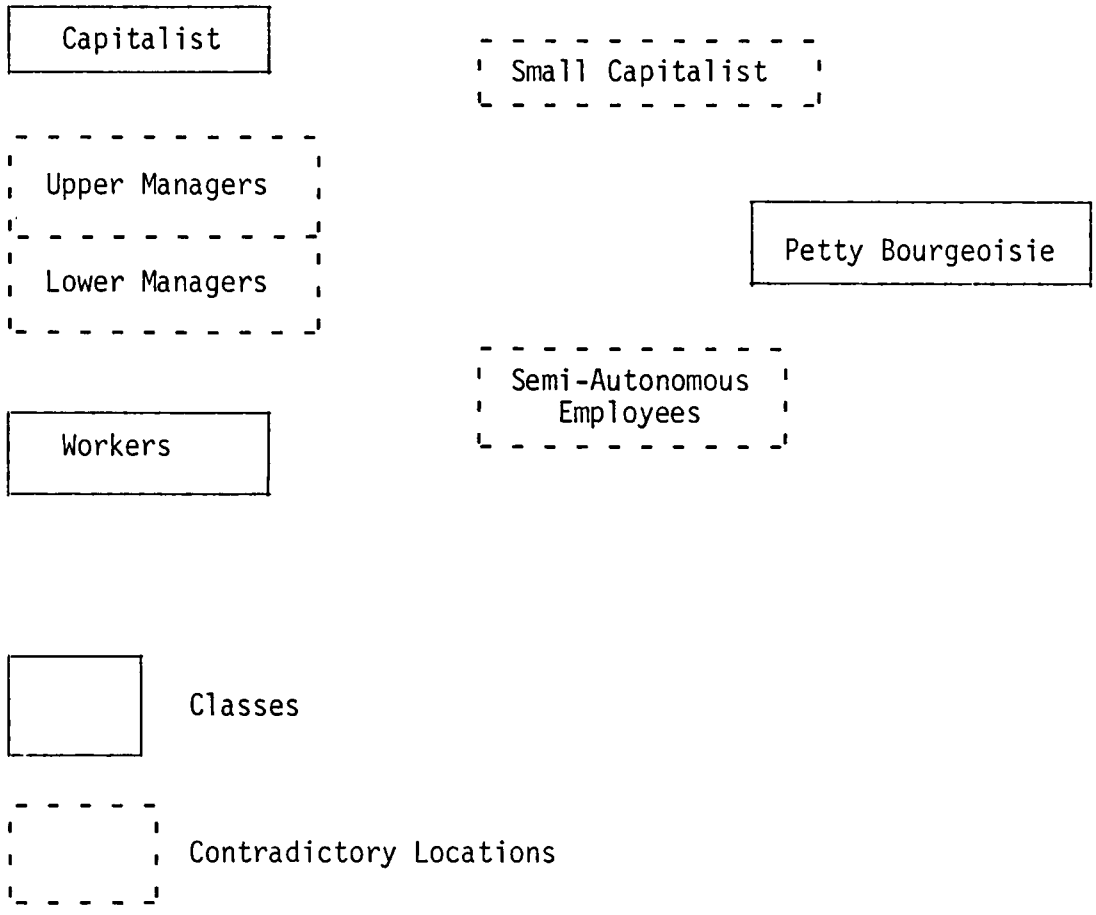


Figure 1. Wright's Class Model.

class. His triad of control relations is an empirical rather than definitional statement of how classes are generated. The contradictory class locations show an awareness of the dynamics of advanced capitalist production in that he is willing to disregard Marx's polemical statements about the simplification of class structures. At the same time, however, these contradictory categories enable us to grasp the fragmentation of classes in modern capitalist societies.

However, there is one glaring omission in Wright's work. From Figure 1 we observe that he intends to illustrate the segmentation of capitalist social relations: traditional capitalists are distinguished from small employers, upper management from lower-level supervisors, and semi-autonomous employees from the working class. But he dismisses the differentiation in the working class itself. Such an over-simplification is unnecessary and certainly inconsistent with his basic thrust. Poulantzas' distinction between manual and non-manual workers is at least a recognition of this segmentation. But the manual vs. non-manual distinction is not consistent with Wright's emphasis on control. However, we must retain the control triad and further take into account the manner in which the working class is fragmented by dual industrial and labor market structures.

Recently, a large body of literature in economics and other social sciences has begun to discuss how labor markets tend to become segmented.[12] The labor market consists of institutions structuring the

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[12]This literature includes theories of dual economy, dual labor markets, and labor market segmentation. Common to all these approaches

purchase and sale of labor power. As such, the labor market thesis coincides with the argument that classes emerge from the exploitative social relations of production, and is also consistent with Wright's control theme in that institutions mediate the relationship between employers and employees on the one hand and relations among workers on the other. Wright (1978b) notes that control must be understood in terms of the social relations of control. Control is not an attribute of a position per se, nor does it express a relationship to a thing such as money, but it does describe the relationships of domination and subordination between positions. For example, one position within the social relations of production involves control over the use of the physical means of production while another position is excluded from such control. The dual economy thesis is useful because labor markets affect the relationship between capitalists and workers in the sense that the appropriation of surplus value is facilitated and because workers obtain differential market capacities (in a sense control probabilities) from their occupancy in certain industrial and labor market structures.

Labor market segmentation occurs when the labor market, responding to changes in capitalist economies, separates into distinct

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is the thesis that the industrial structure is divided into distinct sectors in which firms and employees operate according to divergent rules. Piore (1975) and Spilerman (1977) come from the dial labor market perspective, analyzing markets and labor force segmentation on the basis of the unique characteristics of labor markets. Here, our perspective is similar to that of Averitt (1968), Bluestone (1973) and Beck et al. (1978), in which labor market characteristics are viewed as products of the dual industrial structure emerging from the nature of monopoly capitalism and not as their defining characteristics. For an excellent review of this literature see Cain (1976).

submarkets characterized by different behavioral rules. A dualistic industrial structure and labor market reverses forces dominant during the nineteenth century which created the common work experiences in the working class; work experience is increasingly segmented, defined by differentiation rather than homogenization.

Monopoly capitalism generates a core industrial sector which taps a "primary" labor market, and a peripheral competitive industrial sector dependent on a "secondary" labor market for its employees. Bluestone (1973) notes that beyond the fringes of the core economy is a set of industries concentrated in agriculture, nondurable manufacturing, retail trade, and subprofessional services. These peripheral industries are notable because their character is directly opposite that of the core sector. Peripheral industries are distinguished by their small size, labor intensity, low profits, low productivity, intensive market competition, lack of unionization, and low wages. The distinction between core and periphery sectors is not synonymous with the classification of industries as either goods-producing or service-producing. The two classifications cross-cut one another.

The primary labor market generated by the core sector is characterized by occupations with a high rate of economic returns, employment security, and career mobility. Secondary markets in the peripheral sector, on the other hand, are characterized by an absence of these conditions. Historically, the differentiation between primary and secondary markets followed skill lines within the working class with skilled workers enjoying the benefits of the primary market. But

with the tendency for industry, especially those in the core sector, to negotiate long-term contracts with powerful unions, the distinction between primary and secondary labor markets now cuts across skill divisions. Bluestone (1973), for example, notes that industrial structure and other "demand side" variables have greater explanatory power than educational level or other "supply side" variables in predicting income levels.

The restrictiveness of primary labor markets acts as a "sheltering mechanism" for workers in the core sector. Friedman (1977) suggests that market shelters provide workers with employment stability, protection against risk, and high earnings and fringe benefits. Shelters typically restrict entrance into core sector jobs through control by powerful unions. Wright's dimensions of control are compatible with the "sheltering mechanism" concept. The primary labor market created by the core sector's need for stable labor relations provides core workers considerable control through collective bargaining and action (Friedman, 1977). Here, union membership and other sheltering mechanisms define the worker's job as a form of property, elevating his or her market capacity well above that possible for similar jobs in the peripheral industrial sector. Consequently, the working class is segmented into dual labor markets which correspond to industrial sectors. The individual's occupancy in either the core or peripheral sector is the relevant variable for our purposes.

Operationalizing Class Relations

In operationalizing class position, only an approximation of Wright's trilogy of control can be made. Barfield and Morgan's data do contain information which makes it possible to roughly operationalize position in the social relations of production. Table 5 indicates the criteria used in this operationalization. Nevertheless, it is necessary to make some comments on these criteria.

Employers

Wright theoretically distinguishes between traditional capitalists and small capitalists on the basis of how many workers each employs; small capitalists employ less than ten workers. Empirically, however, he has never been able to maintain this distinction because of data limitations. This study is faced with a similar problem. Barfield and Morgan's data do not provide information on the number of workers employed, nor do they ascertain directly if workers are employed at all. Consequently, a strategy similar to Wright's will be followed, negating the distinction between capitalists and small capitalists and referring simply to employers. Nevertheless, the core-periphery distinction is maintained with respect to the working class because the data provide information to do so.

To precisely measure the social relations of control over the capital accumulation process is impossible with the data available. A rough approximation, however, is possible to glean from the question: "Do you work for someone else, or yourself, or what?" This information

TABLE 5

OPERATIONAL CRITERIA FOR CLASS LOCATIONS

	Self-employed	Have Subordinate[a]	Autonomy on Job[b]	Job Located in a Core Industry
Capitalist	yes	yes		
Petty bourgeoisie	yes	no		
Managers/Supervisors				
Upper level	no	yes		
Lower level	no	yes		
Semi-autonomous employees	no	no	yes	
Workers				
Core sector	no	no	no	yes
Periphery sector	no	no	no	no

[a]All teachers are classified as nonsupervisors regardless of their response to this criterion (see footnote 27 for further explanation). The Dictionary of Occupational Titles codes occupations in terms of their relationship to people (see text for further explanations).

[b]The Dictionary of Occupational Titles codes occupations in terms of their relationship to data and things (see text for further explanations).

does not reflect the size of an enterprise, nor the extent to which labor power is purchased and exploited. Only ownership of the means of production emerges as a criteria for class location from this information.

An indirect measure of the dimensions of control over the physical means of production and labor power is derived by logically combining the ownership information with that derived from the question: "Do you supervise other people?" These operationalizations of the control dimensions obviously contain difficulties; however, it is a characteristic problem associated with most secondary analyses.

Petite Bourgeoisie

By definition, the petite bourgeoisie own the means of production (self-employed) but do not buy and exploit labor. The second criteria, as noted above, is measured indirectly by logical derivation. Members of the petite bourgeoisie do not supervise other people; for example, owners of "mom and pop" establishments and independent professionals and craftsmen.

Semi-autonomous Employees

Wright intends this contradictory class location to include people whose jobs allow them to retain a degree of control over the labor process, particularly over what they produce. Their jobs provide considerable freedom and autonomous decision-making capacity. One question on the interview schedule taps this dimension of control: "Do you organize your own work, vary its pace, or is it all determined

by a production line or crew that has to keep together?" Unfortunately, this question was used on only a small portion (about 35 percent) of the interviews.

To overcome this problem, The Dictionary of Occupational Titles is used. The dictionary codes occupations in terms of their relationship to data and to things in the following manner:

(a) relationship to things:

0. setting up;
1. precision working;
2. operating-controlling;
3. driving-operating;
4. manipulating;
5. tending;
6. feeding-offbearing;
7. handling;
8. no significant relationship to things.

(b) Relationship to data:

0. synthesizing;
1. coordinating;
2. analyzing;
3. compiling;
4. computing;
5. copying;
6. comparing;
7. no significant relationship to data.

Only those relationships which are occupationally relevant in

terms of the requirements of the job are reflected in these codes. Incidental relationships which all workers have to data and things, but which do not significantly affect successful performance of essential responsibilities, are not reflected.

Therefore, to operationalize the dimension of control and autonomy on the job, an occupation which scores 0-2 on data and 0-2 or 8 on things, or which scores 0-2 on things and 7 on data, is classified as a "complex" occupation. Semi-autonomous employees, then, are those nonsupervisory, nonself-employed individuals whose occupation is classified as having a complex relation to data and things by The Dictionary of Occupational Titles job classification scheme.

Managers/Supervisors

This contradictory location in the social relations of production is operationalized by the question: "Do you supervise other people?" (Managers and supervisors do not own the means of production nor are they self-employed.) To be sure, this is an extremely ambiguous operationalization of the control dimensions associated with supervisory capacity. It also creates a problem as to the classification of persons with only nominal supervisory capacity and no genuine authority.[13] This will result in some misclassification; unfortunately, it is unavoidable with the available data.

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[13]One such example is teachers. It is unrealistic to consider teachers as performers of meaningful supervisory functions since they only direct students. Therefore, teachers are classified in the semi-autonomous class. This may result in misclassification of those teachers who also perform meaningful administrative tasks. However, it

To distinguish upper-level managers from lower-level managers, the occupational classifications from The Dictionary of Occupational Titles are used again. The dictionary codes occupations in terms of their relationship to people in the following way:

0. mentoring;
1. negotiating;
2. instructing;
3. supervising;
4. diverting;
5. persuading;
6. speaking-signaling;
7. serving;
8. taking instructions-helping;
9. no relationship to people.

Supervisors whose occupation scores 0-1 on relationship to people and are also classified as professional, technical, managerial, or official are upper-level managers. Lower-level managers are supervisors whose occupation scores 2-9 on relationship to people except for those classified as laborer, or operative.

Workers

These people are excluded from all control dimensions in the social relations of production; they are not self-employed, nor are their jobs supervisory in nature or ones characterized by freedom and

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seems that this strategy will best minimize measurement error (see Wright (1978a; 1978b).

decision-making as to what is produced. Operationally, then, workers are all nonsupervisory employees whose occupations are scored 3-6 on data or 3-7 on things by The Dictionary of Occupational Titles.

To operationalize the core-periphery dichotomy among workers, Beck's (1978) sectoral classification is used. His schema is presented in Table 6. Such devices have proven to be useful in explaining income differentials by sex and race (Averitt, 1968).

Industries in the core sector are those which display "high levels of capital intensity, unionization, large assets, high profit margins, product diversification, and market concentration" while peripheral sector industries exhibit characteristics attributed to competitive capitalism such as "small firm size, seasonal and other variations in product supply and demand, labor intensity, weak unionization, and low assets" (Beck, 1978:709). This yields a sectoral classification similar, though not identical, to those constructed by Bibb and Form (1977) and Hodson (1977).[14]

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[14]There is consensus among these schemes on the majority of the industry classifications. Disagreement centers on the following industries: printing, publishing, and allied industries; wholesale trade; finance, insurance, and real estate; professional and related services; and miscellaneous durable manufacturing. Beck (1978) classifies the first four of these clusters in the core sector while Bibb and Form and Hodson allocate them to the peripheral sector. It seems to the writer, however, that Beck's classification is superior. Indeed, the printing and publishing industries were well on their way toward oligopoly in the late 1960s, wholesale trade also displayed tendencies toward capital intensity, professions have always exerted control over supply and prices of services, and the finance industry is certainly a salient member of the core sector since it serves as managers and brokers of capital.

TABLE 6

BECK'S (1978) SECTORAL CLASSIFICATIONS

Industry Group	Classification
Agriculture, forestry and fisheries	Periphery
Mining	
Metal mining	Core
Coal mining	Core
Crude petroleum and natural gas	Core
Nonmetallic mining and quarrying	Core
Construction	Core
Durable manufacturing	
Lumber and wood products	Periphery
Furniture and fixtures	Periphery
Stone, clay, and glass products	Core
Metal industries	Core
Machinery, except electrical	Core
Electrical machinery, equipment, supplies	Core
Transportation equipment	Core
Professional and photographic equipment	Core
Ordnance	Core
Miscellaneous durable manufacturing	Periphery
Nondurable manufacturing	
Food and kindred products	Periphery
Tobacco manufacturers	Periphery
Textile mill products	Periphery
Apparel and other fabricated textiles	Periphery
Paper and allied products	Core
Printing, publishing and allied industries	Core
Chemicals and allied products	Core
Petroleum and coal products	Core
Rubber and miscellaneous plastic products	Core
Leather and leather products	Periphery
Not specified nondurable manufacturing	Periphery

TABLE 6 (Continued)

Industry Group	Classification
Transportation	
Railroads and railway express service	Core
Street railways and bus lines	Core
Taxicab service	Core
Trucking service	Core
Warehousing and storage	Core
Water transportation	Core
Air transportation	Core
Petroleum and gasoline pipelines	Core
Services incidental to transportation	Core
Communications	
Radio broadcasting and television	Core
Telephone (wire and radio)	Core
Telegraph (wire and radio)	Core
Utilities and sanitary services	
Electric light and power	Core
Gas, steam and supply systems	Core
Electric-gas utilities	Core
Water supply	Core
Sanitation services	Core
Other not specified utilities	Core
Wholesale trade	Core
Retail trade	Periphery
Finance, insurance, and real estate	Core
Business and repair services	Periphery
Personal services	Periphery
Entertainment and recreation services	Periphery
Professional and related services	Core
Public administration	Core

Source: Adapted from E. Beck, "Stratification in a dual economy: a sectoral model of earnings determination." American Sociological Review 43:720, 1978.

These operationalizations of position in the social relations of production are certainly less than ideal. Data limitations keep us from maintaining a distinction between capitalists and small capitalists. Similar restrictions make the operationalization of the managerial contradictory location too inclusive. And the sectoral classification--although it has proven useful in empirical research--is not empirically derived, rather, it is conceptually deduced. Consequently, these measurements provide only a general impression of the class structure. But it will certainly not encourage unfounded conclusions as to the relationship between class position and retirement decision-making, especially when comparing an explanation emphasizing position in the social relations of production to that of Barfield and Morgan.

Operationalizing Other Variables

Expected retirement income includes government and private pensions, plus any annuities (including rents, interest, dividends, etc.) anticipated by the individual. Respondents were asked to provide a global estimate; if they were unable to give such an estimate an amount was assigned based on estimates of others in similar occupational, educational, and social groupings. Barfield and Morgan measure and code the variable as follows:

0. less than $1,000;
1. $1,000-1,999;
2. $2,000-2,999;
3. $3,000-3,999;

4. $4,000-4,999;
5. $5,000-5,999;
6. $6,000-7,499;
7. $7,500-9,999;
8. $10,000-14,999;
9. $15,000 and over.

But a better way to measure expected retirement income is to use raw scores so that a true interval level of measurement is achieved. The data set do in fact contain such information. Why Barfield and Morgan opt for an ordinal level of measurement is unknown; however, the raw scores to measure expected retirement income will be used in this study.

To measure expected economic situation at 65 years of age, an index (maximum value of 4) is constructed in the following manner:

1 point for having no dependents other than a spouse after age 59;

1 point for expecting to receive $500 or more per year from post-retirement work;

1 point for having an imputed retirement income from assets of $1,000 or more per year;

1 point for having no mortgage payments to make after age 60.

Strictly speaking this, and other variables to be discussed, is not an interval variable, although treating it as such does not violate common research practices in sociology, nor will it affect any substantive conclusions.

The individual's health status is measured by an index, ranging from 0 to 5, constructed as the sum of:

2 points for feeling better now than several years ago;

1 point for having missed at most a few workdays because of illness during the last five years;

1 point for not having a work-limiting disability;

1 point for having missed no work because of illness in 1965.

Expectations to pursue leisure activities in retirement are measured as a dummy variable; those respondents who expressed plans to continue recreational activities or to increase their activities are coded 1, all other responses are given a value of 0.

During the interviews, respondents were given a list of criteria corresponding to preferences concerning job attractiveness. This variable is designed to tap the person's orientation to work in general, not just his or her current job. Respondents who ranked "working hours are short, lots of free time" last are assigned a value of 1, all other responses are coded 0.

To measure the respondent's satisfaction with his or her current work, each person was asked to evaluate his or her job according to these categories (coded as follows):

1. enjoy work very much;
2. enjoy work (with qualifications);
3. neutral;
4. dislike work (with qualifications);
5. dislike work very much;
8. don't know;
9. not ascertained.

The respondent's age is measured and coded as follows:

1. age 35 to 44;
2. age 45 to 49;
3. age 50 to 54;
4. age 55 to 59.

Current family annual income, like expected retirement pension income, is not measured as an interval variable. To do so, however, requires some modifications in the manner in which Barfield and Morgan measure income. They operationalize and code income in the following way:

0. less than $1,000;
1. $1,000-1,999;
2. $2,000-2,999;
3. $3,000-3,999;
4. $4,000-4,999;
5. $5,000-7,499;
6. $7,500-9,999;
7. $10,000-14,999;
8. $15,000 and over;
9. not ascertained.

Certainly, this procedure is valid and does allow one to use the variable in some fairly sophisticated statistical techniques. An alternate way to measure income which is commonly used in sociological research is to calculate the midpoint of each category above and treat it as a raw score in the following fashion:

Less than $1,000 equals $500;

$1,000-1,999 equals $1,500;

$2,000-2,999 equals $2,500;

$3,000-3,999 equals $3,500;

$4,000-4,999 equals $4,500;

$5,000-7,499 equals $6,250;

$7,500-9,999 equals $8,750;

$10,000-14,999 equals $12,500;

$15,000 and over equals $17,500;

not ascertained equals 0.

Two points should be made about this measurement. The first is that all respondents for which an income could not be ascertained are excluded from any analysis using this variable, a practice which is consistent with custom and validity. Secondly, since Barfield and Morgan do not provide a maximum figure for the eighth category it is necessary to impose one. To maintain continuity with categories six and seven, $20,000 has been selected for this study. This is not an ideal operationalization of income, but it is superior to Barfield and Morgan's. For example, it will allow income and expected retirement income to be used simultaneously in some of the analyses to follow. Also, any distortion caused by this arbitrary figure will serve only to make the distinction between employers and managers, on the one hand, and core and peripheral workers, on the other, less blatant than may actually be the case.

The respondent's sex is measured and coded as follows: 1 - Male, 2 - Female, and 9 - Not Ascertained.

Race is measured as a dummy variable with the following codes: 1 - Black or Latin American, 0 - All Other Responses.

Two variables not considered by Barfield and Morgan are included in this study: occupational status and level of education. These variables are used as controls in the analysis to follow since both are commonly employed by sociologists as determinants of class (see discussion in an earlier section of this chapter). By including occupational status and educational attainment we will increase our confidence that indeed position in the social relations of production has an independent effect on retirement decision-making.

Occupational status is measured by the Standard Duncan SEI scores.

Education is operationalized by a quasi-credential scale in which:

1. 0-5 grades;
2. 6-8 grades;
3. 9-11 grades;
4. 12 grades; completed high school;
5. completed high school plus other non-college training;
6. college, no degree (includes junior colleges);
7. college, bachelor's degree;
8. college, advanced or professional degree;
9. not ascertained.

In their analysis, Barfield and Morgan use a dichotomous variable to measure the dependent variable, expected retirement age, with respondents who planned to retire before age 65 separated from those

who expressed other plans. But there are problems of unreliability and insufficient variance associated with using dummy variables as the dependent variable in regression analysis. As noted in Chapter I, Barfield and Morgan's analysis of expressed retirement plans explains a relatively small proportion of the dichotomous variable, about 4 percent with expected retirement pension income alone and about 8 percent with the entire set of predictors.

To avoid these problems, the respondent's projected retirement age is measured using their raw scores. Thus, an interval level of measurement is attained that is superior to the dummy variable measurement Barfield and Morgan use.[15] Of course, in any analyses to follow which compare Barfield and Morgan's model of retirement decision-making with one emphasizing position in the social relations of production, the interval level measurement of expected retirement age is used.

The Sample

Data for this study were collected in two surveys during 1966; the January-February annual Survey of Consumers and the August consumer attitudes survey, two of several surveys conducted on a regular basis

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[15]For an excellent discussion of the need to maximize variance in the dependent variable, see Kerlinger (1973). Horton (1978) presents a useful analysis of the hazards encountered when dummy variables are used as dependent variables in regression. Why Barfield and Morgan elect to use a dummy variable to measure expected retirement age when the raw scores are in the data set is a mystery. In any event, using the raw scores is a better methodological strategy, and it does increase the R^2 of their analysis from 8 to 8.5 percent (see Chapter 4).

by the Survey Research Center at the University of Michigan, Ann Arbor.[16] In the Survey of Consumers survey, information from 2,419 families was obtained; 1,228 families participated in the consumer attitudes survey. The data for this research consist of 1,652 interviews with non-retired persons age 35 to 59.

The Survey Research Center samples represent a cross section of the population living in private households in the United States, excluding Alaska and Hawaii. Transients, institutionalized persons, and people living on military bases were not included. A multistage area probability sample of dwelling units was drawn using counties or groups of contiguous counties as primary sampling units. The number of sampling units was 78; the 12 largest metropolitan areas in the United States and 66 other counties selected on the basis of various controls.

In each primary area, three to six secondary selections of cities, towns, census tracts, or rural areas were made. The third stage of sampling involved selecting urban blocks or small sections (blocks) or rural areas. Finally, a new sample of dwelling units was drawn from the block selections in clusters of about four.

Dwelling units were the basic sampling units. For interviews the family unit was the basic unit. A family unit consisted of all persons living in the same dwelling unit who are related to each other

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[16]The material in this section is derived primarily from Barfield and Morgan (1969:177-82) and Katrona et al. (1967), Chapter 12.

by blood, marriage, or adoption. A single person who was unrelated to other occupants in the dwelling unit, or who was living alone, was considered to be a family unit. In the January-February survey, the head of the family was designated as the respondent; the head and his wife (if the head was married) were selected alternately in the August survey.

The response rate was about 83 percent. Approximately half of the nonresponse resulted from refusal to be interviewed or inability to provide relevant information. Most of the remainder resulted from the interviewer's failure to contact anyone at the dwelling unit. At least five calls were made to dwelling units not supplying data. In the case of a respondent refusing to cooperate, a letter was sent urging reconsideration. The letter was followed by another visit.

Interviews had a median time of 62 minutes. Interviewers were asked: "Did the respondent understand the questions and answer readily, or did he/she have some difficulty understanding and answering (not counting language difficulties)?" Ninety percent of the interviews were described as extremely satisfactory or satisfactory. The other interviews--about 10 percent--were described by the interviewers to involve respondents who experienced difficulty understanding and had some problems answering various questions.

Interviewers were selected and trained by Survey Research Center supervisors. They were instructed in the uniform use of the fixed-question open-answer technique. An emphasis was placed on establishing rapport between interviewer and respondent. Many questions were

recorded in the respondent's own words. Non-directive probes were used liberally to clarify answers.

Hypotheses

To realize the research objectives presented in Chapter I, the following hypotheses will be tested:

1. Class position determines income.
    a. This relationship holds when occupational status, education, age, sex, and race are used as controls.
    b. Class position will be a stronger predictor of income than occupational status.
2. Class position determines expected retirement income.
    a. This relationship holds when occupational status, education, age, sex, and race are used as controls.
    b. Class position will be a stronger predictor of expected retirement income than occupational status.
    c. Class position affects the manner in which income is transformed into expected retirement income.
3. Class position determines expected economic situation at 65 years of age.
    a. This relationship holds when income, age, sex, and race are used as controls.
    b. Class position will be a stronger predictor of expected economic situation at 65 years of age than income.
4. Class position determines health status.

a. This relationship holds when income, age, sex, and race are used as controls.

b. Class position will be a stronger predictor of health status than income.

c. Class position affects the manner in which health status influences expected retirement age.

5. Class position determines expected retirement age.

a. This relationship holds when other variables--health status, expected economic situation at 65 years of age; expected retirement income, age, sex, and race--are used as controls.

b. Class position will be a stronger predictor of expected retirement age than expected retirement income, expected economic situation at 65 years of age, health status, or income.

c. Class position adds significantly to Barfield and Morgan's set of predictors for expected retirement age.

With these hypotheses it will be possible to examine the role of class position in retirement decision-making. They also provide a research vehicle which incorporates the essence of critical class theory with the need to generate testable hypotheses.

Summary

An operationalization of class position was advanced in this chapter based on Wright's trilogy of control and dual industrial and labor market theory. Measurements for other independent variables and

the dependent variables were also set forth. Research hypotheses were presented. In the following chapter a viable statistical analysis is detailed to test the critical model of retirement decision-making outlined here.

CHAPTER IV

DATA ANALYSIS

This chapter begins with a discussion of the distribution of selected variables within class positions. But the major objective is to test hypotheses concerning the effectiveness of the class model used in this study in predicting retirement decision-making. Since the variables examined here are subject to differential distribution by age, hypotheses are tested on the entire sample and a 50-59 aged sub sample. Thus, the model's predictive power can be assessed fully.

Description of the Sample

Table 7 presents means and standard deviations (in parentheses) of selected variables within class positions, and a frequency distribution showing the size of each class. An identical statistical summary for the 50-59 aged subgroup is given in Table 8.

One striking feature in the data is the similarity between Wright and Perrone's (1977) sample and the one used in this study. Using a four class model, they place 8.0 percent of the active work force in the employer class, 3.9 percent in the petite bourgeoisie, 37.4 percent in the managerial class, and 50.7 percent in the working class. In the study sample (Table 7), employers and the petite bourgeoisie represent 8.5 and 4.4 percent, respectively, of the active labor force. By combining core and peripheral workers into one class and managers with supervisors into another, this study's sample shows

TABLE 7

MEANS AND STANDARD DEVIATIONS (IN PARENTHESES) OF VARIABLES BY CLASS POSITION (TOTAL SAMPLE, N=1113)

	Variable												
Class Position	Occupational Status	Current Income	Expected Retirement Income	Expected Economic Situation at 65	Sex	Race	Age	Education	Health Status	Job Satis-faction	Hobbies	Expected Retirement Age	N
Employers	57.92 (21.28)	13637 (5944)	9016 (5842)	2.36 (.89)	1.02 (.12)	.05 (.22)	2.15 (1.11)	4.78 (1.98)	2.73 (.98)	1.86 (.90)	.68 (.47)	64.38 (9.90)	95
Petite bourgeoisie	52.24 (29.57)	8994 (5224)	5769 (3616)	2.08 (.95)	1.10 (.30)	.04 (.19)	2.45 (1.19)	3.96 (1.96)	2.40 (1.07)	1.92 (.85)	.63 (.49)	70.41 (11.58)	49
Managers	61.07 (16.74)	13584 (5239)	9496 (5235)	2.43 (.93)	1.06 (.23)	.01 (.12)	1.96 (1.09)	5.67 (1.60)	2.82 (.75)	1.82 (.72)	.76 (.43)	63.68 (5.85)	179
Supervisors	41.13 (18.16)	10575 (4791)	6481 (3365)	(2.16) (.90)	1.06 (.24)	.04 (.19)	2.03 (1.09)	3.93 (1.63)	2.57 (1.00)	1.96 (.74)	.71 (.46)	63.05 (7.38)	133
Semi-autonomous employees	60.95 (19.62)	12258 (4526)	7756 (4304)	2.29 (.87)	1.07 (.25)	.03 (.18)	2.14 (1.14)	5.55 (2.11)	2.53 (.85)	1.97 (.93)	.72 (.45)	62.97 (4.11)	112
Core workers	30.13 (20.01)	8396 (4100)	5382 (3851)	1.90 (.98)	1.13 (.34)	.11 (.32)	2.16 (1.14)	3.58 (1.66)	2.58 (1.00)	2.20 (.94)	.61 (.49)	63.23 (5.67)	436
Peripheral workers	23.79 (16.12)	6688 (4270)	4054 (2665)	1.73 (.96)	1.31 (.46)	.13 (.33)	2.24 (1.20)	3.27 (1.58)	2.41 (1.09)	2.23 (.97)	.51 (.50)	63.69 (6.55)	109

TABLE 8

MEANS AND STANDARD DEVIATIONS (IN PARENTHESES) OF VARIABLES BY CLASS POSITION (50-59 AGED COHORT, N=411)

	Variables												
Class Position	Occupational Status	Current Income	Expected Retirement Income	Expected Economic Situation at 65	Sex	Race	Age	Education	Health Status	Job Satis-faction	Hobbies	Expected Retirement Age	N
Employers	56.14 (20.36)	12987 (5824)	8942 (5661)	2.41 (.91)	1.02 (.11)	.05 (.22)	3.56 (.41)	4.56 (1.95)	2.57 (1.02)	1.85 (.91)	.71 (.48)	67.29 (9.13)	37
Petite bourgeoisie	49.61 (27.17)	7696 (4991)	5613 (3555)	2.06 (.97)	1.09 (.31)	.03 (.19)	3.63 (.54)	3.82 (1.88)	2.27 (1.11)	1.90 (.83)	.63 (.50)	73.06 (10.71)	20
Managers	61.18 (16.47)	13413 (5126)	9202 (5114)	2.47 (.90)	1.05 (.23)	.01 (.12)	3.33 (.26)	5.57 (1.56)	2.66 (.82)	1.83 (.75)	.75 (.41)	67.15 (5.33)	71
Supervisors	41.09 (18.18)	9822 (4701)	6190 (3352)	2.19 (.93)	1.07 (.24)	.03 (.18)	3.37 (.32)	3.87 (1.59)	2.34 (1.05)	2.01 (.75)	.73 (.45)	66.11 (7.21)	47
Semi-autonomous employees	61.12 (19.88)	11514 (4312)	7398 (4183)	2.31 (.90)	1.06 (.25)	.02 (.16)	3.44 (.37)	5.51 (2.09)	2.30 (.87)	1.97 (.92)	.71 (.45)	65.63 (3.96)	40
Core workers	29.79 (19.83)	7181 (3965)	5023 (3718)	1.88 (.98)	1.14 (.35)	.12 (.33)	3.49 (.42)	3.37 (1.56)	2.28 (1.04)	2.18 (.95)	.63 (.51)	66.09 (5.46)	153
Peripheral workers	22.85 (16.52)	6049 (3804)	3763 (2559)	1.71 (.99)	1.33 (.45)	.15 (.35)	3.57 (.52)	3.09 (1.61)	2.25 (1.11)	2.25 (.99)	.50 (.46)	66.05 (6.18)	43

49.1 percent as workers--less than 2 percent below Wright and Perrone's estimate--but only 28.0 percent are classified as manager-supervisor while 37.4 percent are placed as such by Wright and Perrone. The discrepancy is easily accounted for, however, since a substantial segment of Wright and Perrone's managerial class is classified as semi-autonomous employees (see Chapter III for the theoretical and empirical justification for maintaining semi-autonomous employees as a distinct class). When these classification differences are recognized the distribution among class positions is remarkably similar in the two samples.

An examination of Table 7 reveals a distinctive pattern of inequality among the class positions which tends to sharpen somewhat in the 50-59 aged cohort (Table 8). This inequality is grounded in four dimensions: the distribution of rewards (current income, expected retirement income, expected economic situation at 65 years of age, and occupational prestige), human capital variables (education and health status), demographic characteristics (sex, race, and age), and life experiences (leisure activities and job satisfaction).

Consider the income data in Table 7, for example. The average annual income of employers and managers is essentially the same ($13,637 and $13,584, respectively), and both classes earn more than twice the average income of peripheral workers ($6,688). Beyond the polar structure of the American class system in the 1960's which these figures indicate--a valid conclusion only to the extent income is a fundamental component of class situation--a considerable segmentation

among workers can also be inferred. The average yearly income of peripheral and core workers shows a $1,700 earnings gap, while the average differential between peripheral workers and semi-autonomous employees is over $5,500 and between semi-autonomous employees and core workers approximately $3,800. Semi-autonomous employees also average yearly earnings nearly $1,700 above those for supervisors. Core workers and the petite bourgeoisie, on the other hand, are quite similar in their incomes, averaging $8,396 and $8,994, respectively. Income distributions for the 50-59 aged sub group (Table 8) show the same basic class relationships, except the mean earnings for managers ($13,413) are somewhat greater than of employers ($12,987).

With regard to expected retirement income (Table 7), managers anticipate the highest annual retirement income ($9,946), followed by employers ($9,016), semi-autonomous employees ($7,756), supervisors ($6,481), the petite bourgeoisie ($5,769), core workers ($5,382), and finally peripheral workers ($4,054). Here again, the polar structure of the American class system is evident, showing signs of intensifying during a cohort's life-cycle.

For example, comparing the mean income and expected retirement income of peripheral workers as a percentage of that for employers and managers reveals peripheral workers' income is 50 percent that earned by the privileged classes, while the figure for expected retirement income is 45 percent. An increasing segmentation of the working class is also indicated; peripheral workers' income is 79 percent of the average core worker's annual earnings, but peripheral workers' anticipated

retirement income declines to 75 percent of the yearly retirement income expected by core workers.

The expected retirement income data for the 50-59 aged sub sample (Table 8) follows the same general pattern exhibited in the total sample.

Respondents' expected economic situation at 65 years of age reflects similar class specific characteristics as found in the income and expected retirement income data (Table 7). Here (the scale ranges from 0 to 4 with higher scores indicating increasing expectations for economic security), managers and employers (2.43 and 2.36, respectively) are most confident of their economic situation, while core and peripheral workers (1.90 and 1.73, respectively) express the least confidence. Table 8 presents comparable findings for the 50-59 aged cohort.

Class means for occupational status as measured by the standard Duncan socio-economic index display an interesting pattern. In both Tables 7 and 8, managers have the highest average prestige scores, followed by semi-autonomous employees, employers, the petite bourgeoisie, supervisors, core workers, and peripheral workers. Managers and semi-autonomous employees have remarkably similar prestige scores and the same can be said of employers and the petite bourgeoisie despite the notably dissimilar positions held by each class in the social relations of production. At the same time, however, the prestige scores for core and peripheral workers do differentiate between the two. Table 9 presents the occupational distribution within class positions for the

TABLE 9

OCCUPATIONAL DISTRIBUTION WITHIN CLASS POSITIONS (TOTAL SAMPLE, N=1113)

Occupation	Class Positions							
	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	Peripheral Workers	Total
Professionals	14.3%	20.0%	40.1%	0.0%	59.0%	4.5%	1.8%	15.7%
Managers, proprietors, and officials	81.2	53.8	59.9	0.0	.8	2.6	1.2	21.0
Clerks and kindred workers	0.0	6.3	0.0	41.0	0.0	17.3	15.2	12.7
Craftsmen and foremen	3.8	1.1	0.0	59.0	40.2	25.5	24.6	22.2
Operatives and kindred workers	.8	11.3	0.0	0.0	0.0	31.7	35.1	17.8
Laborers	0.0	0.0	0.0	0.0	0.0	9.4	1.8	4.1
Service workers	0.0	7.5	0.0	0.0	0.0	8.9	20.5	6.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%	100.2%	100.0%
N	95	49	179	133	112	436	109	1113

total sample. Although this classification of occupations supplied by the U.S. Census Bureau is not an accurate portrayal of occupational status, it does illustrate that class position is not synonymous with occupation.

It is not surprising to find parallels between the relative standing of the class positions on prestige and educational attainment since the Duncan socio-economic index is partially grounded in educational attainment. The education data in Table 7, page 73, reveal managers and semi-autonomous employees are at one extreme (5.67 and 5.55, respectively, or the equivalent to completion of high school plus other non-college training), while core and peripheral workers have the least educational attainment (3.58 and 3.27, respectively, which corresponds to completion of grades 9 to 11). Table 8, page 74, shows similar results for the 50-59 aged sub group. To be sure, the average educational attainment of managers seems to be low by contemporary standards. However, it should be noted that the tremendous demand for M.B.A., for example, is only recently characteristic of the corporate structure.

Probably of more significance in its effect on retirement decision-making is health status. Managers and employers (Table 7), typically enjoy the best health (2.82 and 2.73, respectively, on a scale ranging from 0 to 5 with higher scores indicating better health). Supervisors, semi-autonomous employees, and core workers all display similar health conditions. But the petite bourgeoisie and peripheral workers (2.40 and 2.41, respectively) clearly exhibit the poorest health. This may be due to the relatively low incomes and

inimical working conditions found in both classes. Certainly, the petite bourgeoisie are in a stressful situation as a result of their inability to compete effectively with employers, whereas the work environment of peripheral workers--including such fringe benefits as health insurance--is inferior to core workers. Health figures for each class in the 50-59 aged sub sample are essentially the same as those found in the total sample (Table 8, page 74).

Demographically, there are few surprises. With regard to the gender composition of the seven classes, in both the total sample and the 50-59 aged cohort, the affluent classes are male dominated (1.00 corresponds to an all-male group whereas 2.00 is a pure female group). Employers (Table 7, page 73) as a class score 1.02 on the scale (2 percent female), and peripheral workers (1.31) show the greatest concentration of women (31 percent).

Interestingly, the sexual composition of core workers resembles employers (1.13-1.02 = .11) more than peripheral workers (1.31-1.13 = .18). This pattern holds for the 50-59 age sub group as well. Actually, this is not a surprising development. Research incorporating the dual economy and sectural models of capitalist economies consistently find women and other minorities overrepresented in the less affluent and politically impotent peripheral sector.

The class locations also reflect divergent racial characteristics; however, here it is among managers (.01, Table 7) where the exclusion of minorities is more blatant (blacks and other ethnic minorities are coded 1 and caucasians 0). Employers, by contrast, are slightly more

racially mixed (5 percent). Minorities tend to be concentrated in the working classes, most heavily in the peripheral (13 percent) as opposed to the core sector (11 percent). Table 8, page 74, shows that the uneven racial distribution across class positions is more pronounced in the 50-59 aged sub sample.

Table 7, page 73, reveals managers are the youngest class (1.96 on the scale, corresponding to the 35-44 aged group) while the petite bourgeoisie are by far the oldest (2.45, or 45-49 years of age). Supervisors are the second youngest class (2.03). Employers, semi-autonomous employees, and core workers average basically the same age (2.15, 2.14, and 2.16, respectively). Older people tend to be concentrated in the most disadvantaged classes--the petite bourgeoisie and peripheral workers (2.24). The 50-59 aged cohort (Table 8) exhibits a similar profile.

Actually, it is not surprising that supervisors, and especially managers, are the youngest groups in the sample. The propertied class secures people to serve as functionaries and administrators who are acquainted with contemporary management techniques and productive procedures, and who are also likely to provide the longest service. The petite bourgeoisie, on the other hand, are individuals who entered business in prior decades before the monopoly sector crystallized its hegemony and prospects for small business were brighter. During the postwar period, the entrepreneurial ideology has eroded, young people simply enter the relative safety of the managerial hierarchy.

But why is age stratification found among workers, too? In the

peripheral sector, with its emphasis on human labor, older workers find more opportunity to use their skills than in the core sector where the productive process is capital intensive. Here again, core sector employers want a young labor force with up-to-date skills and receptiveness to a mechanized labor process.

Table 7, page 73, presents a summary of planned leisure activities for each class (with plans to pursue recreational activities during retirement coded 1 and no such plans 0). Managers (.76) are the most likely to pursue post-retirement recreation, followed by semi-autonomous employees (.72), and supervisors (.71). Employers (.68), the petite bourgeoisie (.63), and core workers (.61) tend to cluster together, while peripheral workers (.51) are just as likely as not to plan for leisure activities during retirement. This pattern is typical of the 50-59 aged sub group (Table 8, page 74) as well. These data parallel Miller's (1965) and Simpson, Back, and McKinney's (1966) findings.

Respondents' job satisfaction reflects a polarized class structure. Managers and employers (Table 7) express the most satisfaction with their work experiences (1.82 and 1.86, respectively, which corresponds to "enjoy work very much"), while the petite bourgeoisie, supervisors, and semi-autonomous employees follow closely with scores ranging between 1.92 and 1.97. Core (2.20) and peripheral (2.23) workers, by contrast, view their work environments less favorably. Table 8 shows a more pronounced polarization concerning job satisfaction among the 50-59 aged sub sample.

To summarize, the distribution of rewards and privileges among the class locations reflects an inequality which, according to critical theory, is endemic to the American class system. With each evaluative criteria a pattern emerges: employers and managers occupy positions of control over the distributive system and workers, especially peripheral workers, are excluded from the dispersion of rewards, a pattern accentuated in the 50-59 aged cohort.

On the basis of research reviewed in Chapter II, including Barfield and Morgan's, one should expect the affluent to plan early retirement and the poorer classes to delay retirement as long as possible. This is not the case, however. Semi-autonomous employees plan to retire earlier than other classes followed by supervisors, core workers, managers, peripheral workers, employers, and the petite bourgeoisie (Table 7, page 73).

Analysis

Multiple regression is used to analyze the data. This statistical procedure examines the relationship between a dependent variable and a set of independent or predictor variables. Here, it is used as both an inferential tool--relationships in the population are evaluated from sample data--and as a descriptive device to summarize and decompose the dependence of the criterion variable on various sets of predictors.

For example, with multiple regression it is possible to test propositions of the "if p, then q" type, or even more complicated ones such as "if p, then q, under conditions r, s, and t," where p is an

independent variable, q a dependent variable, and r, s, and t other independent variables. It is precisely this type of statement examined in the hypotheses below: p is class position, q is expected retirement age (or income, expected retirement income, expected economic situation at 65 years of age, and health status, depending on the specific hypothesis under consideration), and r, s, and t are Barfield and Morgan's set of predictors.

Actually, multiple regression makes it possible to use r, s, and t as control variables, that is, their effects are statistically controlled so as to remove their influence on the dependent variable. When this technique is employed, the effect of one predictor on a dependent variable can be assessed without contamination from extraneous variables. By controlling for, or holding constant extraneous variables we avert the danger of accepting a false hypothesis as true. This is of particular value when the relationships tested involve obviously contaminated variables. Without the introduction of controls, an ominous shadow of doubt hangs over the interpretation of data.

The basic fact of sociological analysis, especially that using survey techniques, is that human beings and groups--or any sociological unit of analysis for that matter--can be characterized by a number of dimensions. In other words, many of the global concepts in sociology are comprised of a number of subconcepts which enter into it. Mainstream sociology typically views education, income, and occupation as components of class.

To illustrate how the multiple dimensions of class as defined by

mainstream sociology may affect the interpretation of data, consider the following examples: in the first case the researcher finds a relationship between class and attendance of theatrical events, while in the second case a relationship between class and type of residence is discovered. In fact, the same aspects of class may not be responsible for the relationships observed in the two cases. In the first case it may be level of education which is the relevant dimension in theatre attendance, whereas in the second example perhaps income affects type of residence.

Consequently, although the same concept (class), and maybe even the identical empirical measurement, is perhaps involved in both relationships, it does not necessarily mean that the same influences are relevant in both cases. If a variable, such as class, is a very broad one, then it may be misinterpreted; in other words, its theoretical power may be deceptive. Unless the multiple dimensions of a variable are taken into account, there is danger of attributing excessive importance to it because it is broad and encompassing.

Although only ownership, authority, and control in the social relations of production has been used to define class position (see Chapter III), when it is relevant to a particular hypothesis the dimensions of class used by mainstream sociology are introduced as controls. Thus, from time to time income and occupational status are introduced as control variables. In each hypothesis, however, education, sex, race, and age are held constant, that is to say, their possible influences on the dependent variable are removed statistically so that

an accurate interpretation of class as position in the social relations of production can be gleaned.

Class Position and Income

As noted earlier (see Chapters I and II), Barfield and Morgan attribute primary importance to economic factors in retirement decision-making; consequently, it may be useful to examine the relationship between class position and income with the following hypotheses:

1. Class position determines income.
    a. This relationship holds when occupational status, education, age, sex, and race are used as controls.

These hypotheses, concerning the effects of class position on income, are tested by using dummy variables to represent classes in equation 1:[17]

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[17]The use of dummy variables to show membership in a given category of a variable, in this case class position, is quite common in sociological analysis. A dummy variable is a vector in which members of a given category are assigned an arbitrary number--usually 1--while all subjects not belonging to that category are assigned another arbitrary number, such as 0. Dummy variables are useful when the independent variables are categorical, and can be used in combination with continuous independent variables as is done in the present analysis (Kerlinger and Pedhazur, 1973).

Since the dummy variables have arbitrary metric values of 1 and 0, it is appropriate to treat them as interval variables and insert them into regression equation 1. For statistical reasons it is necessary to exclude one of the dummies from the equation; however, this does not mean a loss of information. The excluded category--that is, in equation 1 and all others to follow, peripheral workers--serves as a reference point by which the effects of the other dummies are examined. For example, in equation 1 the regression coefficient b_1 is the difference in predicted income for subjects classified as employers as compared to those that are classified as peripheral workers. The a, or intercept, in equation 1 is the predicted income for peripheral

EQ. 1. Income = a + b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 occupational status + b_8 education + b_9 age + b_{10} sex + b_{11} race.

Table 10 presents, for the total sample, the mean income levels for each class as the control variables are added to equation 1 in a hierarchical fashion.[18] Results from an identical statistical procedure performed on the 50-59 aged cohort are shown in Table 11. Generally speaking, hypothesis 1 and its elaboration (hypothesis 1a) are supported by the data.

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workers. Regression coefficients for the remaining dummy variables (b_2 through b_6) are compared to the income intercept a in a similar fashion. Conversely, all categories may be compared to one another so that differential effects can be assessed. For example, the expression (b_1 - b_6) indicates the difference in predicted income between employers and core workers.

The regression coefficients, usually referred to as the unstandardized coefficient, for the continuous variables in equation 1 (b_7 through b_{11}) simply indicate the expected change in income with a unit change in a given variable. Since these variables are excluded from the construction of the dummy variables, the reference category is not used in interpreting their individual effects on income. For example, b_7 is the impact on income (measured in dollar units) accruing to each increase on the Duncan occupational status scale.

[18]Hierarchical inclusion of variables involves entering independent variables into the regression equation in a predetermined order. The method is useful when one desires to examine changes in regression coefficients at each step in the regression analysis so as to glean an indepth understanding of the interrelationships among the independent variables.

In equation 1, for example, the class dummy variables are entered into the equation first to test hypothesis 1. With hypothesis 1a, occupational status is added to the equation in a second inclusion stage, followed by a third stage in which education, age, sex, and race are included. This procedure is used to test hypotheses 2, 2a, 3, 3a, 4, 4a, 5, and 5a as well, although the particular variables included in the analysis may change from time to time. Such a strategy, often

TABLE 10

CLASS DIFFERENCES IN INCOME (TOTAL SAMPLE, N=1113)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Occupational Status	Age, Sex, Race, Education, Occupational Status
Employers	13979*	9380*	11690*
Petite bourgeoisie	9378*	5464	8256
Managers	13761*	8571*	10758*
Supervisors	10933*	6917*	9919*
Semi-autonomous employees	12544*	7755*	9875*
Core workers	8492*	5675*	8729
Peripheral workers	6959	4626	8237
R^2	.226*	.280*	.375*

*p = <.01

TABLE 11

CLASS DIFFERENCES IN INCOME (50-59 AGED COHORT, N=411)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Occupational Status	Age, Sex, Race, Education, Occupational Status
Employers	13319*	8921*	11308*
Petite bourgeoisie	9000*	5520	9081
Managers	14120*	9263*	11740*
Supervisors	11201*	7549*	10885*
Semi-autonomous employees	12784*	8359*	10852*
Core workers	7743**	5394	9131
Peripheral workers	6630	4520	9154
R^2	.257*	.302*	.421*

*p = <.01

**p = <.05

Column 1 in both tables tests hypothesis 1, revealing class differences on income when no control variables are used in the equation. The differences are substantial; that is, the income of employers and managers averages twice that of peripheral workers. An F-test reveals that all income gaps (comparisons with peripheral workers) are significant at the .01 level of significance, except for the difference between core and peripheral workers in the 50-59 age subsample (Table 11), which is significant at the .05 level of statistical significance.

Hypothesis 1a is examined in columns 2 and 3 in both tables. For hypothesis 1a to be rejected the income differentials would have to disappear as occupational status, education, age, sex, and race are held constant. The data show, however, that the class-induced economic inequalities remain fairly stable when differences in occupational status across classes are controlled (column 2). Only the petite bourgeoisie (Tables 10 and 11), and core workers (Table 11) do not differ significantly from peripheral workers in terms of income when occupational status is included in regression equation 1.

When age, sex, race, and education are introduced as controls the pattern of inequality changes little, although the differences among peripheral workers, core workers, and the petite bourgeoisie remain statistically insignificant (Tables 10 and 11, column 3). For the entire sample, even with extensive controls applied, employers earn

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called the "stepdown procedure," allows one to test the significance of variable (A) without adjusting for (B), and then test the significance of (A) after controlling for (B).

about $3,500 more than peripheral workers per year, while the gap between peripheral workers and managers is approximately $2,500. In the 50-59 aged cohort the class-induced income gaps continue, however here managers earn slightly more than employers.[19]

Columns 1 and 2 in Tables 10 and 11 show that semi-autonomous employees' incomes are higher than supervisors. However, when all controls are added (column 3) to the equation supervisors earn slightly more than semi-autonomous employees. Such a reversal in their relative standing stems from the fact that semi-autonomous employees receive economic rewards in relation to their specialized expertise--or, in other words, from greater economic returns to education than is the case for supervisors--and because minorities are found in greater numbers among supervisors as opposed to semi-autonomous employees. By removing the effects of education and race the income gap between supervisors and semi-autonomous employees is virtually eliminated.

Another interesting finding revealed by the data is the similar income levels among the petite bourgeoisie, core workers, and peripheral workers when all controls are introduced (column 3). In

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[19]One reason for this anomaly may be due to the difficulty encountered by researchers in obtaining accurate data on the capitalist class. Sweezy (1942), Mills (1959), and Domoff (1978), among others, note that the capitalist class resists inquiries from social scientists. This problem is evident here as well; the employer class in this study sample is not a "true" capitalist class at all, rather, it more closely resembles a small capitalist class in which business activities are relatively small-scale, employing only a few workers, and covering local markets as opposed to regional and national markets.

fact, Table 10 shows that core workers' income is greater than that earned by the petite bourgeoisie, while in Table 11 both core and peripheral workers earn more than the petite bourgeoisie when occupational status, age, sex, race, and education are held constant. One conclusion which might be drawn from these results is that ownership of the means of production alone has less impact on earned income than supervisory capacity in and of itself. For example, in the total sample (Table 10) the income of managers and supervisors is significantly higher than that found for the petite bourgeoisie, but employers' incomes, when all controls are used, remain greater than those for managers and supervisors. Consequently, it seems that the salient determination of higher economic rewards resides in the combination of ownership of and authority over the means of production (appropriation of surplus value).

The income gaps between core and peripheral workers are not statistically significant when controls are added to equation 1, except when the influence of occupational status alone is removed (Table 10, column 2). And, as Table 11 shows, the incomes of peripheral workers are slightly higher than core workers' earnings in the 50-59 aged cohort when all controls are employed (column 3). Why is this the case? It is due to the fact that the sample is restrictive, in the sense that only full-time workers are included. This restriction effectively eliminates many individuals who would otherwise be classified as peripheral workers (see Chapter III). Naturally, these individuals experience depressed earnings as a result of their

unstable economic situation. By focusing only on full-time workers, the sample is biased somewhat in favor of income estimates for peripheral workers that are probably too high.

Despite these nonsignificant findings, hypotheses 1 and 1a are at least tentatively supported: class position does have an effect on income and the relationship between class and income holds when other variables--occupational status, age, sex, race, and education--are added as controls. The income inequalities are particularly evident between core and peripheral workers, on the one hand, and employers and managers, on the other.

One way to increase our confidence in the effectiveness of class position to predict income inequalities is to compare its explanatory power with that of occupational status, the variable which enjoys widespread acceptance among mainstream stratification researchers. Hypothesis 1b predicts:

1b. Class position will be a stronger predictor of income than occupational status.

Tables 10 and 11 reveal that class position alone (column 1) explains 22.6 and 25.7 percent[20] of the income variance (R^2)[21] for the

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[20]These figures are similar to those obtained by Wright and Perrone (1977), Wright (1978a), Kalleberg and Griffin (1980), and Koo and Hong (1980) in tests of income determination using various neo-marxist class models.

[21]The phrase "percent of the variance explained"--often referred to as R^2--denotes the strength of the dependence or, equivalently, the amount of variation in the dependent variable that is explained by its dependence on an independent variable or set of independent variables

total sample and the 50-59 aged subsample, respectively. Since occupational status does not add as much to the explained variance in earned income as the class dummy variables alone--28.0 percent (Table 10, Column 2, page 88) with occupational status and class as opposed to 22.6 percent (Table 10, column 1) with only class position considered, and 30.2 percent (Table 11, column 2, page 89) compared to 25.7 percent (Table 11, column 1)--we might conclude that class position is indeed a stronger predictor of income than occupational status. This certainly would cast a shadow of doubt on the relevance of occupational status as a predictor of income and much of the stratification research in sociology. To further our argument we might note that occupational status did not eliminate the class-induced income differentials when introduced to equation 1 as a control variable. But such interpretations are premature.

A more thorough way to test hypothesis 1b is to determine whether a regression equation containing class position (equation 2, below) explains a larger proportion of the variance (R^2) in income than an equation (3, below) with occupational status.

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operating jointly. The overall accuracy of a given regression equation is reflected by R^2. If an independent variable or set of independent variables completely explained the variance of the dependent variable R^2 would equal 1.00. Of course, complete explanation is never achieved because we rarely know all of the independent variables which influence a given dependent variable.

EQ. 2. Income = a + b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 education + b_8 age + b_9 sex + b_{10} race.

EQ. 3. Income = a + b_1 occupational status + b_2 education + b_3 age + b_4 sex + b_5 race.

Age, sex, race, and education are again used as control variables in equations 2 and 3 so as to allow a comparison of the R^2 obtained in each equation with that obtained in equation 1.[22] By so doing, we can assess the effect of class and occupational status while controlling for the other.

From Table 12 we see that for the total sample equation 2 explains 35.9 percent of the variance in income and equation 3, 34.4 percent. Equation 1 in Table 12, which includes both class position and occupational status, explains 37.5 percent of the variance in income. Thus, when class position is added to the equation (3)

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[22]The hierarchical inclusion of variables is not used in equations 2 and 3. In fact, to test hypothesis 1b, equation 1 is recycled without hierarchical inclusion. With equations 1, 2, and 3 variables are entered into the equations by the computer according to statistical considerations based on a correlation matrix of the variables. Variables with high zero-order correlations coefficients are entered into the equations first, followed by the variable which contributes most to the highest possible multiple correlation, and so on, until all variables are included. This may change the size of individual regression coefficients, but the R^2 is not affected by the transition away from hierarchical inclusion (see Nie et al., 1975, and Horton 1978) as long as every independent variable is eventually included in the equation.

TABLE 12

CLASS POSITION VS. OCCUPATIONAL STATUS IN PREDICTING INCOME (STANDARDIZED COEFFICIENTS IN PARENTHESES: TOTAL SAMPLE, N=1094)

EQ	Constant	Age	Race	Sex	Education	Occupational Status	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
1	8095	155 (.034)	-725 (-.035)	-4086 (-.231)	701 (.265)	53 (.183)	3567 (.192)	76 (.003)	2557 (.182)	1754 (.109)	1603 (.094)	510 (.048)	.375*
2	8952	125 (.027)	-1175 (-.057)	-4026 (-.227)	876 (.332)	--	4614 (.248)	833 (.033)	3806 (.271)	2624 (.164)	2639 (.154)	748 (.071)	.359*
3	8441	183 (.040)	-714 (-.034)	-4600 (-.260)	733 (.279)	74 (.292)	--	--	--	--	--	--	.344*

Equation 1 minus Equation 3: Class Position adds 3.1 percent**

Equation 1 minus Equation 2: Occupational Status adds 1.6 percent**

*p = <.01

**p = <.05

including occupational status so as to hold the effects of occupational status constant, the R^2 increases by 3.1 percent (37.4-34.1 = 3.1), but when occupational status is included in the equation (2) containing the class dummies the increase in R^2 is only 1.6 percent (37.5-35.9 = 1.6). Repeating the analysis for the 50-59 aged cohort reveals a similar, yet weaker, gap; class adds 2.6 percent and occupational status 2.4 percent to the R^2 (Table 13).

This does not mean, however, that occupational status is a useless predictor of income. Such an interpretation is not warranted empirically or theoretically. Empirically, an F-test shows that class position and occupational status add significantly (.05) to the explained variance in income. For the 50-59 aged subsample, neither class nor occupational status adds significantly more than the other to the R^2 in income. Theoretically, class refers to position in the social relations of production as defined by ownership, authority, and autonomy, whereas occupational status indicates indirectly the technical activities in the division of labor. In other words, class and occupational status should not be defined with reference to the other--they are mutually exclusive.

The critic may counter these findings by suggesting that education, as one of the dimensions underlying Duncan's measurement of occupational status, is a better predictor of income than occupational status, and hence, is the more appropriate variable to test the effectiveness of class position as a determinant of income. Actually, the potency of education as a predictor of income is less than that of

TABLE 13

CLASS POSITION VS. OCCUPATIONAL STATUS IN PREDICTING INCOME (STANDARDIZED COEFFICIENTS IN PARENTHESES; 50-59 AGED COHORT, N=403)

EQ	Constant	Age	Race	Sex	Education	Occupational Status	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
1	8876	-126 (-.012)	-364 (-.018)	-4435 (-.276)	736 (.275)	61 (.215)	2315 (.121)	33 (.001)	2647 (.165)	1932 (.112)	1607 (.092)	58 (.005)	421*
2	9693	-176 (-.016)	-866 (-.043)	-4162 (-.259)	900 (.336)	--	3802 (.199)	939 (.040)	4427 (.276)	3058 (.177)	2989 (.172)	274 (.025)	.397*
3	9083	-127 (-.012)	-318 (-.016)	-5054 (-.315)	756 (.282)	79 (.336)	--	--	--	--	--	--	.395*

Equation 1 minus Equation 3: Class Position adds 2.6 percent**

Equation 1 minus Equation 2: Occupational Status adds 2.4 percent**

*p = <.01

**p = <.05

occupational status; the standardized regression coefficient for education (Table 12, equation 3) is .279, whereas the standardized coefficient for occupational status is .292.[23] In the 50-59 aged cohort (Table 13, equation 3) the gap widens--.282 for education and .336 for occupational status.

The data provide support for hypothesis 1b: class position is a stronger predictor of income than occupational status.

In summary, hypotheses 1 and 1a are confirmed by the data. Class position does determine income--a relation which stands even when extensive controls are applied. Furthermore, class position is a stronger predictor of income than occupational status (hypothesis 1b) in spite of the fact that our operationalization of class is less than perfect (see Chapter III). This suggests that sociologists striving to understand the distribution of economic rewards would do well to consider a critical analysis. And in so far as economic considerations are a salient feature of retirement decision-making, as Barfield and Morgan insist, class position is a variable social gerontologists should use, both theoretically and empirically.

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[23]As noted earlier, unstandardized regression coefficients indicate the expected difference on a dependent variable between two groups that are different on a given independent variable by one unit. With standardized regression coefficients, on the other hand, the dependent and independent variables are standardized to have standard deviations equal to (1). Standardized coefficients are computed on standardized X and Y values rather than on the original unstandardized values. Since the constant (a) is always equal to zero when X and Y values are standardized it can be omitted from the equation (see Tables 12 and 13). When two or more independent variables are measured on different units--education and occupational status, for example--standardized coefficients provide the only valid way to compare the relative effects of each on the dependent variable.

Class Position and Expected Retirement Income

As was noted in Chapters I and II, Barfield and Morgan argue that expected retirement income is the salient factor in retirement decision-making; plans to retire early are related to high expected income during retirement. What Barfield and Morgan do not consider, however, is the manner in which expected retirement income is affected by the social relations of production. Perhaps class position is an extraneous variable in the relationship between expected retirement income and retirement decision-making. Two more hypotheses addressed this possibility:

2. Class position determines expected retirement income.
    a. This relationship holds when occupational status, education, age, sex, and race are used as controls.

These hypotheses, concerning the effects of class position on expected retirement income, are tested in the same manner as hypotheses 1 and 1a.

Here, equation 4 is used for the regression analysis:

EQ. 4. $E.R.I. = a + b_1$ employers $+ b_2$ petite bourgeoisie $+ b_3$ managers $+ b_4$ supervisors $+ b_5$ semi-autonomous employees $+ b_6$ core workers $+ b_7$ occupational status $+ b_8$ education $+ b_9$ age $+ b_{10}$ sex $+ b_{11}$ race.

Expected retirement income is the dependent or criterion variable. The class dummies are inserted into equation 4 first, followed by occupational status in the second stage, and finally age, sex, race, and education in a third inclusion stage. Tables 14 and 15 present the

TABLE 14

CLASS DIFFERENCES IN EXPECTED RETIREMENT INCOME (TOTAL SAMPLE, N=1113)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Occupational Status	Age, Sex, Race, Education, Occupational Status
Employers	9243*	5433*	8064*
Petite bourgeoisie	5951*	2709	5753
Managers	9926*	5626*	8049*
Supervisors	6928*	3602*	6745**
Semi-autonomous employees	8059*	4092*	6519
Core workers	5474*	3140**	6313
Peripheral workers	4391	2459	6087
R^2	.172*	.221*	.315*

*p = <.01

**p = <.05

TABLE 15

CLASS DIFFERENCES IN EXPECTED RETIREMENT INCOME (50-59 AGED COHORT, N=411)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Occupational Status	Age, Sex, Race, Education, Occupational Status
Employers	8518*	4882*	7157**
Petite bourgeoisie	5371**	2494	5618
Managers	9580*	5565*	7870*
Supervisors	7022*	4003*	6977**
Semi-autonomous employees	7406*	3748*	5970
Core workers	4712**	2770	6028
Peripheral workers	3780	2036	5955
R^2	.207*	.257*	.393*

*p = <.01

**p = <.05

results of the regression analysis for the total sample and the 50-59 aged cohort, respectively.

One conclusion is obvious (Tables 14 and 15, column 1), the income inequality across class positions found earlier emerges with respect to expected retirement income as well; in fact, the gaps between classes--especially between peripheral workers, on the one hand, and employers and managers, on the other--tend to widen when post-retirement expected income is considered. Table 14 (column 1) shows that, with only class position in the regression equation, all class-induced differences on expected retirement income are statistically significant at the .01 level of statistical significance. An F-test conducted on the expected retirement income gaps across classes for the 50-59 aged subsample reveals similar findings (Table 15, column 1), although the level of significance is .05 for the differences between peripheral workers and core workers and the petite bourgeoisie. Consequently, based on these findings, hypothesis 2 is confirmed: class position does have an affect on expected retirement income.

When occupational status, age, sex, race, and education are introduced into equation 4 as control variables to test hypothesis 2a (Tables 14 and 15, columns 2 and 3), the difference in expected retirement income between employers and managers disappears, particularly in the total sample (see footnote 19, page 91, for an explanation). This is not the case for the other class-induced differences in expected retirement income, however. Even when these extensive controls are in

place, peripheral workers' expected retirement incomes are significantly lower statistically than those anticipated by employers, managers, and supervisors.

The differences in expected retirement income between peripheral workers, on the one hand, and core workers and semi-autonomous employees, on the other, are substantially if not statistically significant when all controls are used. For example, core workers (Table 14, column 3) expect an annual retirement income which is more than $200 greater than that anticipated by peripheral workers; and the difference for semi-autonomous workers is more than $400.[24] On the basis of these findings, hypothesis 2a is supported: the effect of class position on expected retirement is not completely removed--that is, it remains statistically significant--when occupational status, age, sex, race, and education are held constant.

Hypothesis 2b predicts that:

2b. Class position will be a stronger predictor of expected retirement income than occupational status.

Once again, as with hypothesis 1b, we make a direct comparison of the critical framework with the traditional stratification model. To test this hypothesis equations 5 and 6--containing the class dummies and occupational status, respectively--are used.

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[24]Note that these expected retirement income gaps reflect 1967 dollars. Calculated in 1981 dollars the class-induced differences would be about $500 and $1,000 per year between peripheral workers and core workers, and between peripheral workers and semi-autonomous employees, respectively.

EQ. 5. E.R.I. = a + b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 education + b_8 age + b_9 sex + b_{10} race

EQ. 6. E.R.I. = a + b_1 occupational status + b_2 education + b_3 age + b_4 sex + b_5 race

Age, sex, race, and education are used as control variables in both equations. Equation 4 is used as a reference to assess the additions to the R^2 made by class position and occupational status. The task is to determine whether the equation including the class dummies (equation 5) explains a larger proportion of the variance in expected retirement income than equation 6 where occupational status is substituted for class position.

For the total sample (Table 16), equation 5 explains 31.1 percent of the variance in expected retirement income, while equation 6 accounts for 30.1 percent. Equation 4, which includes both class position and occupational status shows an R^2 of 32.3 percent. Thus, class position adds 2.2 percent to the explained variance (32.3-30.1 = 2.2), whereas occupational status adds only 1.0 percent (32.3-31.2 = 1.0). Both additions to the R^2 are significant at the .05 level of statistical significance.

Table 17 presents findings from the 50-59 aged cohort. In this case, occupational status increases the explained variance by 2.1 percent (40.1-38.0 = 2.1). Class position, by contrast, adds 2.7 percent (40.1-37.4 = 2.7) to the R^2 in expected retirement income. Once again,

TABLE 16

CLASS POSITION VS. OCCUPATIONAL STATUS IN PREDICTING EXPECTED RETIREMENT INCOME
(STANDARDIZED COEFFICIENTS IN PARENTHESES; TOTAL SAMPLE, N=1094)

EQ	Constant	Age	Race	Sex	Education	Occupational Status	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-automomous Employees	Core Workers	R^2
4	6045	-181 (-.045)	-971 (-.054)	-3362 (-.217)	625 (.271)	45 (.149)	2052 (.126)	-397 (-.018)	1960 (.160)	696 (.050)	405 (.027)	203 (.022)	.323*
5	6659	-203 (-.051)	-1294 (-.071)	-3318 (-.214)	751 (.325)	--	2803 (.173)	145 (.007)	2855 (.233)	1319 (.094)	1146 (.076)	374 (.040)	.313*
6	6067	-176 (-.044)	-933 (-.052)	-3655 (-.236)	654 (.283)	64 (.230)	--	--	--	--	--	--	.301*

Equation 4 minus Equation 6: Class Position adds 2.2 percent**

Equation 4 minus Equation 5: Occupational Status adds 1.0 percent**

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

TABLE 17

CLASS POSITION VS. OCCUPATIONAL STATUS IN PREDICTING EXPECTED RETIREMENT INCOME
(STANDARDIZED COEFFICIENTS IN PARENTHESES; 50-59 AGED COHORT, N=403)

EQ	Constant	Age	Race	Sex	Education	Occupational Status	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
4	5827	-647 (-.076)	-686 (-.043)	-3241 (-.255)	702 (.331)	53 (.187)	1371 (.091)	-426 (-.023)	1968 (.155)	1193 (.087)	-70 (.004)	132 (.015)	.401*
5	6416	-681 (-.080)	-1035 (-.065)	-3058 (-.241)	816 (.385)	--	2374 (.157)	176 (.009)	3173 (.250)	1948 (.143)	909 (.066)	260 (.030)	.380*
6	6100	-660 (-.077)	-630 (-.039)	-3630 (-.286)	691 (.326)	70 (.273)	--	--	--	--	--	--	.374*

Equation 4 minus Equation 6: Class Position adds 2.7 percent**

Equation 4 minus Equation 5: Occupational Status adds 2.1 percent**

*p = <.01

**p = <.05

class position and occupational status add significantly (.05) to the R^2. But the data clearly show that class position is a more effective predictor of expected retirement income than occupational status. Hence, hypothesis 2b is confirmed.

Logically, however, one can assume that expected retirement income is affected by current income. It might be useful to examine the transformation of current income into expected retirement income in each class, or stated statistically, to test for an interaction effect between class position and income in the determination of expected retirement income. Hypothesis 2c predicts that:

2c. Class position affects the manner in which income is transformed into expected retirement income.

Theoretically, hypothesis 2c suggests that class position influences the relationship between current income and expected retirement income so that different class positions yield varying expected retirement income returns to income. Statistically, this hypothesis predicts that the slopes for income are not constant but fluctuate according to class position.[25] To test this hypothesis, each of the seven class positions are compared using equations 7 and 8.

EQ. 7. $E.R.I. = a + b_1$ income

EQ. 8. $E.R.I. = a + b_1$ income $+ b_2$ age $+ b_3$ sex $+ b_4$ race $+ b_5$ occupational status $+ b_6$ education

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[25] In regression analysis the coefficient b is called the slope. For example, the b coefficient in the equation $Y = a + bX$ indicates that as X changes one unit Y changes b units.

Equation 7 is the simple regression of income on expected retirement income, while equation 8 regresses income on expected retirement income when age, sex, race, occupational status, and education are held constant.

Equation 8 is important in evaluating the extent to which class interactions obtained in equation 7 result from the class distributions of the control variables included in equation 8. If the differential expected retirement returns accruing to current income for various classes obtained in equation 7 are the result of the distributions of occupational status or race across class positions, for example, then when occupational status or race is inserted into the equation (8), the differential returns to current income between classes would be reduced to insignificance. Equation 8 statistically removes the effect of several stratification dimensions which may be salient causal components of the relationship between expected retirement income and current income. If current income coefficients differ among class positions even when these extensive controls are applied, these differences can be viewed as direct consequences of class position.

Table 18 presents the expected retirement income returns for current income in each class position obtained from equations 7 and 8. Expected retirement income returns are highest among employers and lowest among the petite bourgeoisie when equation 7 is used. An unexpected finding is that semi-autonomous employees expect higher retirement income returns to current income than managers. The simple regression of income on expected retirement income shows that for each

TABLE 18

REGRESSIONS ON EXPECTED RETIREMENT INCOME RETURNS TO CURRENT INCOME (TOTAL SAMPLE, N=1113; STANDARD ERRORS IN PARENTHESES)

Variable	Employers (95)		Petite Bourgeoisie (49)		Managers (179)		Supervisors (133)		Semi-autonomous Employees (112)		Core Workers (436)		Peripheral Workers (109)	
	EQ7	EQ8	EQ7	EQ8	EQ7	EQ8	EQ7	EQ8	EQ7	EQ8	EQ7	EQ8	EQ7	EQ8
Income	.55	.54	.40	.37	.48	.45	.35	.31	.55	.54	.41	.35	.42	.39
	(.09)	(.10)	(.09)	(.09)	(.06)	(.07)	(.05)	(.05)	(.07)	(.08)	(.04)	(.04)	(.05)	(.05)
Age		-377		-306		-430		-211		-708		-281		-338
		(475)		(428)		(315)		(229)		(305)		(135)		(164)
Sex				-2013		-2780		-2740		-723		-1713		-221
				(1808)		(1728)		(1085)		(1461)		(473)		(513)
Race		-2716		-1807		485		-1511		-1211		-1284		-965
		(2688)		(3318)		(2666)		(1506)		(2078)		(484)		(611)
Occupational status		78		46		81		66		68		52		48
		(7)		(11)		(7)		(7)		(8)		(5)		(5)
Education		701		529		774		651		746		565		537
		(294)		(380)		(263)		(336)		(348)		(249)		(264)
Constant	1488	2636	2183	5437	3344	7435	3101	6967	1104	3647	1996	5104	1478	2835
R^2	.27	.30	.31	.38	.22	.28	.26	.34	.31	.38	.20	.25	.42	.49

Selected Comparisons

Class Comparisons	Equation 7 Difference	Equation 8 Difference
Employer vs. supervisor	.20**	.23**
Employer vs. core workers	.14**	.19**
Employer vs. peripheral workers	.13****	.15****
Manager vs. supervisor	.13***	.14***
Semi-autonomous employees vs. core workers	.14**	.19*
Semi-autonomous employees vs. peripheral workers	.13***	.15***

*p = <.0005 **p = <.005 ***p = <.025 ****p = <.05

dollar earned annually employers expect $.57 in retirement income per year, while semi-autonomous employees anticipate $.53 annually, managers $.48, supervisors $.45, core workers $.42, peripheral workers $.41, and the petite bourgeoisie $.40. A t-test[26] shows that the differences between employers and peripheral workers are significant at the .05 level of statistical significance. The gap between employers and core workers is statistically significant at the .005 significance level.

When age, sex, race, occupational status, and education are used as control variables (equation 8), employers still show the highest expected retirement income returns to current income; however, peripheral workers replace the petite bourgeoisie as the class with the lowest expected retirement income returns. Also, the gaps between the class positions tend to expand somewhat. For example, the difference between employers and core workers increases from $.15 to $.16 when equation 8 is used, and the gap between employers and peripheral workers widens from $.16 to $.19. Here, the differences on expected retirement income returns to current income between employers and the supervisors

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[26]The statistical significance of the income slope differences between class positions is assessed by the following t-test:

$$t = \frac{b_{11}-b_{12}}{\sqrt{\frac{(N_1-1)\ S^2\ b_{11} + (N_2-1)\ S^2\ b_{12}}{(N_1 + N_2-2)}}}$$

where b_{11} is the income coefficient for class 1, b_{12} is the income coefficient for class 2, $S^2\ b_{11}$ and $S^2\ b_{12}$ are the squared standard errors of the income coefficients for classes 1 and 2, respectively, and

is statistically significant at the .05 level of significance. Also, the gaps between employers and both core (.005) and peripheral (.05) workers is statistically significant. Obviously hypothesis 2c is supported by the data: class position does affect the manner in which income is transformed into expected retirement income.

In summary, the data support hypotheses 2, 2a, and 2b: class position does indeed determine expected retirement income even when extensive controls are used, and its predictive power is greater than that of occupational status. But the most dramatic findings, and probably the most important in terms of retirement decision-making as well, relate to hypothesis 2c. The significance of class position with respect to expected retirement income is not found in its independent causal impact, but in its interaction with current income such that employers, by virtue of their position of ownership and control in the social relations of production, transform income into expected retirement income at a significantly higher rate of return than other classes, especially core and peripheral workers.

Class Position and Expected Economic Situation at 65 Years of Age

Our investigation thus far indicates that class position exerts a substantial impact in two economic factors which Barfield and Morgan suggest are central to retirement decision-making--current income and expected retirement income. Here, we continue to focus on one of the

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(N_1-1) and (N_2-1) are the degrees of freedom for classes 1 and 2, respectively.

key economic dimensions of the decision-making process by assessing the effect of class position on expected economic situation at 65 years of age.

In Chapter III it was noted that this economic aspect of retirement is measured as an index ranging from zero (0) to four (4) and constructed as the sum of:

1 point for having no dependents other than a spouse after age 59,

1 point for expecting to receive $500 or more per year from post-retirement work,

1 point for having an imputed retirement income from assets of $1,000 or more per year, and

1 point for having no mortgage payments to make after age 60.

With this measurement strategy we have a more sensitive indication of economic situation than with current income or expected retirement income. These dimensions of one's economic situation are the mundane information on which the retirement decision-making process may conceivably hinge.

For example, an expected retirement income of $10,000 per year may not be as satisfactory for an individual with several dependents, few prospects for post-retirement work, and mortgage payments than an annual retirement income of $5,000 for a person with no dependents other than a spouse, some opportunity for post-retirement employment, and no mortgage payments. Thus, we have in this variable a measure which takes into consideration the unique situations which people find impinging upon them, regardless of their occupation or education.

Of course, a person's expected economic situation at 65 years of age is intimately related to earnings, but as shown earlier in hypotheses 1, 1a, and 1b, class position is a powerful determinant of income. Thus, hypotheses 2 and 3a predict that:

3. Class position determines expected economic situation at 65 years of age.
   a. This relationship holds when income, age, sex, and race are used as controls.

Equation 9 is used to test these hypotheses.

EQ. 9. Exp. Econ. St. 65 y.o.a. = b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 income + b_8 age + b_9 sex + b_{10} race.[27]

As with hypotheses 1, 1a, 2, and 2a, the analysis proceeds by using hierarchical inclusion of the variables; first the class dummies are inserted into the equation, then income, and finally age, sex, and race.

Column 1 in Tables 19 and 20 presents the data from equation 9 for the total sample and the 50-59 aged cohort, respectively. Table 19 shows that for the total sample each class differs significantly--a .01

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[27]Since the dependent variable in equation 9 does not have an inherently meaningful metric, standardized regression coefficients are in order (Tables 12 and 13, pages 96 and 98). Consequently, the constant (a) is omitted from the equation.

TABLE 19

CLASS DIFFERENCES IN EXPECTED ECONOMIC SITUATION AT 65 YEARS OF AGE
(TOTAL SAMPLE, N=1113; STANDARDIZED COEFFICIENTS)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Income	Age, Sex, Race, Income
Employers	.186*	.110*	.096*
Petite bourgeoisie	.083*	.071*	.061**
Managers	.278*	.169*	.127*
Supervisors	.166*	.109*	.076*
Semi-autonomous employees	.181*	.103*	.084*
Core workers	.104*	.062*	.035
R^2	.062*	.102*	.179*

*p = <.01

**p = <.05

TABLE 20

CLASS DIFFERENCES IN EXPECTED ECONOMIC SITUATION AT 65 YEARS OF AGE (50-59 AGED COHORT; N=411; STANDARDIZED COEFFICIENTS)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Income	Age, Sex, Race, Income
Employers	.205*	.123*	.115*
Petite bourgeoisie	.134*	.110*	.098*
Managers	.224*	.115*	.101**
Supervisors	.146*	.084	.062
Semi-autonomous employees	.203*	.120*	.104*
Core workers	.051	.027	.021
R^2	.078*	.119*	.147*

*p = <.01

**p = <.05

level of statistical significance computed from an F-test--on expected economic situation at 65 from peripheral workers when no controls are in place. Managers clearly expect the most favorable economic condition at the traditional retirement age, while employers, semi-autonomous employees, supervisors, core workers, the petite bourgeoisie, and peripheral workers follow in descending order of favorable expectations. Among the 50-59 aged subsample (Table 20, column 1) a similar pattern emerges with the exception of the petite bourgeoisie and core workers; here, the petite bourgeoisie express more favorable expectations than core workers, and the gap between core and peripheral workers is not statistically significant. Nevertheless, on the basis of these findings it is obvious that hypothesis 3 is supported: class position does have an affect on expected economic situation at 65 years of age.

To test hypothesis 3a, income (Tables 19 and 20, column 2), age sex, and race (Tables 19 and 20, column 3) are held constant. When income is controlled in the total population (Table 19), all of the class differences on expected economic situation at age 65 remain statistically significant at the .01 level of significance. The relative standing of the class categories remains the same as before; managers still express the greatest degree of confidence in their economic future, whereas peripheral workers continue to view their economic situation at 65 years of age in the least favorable light. In the 50-59 aged cohort (Table 20) this pattern is perpetuated, although the gaps between the expectations of peripheral workers and

those of core workers and supervisors are not statistically significant.

As age, sex and race are added to the equation with income as control variables (Tables 19 and 20, column 3), the relative standing of the class positions on expected economic situation at age 65 is unchanged. For the total sample (Table 19), the expectations of employers, managers, supervisors, and semi-autonomous employees are each significantly different from those of peripheral workers at the .01 level of statistical significance. The gap between peripheral workers and the petite bourgeoisie is significant at the .05 level. In the older subsample (Table 20), only the expectation differences between peripheral workers, on the one hand, and core workers and supervisors on the other, are statistically insignificant when extensive controls are applied. Thus, hypothesis 3a is confirmed by the data: the impact of class position on expected economic situation at 65 years of age is not significantly reduced when income, age, sex, and race are introduced as control variables.

To assess the predictive power of class position on expected economic situation at 65 years of age a comparison between class and income is in order. Hypothesis 3b predicts that:

3b. Class position will be a stronger predictor of expected economic situation at 65 years of age than income.

Equations 10 and 11 are used to test hypothesis 3b by employing a strategy similar to that used for hypotheses 1b and 2b.

EQ. 10. Exp. Econ. St. 65 y.o.a. = b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5

semi-autonomous employees + b_6 core workers + b_7 age + b_8 sex + b_9 race.

EQ. 11. Exp. Econ. St. 65 y.o.a. = b_1 income + b_2 age + b_3 sex + b_4 race.

Age, sex, and race are used as control variables in equations 10 and 11 so as to allow a comparison of the R^2 obtained in each equation with that obtained in equation 9.

Table 21 shows that for the total sample equation 11, which contains income only, explains 16.8 percent of the variance in expected economic situation at age 65, and the equation (10) containing only class position explains 15.5 percent. Equation 9, which includes both class position and income, explains 17.9 percent of the variance. Thus, when class position is added to the equation (3) including income so as to hold its impact on expected economic situation at 65 years of age constant, the R^2 increases by 1.1 per cent (17.9-16.8 = 1.1), but when income is included in the equation containing class position the R^2 increases by 2.4 percent (17.9-15.5 = 2.4). Both additions to the R^2 are significant at the .05 level of statistical significance. When the regression analysis is repeated for the 50-59 aged cohort (Table 22) the results are similar; class position adds 1.9 percent which is statistically significant at the .05 level of significance, but the addition of income to the R^2 in expected economic situation at age 65 is 3.2 percent with a statistical significance level of .01 percent. Clearly these findings mean that hypothesis 3b must be rejected: class

TABLE 21

CLASS POSITION VS. INCOME IN PREDICTING EXPECTED ECONOMIC SITUATION AT 65 YEARS OF AGE (TOTAL SAMPLE, N=1094)

EQ	Age	Sex	Race	Income	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
9	-.227	-.067	-.138	.181	.096	.061	.127	.076	.084	.035	.179*
10	-.230	-.105	-.153	--	.145	.063	.202	.111	.144	.068	.155*
11	-.229	-.074	-.148	.231	--	--	--	--	--	--	.168*

Equation 9 minus Equation 11: Class Position adds 1.1 percent**

Equation 9 minus Equation 10: Income adds 2.4 percent**

*p = <.01

**p = <.05

TABLE 22

CLASS POSITION VS. INCOME IN PREDICTING EXPECTED ECONOMIC SITUATION AT 65 YEARS OF AGE (50-59 AGED COHORT; N=403)

EQ	Age	Sex	Race	Income	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
9	-.062	.001	-.162	.217	.115	.098	.101	.062	.105	.021	.147*
10	-.067	-.050	-.178	--	.175	.113	.183	.104	.167	.028	.115*
11	-.061	-.007	-.174	.279	--	--	--	--	--	--	.128*

Equation 9 minus Equation 11: Class Position adds 1.9 percent**

Equation 9 minus Equation 10: Income adds 3.2 percent*

*p = <.01

**p = <.05

position is not a stronger predictor of expected economic situation at 65 years of age than income.

But these negative findings do not mean that class position is an irrelevant variable in predicting economic situation at age 65. On the contrary, its contribution to the R^2, although not as large as that from income, is still statistically (.05) significant. And the positive findings gleaned from hypotheses 3 and 3a show that class position is a salient determinant of expected economic situation at 65 years of age, so much so that its impact remains statistically significant when extensive controls--age, sex, race, and even income--are in place.

Class Position and Health

From the preceding analyses, a distinct advantage for some classes is detected while others can be viewed as vulnerable on the economic dimensions of retirement decision-making--generally speaking, employers and managers occupy a privileged position while workers, especially peripheral workers, are somewhat disadvantaged. But Barfield and Morgan, as well as others (see Chapter II) emphasize the importance of a non-economic variable, health status, in the decision-making process. To examine the relationship between health and class position, hypotheses 4 and 4a predict that:

4. Class position determines health status.
    a. This relationship holds when income, age, sex, and race are used as controls.

The control variables above have been shown to be intimately related to health status (see Chapter II). As such, they provide a rigorous test for the significance of class position as a determinant of health status.

Equation 12 is used in the regression analysis of the data.

EQ. 12. Health status = b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 income + b_8 age + b_9 sex + b_{10} race.

The hierarchical inclusion of variables is employed again with the class dummies, income, age, sex, and race placed into the equation, respectively.

Table 23 presents the data generated from equation 12 for the total sample and Table 24 the data for the 50-59 aged cohort. As in the case of expected economic situation at 65 years of age, the scale measuring health status does not have an inherently meaningful metric, hence, only standardized regression coefficients are reported in Tables 23 and 24. Peripheral workers again serve as the suppressed or reference category for the regression analysis.

Generally speaking, the data in Table 23 (column 1) suggest that inequalities exist among the class positions with respect to health status. Column 1 shows that when no controls are used in the regressive equation the difference between peripheral workers, on the one hand, and employers, managers, and core workers, on the other, is

TABLE 23

CLASS DIFFERENCES IN HEALTH STATUS (TOTAL SAMPLE, N=1113; STANDARDIZED COEFFICIENTS)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Income	Age, Sex, Race, Income
Employers	.111*	.099*	.094*
Petite bourgeoisie	.010	.007	.004
Managers	.154*	.139*	.127*
Supervisors	.066**	.057	.048
Semi-autonomous employees	.039	.029	.024
Core workers	.088*	.083**	.075**
R^2	.017**	.017**	.023**

*p = <.01

**p = <.05

TABLE 24

CLASS DIFFERENCES IN HEALTH STATUS (50-59 AGED COHORT; N=411; STANDARDIZED COEFFICIENTS)

	Control Variables		
	Column 1	Column 2	Column 3
Class Position	None	Income	Age, Sex, Race, Income
Employers	.072	.082	.080
Petite bourgeoisie	.058	.061	.059
Managers	.179*	.192*	.186*
Supervisors	.046	.054	.045
Semi-autonomous employees	-.022	-.012	-.015
Core workers	.087	.090	.080
R^2	.028	.028	.039

*p = <.01

significant at the .01 level of statistical significance. The gap on health status between peripheral workers and supervisors is statistically significant at the .05 level of significance. Employers and managers report the highest health status.

The results are not as favorable to a positive interpretation of the impact on health status from class position in the 50-59 aged subsample, however (Table 24, column 1). Here, only the managerial class exhibits a health status significantly different (.01) from that reported by peripheral workers. Consequently, on the basis of this analysis, hypothesis 4 is only tentatively supported; in the total sample class position does determine health status to a significant degree, but when the 50-59 aged cohort is considered the class differences disappear, although the gap between managers and peripheral workers is statistically significant.

When income, age, sex, and race are introduced as control variables into equation 12 few changes occur. For the total population (Table 23), the class differences on health status observed earlier are maintained when income is held constant (column 2), although the gap between peripheral and core workers is statistically significant at only the .05 level of significance, and the difference between peripheral workers and supervisors is no longer statistically significant. Even when extensive controls are applied so as to remove the impact of age, sex, race, and income (column 3), the class differences on health status remain statistically significant in the total population. But the same analysis for the 50-59 aged cohort

reveals a different picture (Table 24). As income (column 2) and age, sex, race, and income (column 3) are held constant, only the health status differences between managers and peripheral workers are statistically significant. Thus, hypothesis 4a is only tentatively supported: the relationship between class position and health status remains significant when extensive controls are used only in the total sample, and not in the 50-59 aged subsample.

Nevertheless, class position does seem to exert a salient influence on health status. In Chapter II, several studies were mentioned which indicate a causal relationship between income and health status. To test the predictive power of class position on health status, a comparison between it and income may be useful; thus hypothesis 4b predicts that:

4b. Class position will be a stronger predictor of health status than income.

The analysis proceeds in a fashion similar to the tests of hypotheses 1b, 2b, and 3b. Here, we compare the R^2 obtained from equation 13 which includes the class dummy variables with the R^2 observed in equation 14 which contains income, but not class position.

EQ. 13. Health status = b_1 employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 age + b_8 sex + b_9 race.

EQ. 14. Health status = b_1 income + b_2 age + b_3 sex + b_4 race.

Age, sex, and race are used as controls in equations 13 and 14 so as to

permit comparison with equation 12 which includes both class position and income.

Tables 25 and 26 report the results of the analysis on the total sample and the 50-59 aged cohort, respectively. Table 25 shows that equation 13 explains 2.25 percent of the variance in health status, whereas equation 14 explains 1.19 percent. Hence, when class position is added to the equation (14) containing income, the total explained variance in health status increases by 1.06 percent (2.25-1.19 = 1.06). However, when income is added to the equation including class position the increase is only .03 percent (2.25-2.22 = .03). For the 50-59 aged cohort the difference in the predictive power of class position and income with respect to health status is greater. Class position increases the R^2 in health status by 2.7 percent (3.94-1.24 = 2.7), whereas income adds only .1 percent (3.94-3.84 = .1) to the total explained variance (Table 26).[28] In both samples class adds significantly (.01) to the total explained variance in health status while income does not. Thus, hypothesis 4b is confirmed by the data: class position is a more powerful predictor of health status than income.

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[28]Actually, none of these equations (12, 13, and 14) explains much of the variance in health status. For example, equation 12 contains class position as well as income, plus other variables which have been shown to influence health status such as age, sex, and race. Yet equation 12 explains only about 4 percent of the variance in health status. But as noted in Chapters II and III, health in general, and health status as measured by Barfield and Morgan in particular, is an elusive notion. It may be that the low R^2 obtained in the equations is due to the nature of health as a phenomenon that reflects individual differences rather than differences according to structural positions in society as well as the subjective estimate of health the respondents were required to make.

TABLE 25

CLASS POSITION VS. INCOME IN PREDICTING HEALTH STATUS (TOTAL SAMPLE, N=1113)

EQ	Age	Sex	Race	Income	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
12	-.059	-.032	-.021	.018	.094	.004	.127	.048	.024	.075	.0225*
13	-.059	-.036	-.023	--	.100	.005	.135	.052	.030	.077	.0222*
14	-.038	-.038	-.024	.055	--	--	--	--	--	--	.0119

Equation 12 minus Equation 14: Class Position adds .06 percent

Equation 12 minus Equation 13: Income adds .03 percent

*p = <.05

TABLE 26

CLASS POSITION VS. INCOME IN PREDICTING HEALTH STATUS (50-59 AGED COHORT; N=411)

EQ	Age	Sex	Race	Income	Employers	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
12	-.100	-.018	.022	-.036	.080	.059	.186	.045	-.015	.080	.039
13	-.099	-.010	.025	--	.070	.057	.172	.038	-.026	.079	.038
14	-.102	-.032	.021	.002	--	--	--	--	--	--	.012

Equation 12 minus Equation 14: Class Position adds 2.70 percent*

Equation 12 minus Equation 13: Income adds .10 percent

*p = <.01

Since much of the research on retirement decision-making (see Chapter II) points to the impact of health, it may be interesting to examine the interaction between class position and health status in the prediction of expected retirement age. Barfield and Morgan, for example, note that poor health increases the tendency to plan for early retirement, regardless of one's economic situation. An alternate way to interpret the relationship between health and expected retirement age suggests that class position affects this relationship, producing different expected retirement age returns to health status for different class positions. Hypothesis 4c, then, predicts that:

4c. Class position affects the manner in which health status influences expected retirement age.

Hypothesis 4c, like hypothesis 2c, predicts that health status slopes are not constant, but vary according to class position. Barfield and Morgan, on the other hand, argue that the impact of health status upon retirement decision-making is not subject to positional differences.

To test hypothesis 4c, equations 15 and 16 are used to compare the seven class positions.

EQ. 15. E.R.A. = $a + b_1$ health status.

EQ. 16. E.R.A. = $a + b_1$ health status + b_2 age + b_3 sex + b_4 race + b_5 expected retirement income.

Equation 15 is the simple regression of expected retirement age on health status, while in equation 16 age, sex, race, and expected retirement income are held constant. The health status coefficients obtained for each class position in equations 15 and 16 are the

expected retirement age returns to health for a given class. In other words, the health status coefficients indicate the years (or fractions thereof) in either a positive or negative direction that each increment on the health scale produces for a particular class position.[29] Table 27 presents the data generated by equations 15 and 16.

Considering the simple regression of expected retirement age on health status (equation 15), the petite bourgeoisie plans to retire 3.03 years later for each increment in health status, managers plan to retire 1.59 years later, core workers hope to delay retirement by .38 years, and employers express plans to retire .13 years later. By contrast, each increment in health status--an indication of increasingly positive health which should, according to Barfield and Morgan, influence individuals to plan late retirement--supervisors plan to retire .43 years early, semi-autonomous employees expect to retire .79 years early, and peripheral workers expect to retire early by .81 years. A t-test shows that many of these expected retirement age returns to health status are statistically significant. For example, the employer compared to managers gap is statistically significant at the .05 level of significance, the difference between managers and core workers is significant at the .005 level, and the gaps between managers and peripheral workers, semi-autonomous employees and managers, and supervisors and managers are all statistically significant at the .0005

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[29] As noted in Chapter III, each increment in health status indicates increasingly favorable health.

TABLE 27

REGRESSIONS ON EXPECTED RETIREMENT AGE RETURNS TO HEALTH STATUS (TOTAL SAMPLE, N=1113; STANDARD ERRORS IN PARENTHESES)

Variable	Employers (95)		Petite Bourgeoisie (49)		Managers (179)		Supervisors (133)		Semi-autonomous Employees (112)		Core Workers (436)		Peripheral Workers (109)	
	EQ15	EQ16	EQ15	EQ16	EQ15	EQ16	EQ15	EQ16	EQ15	EQ16	EQ15	EQ16	EQ15	EQ16
Health status	.13 (1.18)	.40 (1.17)	3.03 (1.50)	2.90 (1.57)	1.59 (.57)	1.51 (.58)	-.43 (.65)	-.29 (.65)	-.79 (.46)	-.44 (.48)	.38 (.28)	.46 (.28)	-.81 (.58)	-.87 (.58)
Age		1.60 (.90)		.55 (1.53)		.86 (.40)		.58 (.58)		.71 (.36)		1.02 (.24)		.64 (.53)
Sex				6.77 (6.39)		-1.19 (2.10)		3.18 (2.68)		1.04 (1.62)		.16 (.82)		-1.08 (1.50)
Race		8.33 (5.03)		-5.93 (11.78)		-1.31 (3.44)		3.61 (3.70)		3.79 (2.36)		.14 (.86)		-1.47 (1.94)
Expected retirement income		.00 .72		.00 1.62		.00 .61		-.00 .70		-.00 .70		-.00 .31		.00 .66
Constant	64.04	60.12	62.80	54.60	59.22	59.07	64.29	59.27	64.93	61.30	62.25	59.67	65.62	65.65
R^2	.0001	.07	.08	.12	.04	.08	.003	.038	.026	.10	.004	.06	.018	.053

Selected Comparisons

Class Comparisons	Equation 15 Difference	Equation 16 Difference
Employer vs. manager	1.46***	1.11
Employee vs. peripheral workers	.94	1.27***
Manager vs. supervisors	2.02*	1.80*
Manager vs. semi-autonomous employees	2.38*	1.95*
Manager vs. core workers	1.21**	1.05**
Manager vs. peripheral workers	2.40*	2.38*
Semi-autonomous employers vs. core workers	1.17*	.90**
Core workers vs. peripheral workers	1.19*	1.33*

*p = <.0005 **p = <.005 ***p = <.05

level of significance. It is also apparent that the working class is segmented with respect to the relationship between health status and expected retirement age; the gaps between core workers, on the one hand, and peripheral workers and semi-autonomous employees, on the other, are each significant at the .0005 level of statistical significance.

When age, sex, race, and expected retirement income are held constant (equation 16), the pattern of class differentials remains essentially the same--although most of the gaps are reduced somewhat the significance levels are usually unchanged--with the exception of the difference between employers and peripheral workers which increases from .94 years to 1.17 years, the latter gap obtaining a .05 level of statistical significance. Consequently, the data clearly support hypothesis 4c: the impact of health status on retirement decision-making is not constant, but varies significantly according to class position even when the effects of age, sex, race, and expected retirement income are controlled.

The inconclusive findings on hypotheses 4, 4a, and 4b, coupled with the strong support of hypothesis 4c suggest that the real importance of class position with regard to its influence on health status appears to be in the interaction between the two variables in determining expected retirement age.

Class Position and Expected Retirement Age

In Chapters I and II, it was noted that Barfield and Morgan argue that economic factors--particularly expected retirement income and expected economic situation at 65 years of age--are the primary

factors affecting retirement decision-making. Other studies were noted in Chapter II which highlight the salience of age, sex, race, and health in the decision of when it is a good time to retire. But these studies explain very little of the variance in retirement decision-making. For example, Barfield and Morgan use a long list of predictors, but explain roughly 8 percent of the variance in expected retirement age. However, the preceding analyses point to the distinct probability that Barfield and Morgan's best predictors are either determined by or interacting with class position. Logically, we can assume that class position may be a crucial causal component of retirement decision-making.

To examine the impact of class position on expected retirement age, then, the following hypotheses are proposed.

5. Class position determines expected retirement age.
    a. This relationship holds when other variables--health status, economic situation expected at age 65, expected retirement income, age, sex, and race--are used as controls.

Equation 17 is used to test these hypotheses:

EQ. 17. $E.R.A. = a + b_1$ employers $+ b_2$ petite bourgeoisie $+ b_3$ managers $+ b_4$ supervisors $+ b_5$ semi-autonomous employees $+ b_6$ core workers $+ b_7$ health status $+ b_8$ expected economic situation at 65 years of age $+ b_9$ expected retirement income $+ b_{10}$ age $+ b_{11}$ sex $+ b_{12}$ race.

Peripheral workers are again the suppressed category in the analysis. The variables are inserted into equation 17 in a five stage hierarchical fashion: in the first stage only the class dummies are considered, a second stage of inclusion places health status in the equation, expected economic situation at age 65 is inserted into the analysis at the third stage, a fourth stage places expected retirement income in the equation, and the final inclusion stage inserts age, sex, and race into equation 17.

Tables 28 and 29 present the expected retirement age figures for each class position at various inclusion stages for the total sample and the 50-59 aged cohort, respectively. In each table, when no controls are used in the regression equation (column 1), only the petite bourgeoisie differs significantly from peripheral workers on expected retirement age. On the basis of this finding, hypothesis 5 is rejected.

When other variables are placed into equation 17, however, a striking pattern emerges, particularly in the total sample (Table 28)--the impact of class position on expected retirement age becomes statistically significant. For example, once the effect of expected economic situation at 65 years of age is removed (column 3), employers and the petite bourgeoisie differ significantly (.05 and .01 levels of significance, respectively) on expected retirement age from peripheral workers. When expected retirement income is held constant (column 4), the gaps on expected retirement age between peripheral workers, on the one hand, and employers, managers, and the petite bourgeoisie, on the

TABLE 28

CLASS DIFFERENCES IN EXPECTED RETIREMENT AGE (TOTAL SAMPLE, N=1113)

	Control Variables				
	Column 1	Column 2	Column 3	Column 4	Column 5
Class Position	None	Health Status	Economic Situation at 65	Expected Retirement Income	Economic Situation at 65, Expected Retirement Income, Health Status, Age, Sex, Race
Employers	64.41	63.62	66.57**	67.79*	66.61*
Petite bourgeoisie	70.23*	69.52*	72.17*	72.78*	71.53*
Managers	63.67	62.87	65.94	67.27*	66.29*
Supervisors	63.18	62.44	65.21	65.99	64.97
Semi-autonomous employees	62.94	62.21	65.12	66.11	64.98
Core workers	63.23	62.49	64.91	65.45	64.53
Peripheral workers	63.69	63.00	65.17	65.54	64.71
R^2	.045*	.047*	.076*	.091*	.107*

*p = <.01

**p = <.05

TABLE 29

CLASS DIFFERENCES IN EXPECTED RETIREMENT AGE (50-59 AGED COHORT; N=411)

	Control Variables				
	Column 1	Column 2	Column 3	Column 4	Column 5
Class Position	None	Health Status	Economic Situation at 65	Expected Retirement Income	Economic Situation at 65, Expected Retirement Income, Health Status, Age, Sex, Race
Employers	65.28	63.91	65.74	66.28	65.41
Petite bourgeoisie	71.91*	70.54*	72.26*	72.49*	71.61*
Managers	65.13	63.61	65.40	66.06	65.20
Supervisors	63.76	62.45	64.08	64.50	63.68
Semi-autonomous employees	63.77	62.58	64.36	64.80	63.94
Core workers	64.55	63.23	64.58	64.79	64.00
Peripheral workers	64.65	63.42	64.69	64.83	64.03
R^2	.087*	.094*	.110*	.114*	.118*

*p = <.01

other, are statistically significant at the .01 level of statistical significance. The addition of age, sex, and race as control variables does not affect the significant relationship between class position and expected retirement age (column 5), With all controls in place, the petite bourgeoisie expects to retire at 71.53 years of age, followed by employers at 66.61 years of age, managers at 66.29 years of age, semi-autonomous employees at 64.98 years of age, supervisors at 64.97 years of age, peripheral workers at 64.71 years of age, and core workers, who plan the earliest retirement, at 64.53 years of age (Table 28, column 5),

Why does the influence of class position on expected retirement age become statistically significant when extensive controls are used in the regression equation? And what does such an apparent anomaly suggest about the validity of the analyses used to test earlier hypotheses wherein controls were applied to detect whether an observed relationship disappeared rather than emerged? Actually, there is no anomaly at all in these findings for hypothesis 5a, and certainly the preceding analyses remain valid.

Often an investigator can be misled into assuming that an absence of a relationship between two variables is real, whereas the absence of the relationship may result from the intrusion of what Rosenberg (1968) refers to as suppressor variables. Suppressor variables can cancel out, reduce, or conceal a true relationship between two variables. The suppressor variable is the exact opposite of the extraneous or intervening variable. When the researcher holds an

extraneous variable constant an existing relationship between two variables appears to vanish, but when a suppressor variable is introduced as a control a relationship emerges between the two original variables. Obviously suppressor variables are theoretically significant. If a hypothesis derived from a theory reveals an absent or weak relationship, one may erroneously consider the theory defective. If the data are properly analyzed and interpreted, however, the theory may indeed be confirmed.

The suppressor phenomenon operates in situations where a control variable is positively related to the independent variable--here, class position--and is negatively related to the dependent variable--in this instance, expected retirement age. From the data generated by equation 17 in Table 28 (column 4), it seems that expected retirement income is the suppressor variable since the influence of the class dummies on expected retirement age emerges as statistically significant when expected retirement age is held constant.[30] Consequently, a reappraisal of hypothesis 5 is warranted: class position does affect expected retirement age (hypothesis 5 supported), but its impact is suppressed

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[30]Indeed, the expected retirement income zero-order correlation coefficients with each class dummy variable in the total sample is as follows: employers .16, the petite bourgeoisie -.04, managers .30, supervisors .01, semi-autonomous employees .09, and core workers -.25. The coefficients in the 50-59 aged cohort are as follows: employers .17, the petite bourgeoisie -.04, managers .31, supervisors .07, semi-autonomous employees .10, and core workers -.27.

The zero-order correlation coefficient between expected retirement age and expected retirement income in the total sample is -.15, while in the 50-59 aged subsample the coefficient is -.09.

by expected retirement income. Obviously, the data confirm hypothesis 5a as well: the influence of class position on expected retirement age is statistically significant exactly when extensive controls are in place.

Since expected retirement income functions as a suppressor variable in the relationship between class position and expected retirement age, and since Barfield and Morgan attribute primary importance to economic factors as well as health status in retirement decision-making, it is necessary to weigh the effect of class position on expected retirement age with Barfield and Morgan's salient predictors. By so doing, the validity of class position as an important factor in retirement decision-making can be assessed. Thus, hypothesis 5b predicts that:

> 5b. Class position will be a stronger predictor of expected retirement age than expected retirement income, expected economic situation at 65 years of age, health status, or income.

To test this hypothesis, a strategy similar to the one used for hypotheses 1b, 2b, 3b, and 4b is employed based on the following equations:

EQ. 18. $E.R.A. = a + b_1$ employers $+ b_2$ petite bourgeoisie $+ b_3$ managers $+ b_4$ supervisors $+ b_5$ semi-autonomous employees $+ b_6$ core workers $+ b_7$ expected retirement income $+ b_8$ income $+ b_9$ health status $+ b_{10}$ expected economic situation at 65 $+ b_{11}$ age $+ b_{12}$ race $+ b_{13}$ sex.

EQ. 19. E.R.A. = $a + b_1$ employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 income + b_8 health status + b_9 expected economic situation at 65 + b_{10} age + b_{11} race + b_{12} sex.

EQ. 20. E.R.A. = $a + b_1$ employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 expected retirement income + b_8 income + b_9 health status + b_{10} age + b_{11} race + b_{12} sex.

EQ. 21. E.R.A. = $a + b_1$ employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 expected retirement income + b_8 income + b_9 expected economic situation at 65 + b_{10} age + b_{11} race + b_{12} sex.

EQ. 22. E.R.A. = $a + b_1$ employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 expected retirement income + b_8 expected economic situation at 65 + b_9 health status + b_{10} age + b_{11} race + b_{12} sex.

EQ. 23. E.R.A. = $a + b_1$ expected retirement income + b_2 income + b_3 expected economic situation at 65 + b_4 health status + b_5 age + b_6 race + b_7 sex.

In equations 19 through 23, peripheral workers is the excluded category, and age, sex, and race are used as control variables. The analysis involves an attempt to determine whether the total explained variance in expected retirement age increases more when the class dummies are added to the regression equation (equation 18 minus equation 23) than when expected retirement income (equation 18 minus equation 19), expected economic situation at 65 years of age (equation 18 minus equation 20), income (equation 18 minus equation 22), or health status (equation 18 minus equation 21) are added to the equation (18).

Tables 30 and 31 present the data generated from equations 18 through 23 for the 50-59 aged cohort and the total sample, respectively. Table 30 shows that when class position is added to the equation containing all of the predictors (equation 18), the total explained variance increases by 7.9 percent (11.6-3.7 = 7.9). An F-test reveals that the addition to the R^2 on expected retirement age from class position is significant at the .01 level of statistical significance. Similarly, health status adds 1.0 percent to the R^2 (11.6-10.6 = 1.0) in expected retirement age; expected economic situation at 65 years of age also adds 1.0 percent (11.6-10.6 = 1.0), expected retirement income adds .6 percent (11.6-11.0 = .6), and income adds .2 percent (11.6-11.4 = .2). Table 31 shows that class adds 4.5 percent to the R^2 in expected retirement age, expected retirement income adds 1.7 percent, expected economic situation at 65 years of age adds 1.3 percent, health status adds .4 percent, and income adds .3 percent. Once again, an F-test reveals that the addition to the R^2 of expected retirement age from the

TABLE 30

CLASS POSITION VS. OTHER VARIABLES IN PREDICTING EXPECTED RETIREMENT AGE
(50-59 AGED COHORT; N=403; STANDARDIZED COEFFICIENTS IN PARENTHESES)

EQ	Constant	Age	Sex	Race	Expected Economic Situation at 65	Health Status	Income	Expected Retirement Income	Employer	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
18	63.86	.58 (.048)	.00 (.002)	-1.17 (-.05)	-.74 (-.116)	.63 (.106)	.00 (.052)	.00 (.022)	.88 (.041)	7.11 (.268)	.73 (.041)	-.76 (-.039)	-.59 (-.030)	-.23 (-.019)	.116*
19	63.61	.66 (.055)	.19 (.01)	-1.08 (-.05)	-.87 (-.136)	.59 (.100)	.00 (.009)	--	.72 (.034)	7.15 (.270)	.46 (.026)	-.85 (-.044)	-.64 (-.033)	-.26 (-.021)	.110*
20	62.77	.64 (.053)	.00 (.00)	-.81 (-.04)	--	.64 (.108)	.00 (.049)	.00 (-.019)	.69 (.032)	6.85 (.259)	.65 (.036)	-.82 (-.043)	-.77 (-.040)	-.22 (-018)	.106*
21	65.58	.44 (.037)	.00 (.00)	-1.16 (-.05)	-.75 (-.116)	--	.00 (.055)	-.01 (-.09)	.99 (.046)	7.34 (.277)	1.05 (.058)	-.68 (-.035)	-.61 (-.031)	-.15 (-.012)	.106*
22	64.29	.59 (.049)	.09 (.01)	-1.19 (-.05)	-.72 (-.113)	.61 (.103)	--	-.01 (-.09)	1.10 (.052)	7.20 (.272)	.97 (.054)	-.61 (-.031)	-.36 (-.018)	-.21 (-.017)	.114*
23	63.50	.63 (.052)	.00 (.00)	-1.27 (-.06)	-.58 (-.091)	.75 (.127)	.01 (.01)	-.01 (-.10)	--	--	--	--	--	--	.037**

Equation 18 minus Equation 23: Class Position adds 7.9 percent*
Equation 18 minus Equation 21: Health Status adds 1.0 percent**
Equation 18 minus Equation 20: Economic Situation at 65 adds 1.0 percent**
Equation 18 minus Equation 19: Expected Retirement Income adds .6 percent
Equation 18 minus Equation 22: Income adds .2 percent

*p = <.01

**p = <.05

TABLE 31

CLASS POSITION VS. OTHER VARIABLES IN PREDICTING EXPECTED RETIREMENT AGE
(TOTAL SAMPLE, N=1094; STANDARDIZED COEFFICIENTS IN PARENTHESES)

EQ	Constant	Age	Sex	Race	Expected Economic Situation at 65	Health Status	Income	Expected Retirement Income	Employer	Petite Bourgeoisie	Managers	Supervisors	Semi-autonomous Employees	Core Workers	R^2
18	64.33	.72 (.119)	-.63 (-.03)	-1.43 (-.05)	-.90 (-.125)	.40 (.054)	.00 (.06)	.00 (-.032)	1.53 (.063)	6.51 (.196)	1.18 (.064)	-.20 (-.009)	-.12 (-.005)	-.35 (-.027)	.109*
19	63.76	.77 (.128)	-.30 (-.03)	-1.25 (-.05)	-1.08 (-.150)	.36 (.048)	.00 (.011)	--	1.20 (.049)	6.51 (.196)	.68 (.039)	-.28 (.013)	-.32 (-.014)	-.38 (-.027)	.092*
20	62.39	.88 (.145)	-.46 (-.02)	-.99 (-.04)	--	.39 (.053)	.00 (.055)	.00 (-.06)	1.34 (.055)	6.33 (.190)	.99 (.053)	-.37 (-.018)	-.34 (-.015)	-.41 (-.030)	.096*
21	65.27	.70 (.116)	-.62 (-.03)	1.45 (-.05)	-.90 (-1.25)	--	.00 (.055)	.00 (-.06)	1.70 (.069)	6.59 (.198)	1.36 (.073)	-.09 (-.004)	-.07 (-.003)	-.24 (-.017)	.105*
22	64.85	.74 (.122)	-.79 (-.03)	-1.48 (-.05)	-.87 (-.121)	.40 (.054)	--	.01 (-.09)	1.86 (-.076)	6.62 (.199)	1.48 (.080)	.00 (-.001)	-.15 (-.006)	-.28 (-.020)	.106*
23	64.33	.75 (.128)	-.80 (-.03)	-1.76 (-.06)	-.85 (-.118)	.41 (.056)	.00 (-.01)	-.01 (-.10)	--	--	--	--	--	--	.064*

Equation 18 minus Equation 23: Class Position adds 4.5 percent*
Equation 18 minus Equation 21: Health Status adds .4 percent
Equation 18 minus Equation 20: Economic Situation at 65 adds 1.3 percent*
Equation 18 minus Equation 19: Expected Retirement Income adds 1.7 percent*
Equation 18 minus Equation 22: Income adds .3 percent

*p = <.01

class dummy variables is statistically significant at the .01 level of significance. Thus, hypothesis 5b is confirmed by the data: class position is a stronger predictor of expected retirement age than expected retirement income, expected economic situation at 65 years of age, health status, or income.

A more rigorous test of the importance of class position on retirement decision-making is to examine whether a regression equation including the class dummy variables (equation 24) adds significantly to the R^2 in expected retirement age accruing to an equation (25) which includes only Barfield and Morgan's set of predictors.

EQ. 24. E.R.A. = $a + b_1$ employers + b_2 petite bourgeoisie + b_3 managers + b_4 supervisors + b_5 semi-autonomous employees + b_6 core workers + b_7 expected retirement income + b_8 expected economic situation at 65 + b_9 health status + b_{10} income + b_{11} age + b_{12} sex + b_{13} race + b_{14} hobbies + b_{15} education + b_{16} job satisfaction + b_{17} work orientation.

EQ. 25. E.R.A. = $a + b_1$ expected retirement income + b_2 expected economic situation at 65 + b_3 health status + b_4 income + b_5 age + b_6 sex + b_7 race + b_8 hobbies + b_9 education + b_{10} job satisfaction + b_{11} work orientation.

Equations 24 and 25 are used to test hypothesis 5c which predicts that:

5c. Class position adds significantly to Barfield and Morgan's set of predictors for expected retirement age.

Tables 32 and 33 present the data generated by equations 24 and 25 for the total sample and the 50-59 aged subsample, respectively.

Table 32 shows that for the total sample, equation 25 adds 4.1 percent (12.6-8.5 = 4.1) to the total explained variance in expected retirement age. In the 50-59 aged cohort (Table 33), equation 24 adds 7.2 percent (16.2-9.0 = 7.2) to the R^2 in expected retirement age. The impact of class position on expected retirement age is statistically significant at the .01 level of significance in both samples. In fact, class position increases the R^2 in expected retirement age observed in the total sample by almost 50 percent over Barfield and Morgan's model, while in the 50-59 aged cohort the increase is 80 percent. An obvious conclusion asserts itself: class position adds significantly to the predictive power of Barfield and Morgan's retirement decision-making model. Thus, hypothesis 5c confirmed by the data.

The support of hypotheses 5b and 5c is the major finding presented here. As noted in Chapter I, Barfield and Morgan's study is the definitive investigation on the subject of retirement decision-making in social gerontology despite an R^2 of 8.5 percent which, even by social science standards, is quite low.[31] The fact that class position adds significantly--both statistically and substantially, as we will see later--to the explained variance of the critical dependent variable in

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[31]There is very little variation in expected retirement age, however. In the total sample, expected retirement age has a mean of 63.72 and a standard deviation of 6.83, while in the 50-59 aged cohort the figures are 64.94 and 5.99, respectively.

TABLE 32

CLASS POSITION VS. BARFIELD AND MORGAN'S MODEL IN PREDICTING EXPECTED RETIREMENT AGE (TOTAL SAMPLE, N=1094; STANDARDIZED COEFFICIENTS IN PARENTHESES)

EQ	Constant	Age	Sex	Race	ECX[a]	HX	Inc.	ERInc.	Hob.	Educ.	J.S.	W.O.	Empl.	P.B.	Man.	Sup.	S.A.Empl.	C.Wks.	R^2
24	66.18	.78	-.123	-.159	-.81	.38	-.00005	-.0003	-.72	.22	-.39	.07	1.37	6.23	.96	-.14	-.39	-.38	.126*
		(.129)	(-.053)	(-.058)	(-.113)	(.051)	(.039)	(-.075)	(-.108)	(-.064)	(-.051)	(.005)	(.056)	(.187)	(.052)	(-.007)	(-.017)	(-.027)	
25	66.46	.84	-1.48	-1.87	-.77	.38	.00006	-.0003	-.76	.28	-.51	.07	--	--	--	--	--	--	.085*
		(.138)	(-.063)	(-.069)	(-.107)	(.051)	(.047)	(-.071)	(-.101)	(-.080)	(-.066)	(.005)							

Equation 24 minus Equation 25: Class Position adds 4.1 percent*

[a]KEY

ECX = Expected economic situation at 65 years of age
HX = Health Index
Inc. = Income
ERInc. = Expected retirement income
Hob. = Hobbies
Educ. = Education
J.S. = Job satisfaction
W.O. = Work orientation
Empl. = Employers
P.B. = Petite bourgeoisie
Man. = Managers
Sup. = Supervisors
S.A.Empl. = Semi-autonomous employees
C.Wks. = Core workers

*P = .01

TABLE 33

CLASS POSITION VS. BARFIELD AND MORGAN'S MODEL IN PREDICTING EXPECTED RETIREMENT AGE
(50-59 AGED COHORT; N=403; STANDARDIZED COEFFICIENTS IN PARENTHESES)

EQ	Constant	Age	Sex	Race	ECX[a]	HX	Inc.	ERInc.	Hob.	Educ.	J.S.	W.O.	Empl.	P.B.	Man.	Sup.	S.A.Empl.	C.Wks.	R^2
24	66.05	.47	-.70	-1.43	-.65	.61	.00004	-.0002	-.26	.27	-.23	-.16	1.33	7.05	1.07	.00	-.42	.00	.162*
		(.039)	(-.039)	(-.063)	(-.102)	(.104)	(.037)	(-.031)	(-.047)	(.091)	(-.034)	(-.013)	(.062)	(2.66)	(.060)	(-.004)	(-.022)	(-.001)	
25	66.57	.48	-.92	-1.59	-.50	.74	.00005	-.0002	-.27	.31	-.38	-.26	--	--	--	--	--	--	.090*
		(.040)	(.052)	(-.071)	(-.078)	(.124)	(.042)	(-.089)	(-.048)	(.104)	(-.055)	(-.021)							

Equation 24 minus Equation 25: Class Position adds 7.2 percent*

[a] KEY

ECX = Expected economic situation at 65 years of age
HX = Health Index
Inc. = Income
ERInc. = Expected retirement income
Hob. = Hobbies
Educ. = Education
J.S. = Job satisfaction
W.O. = Work orientation
Empl. = Employers
P.B. = Petite bourgeoisie
Man. = Managers
Sup. = Supervisors
S.A.Empl. = Semi-autonomous employees
C.Wks. = Core workers

*p = <.01

a hallmark study should lead to a greater appreciation by social gerontologists of class analysis, generally, and a class model emphasizing the marxist notion of position in the social relations of production, specifically.

Summary

The preceding analyses suggest the usefulness of position in the social relations of production as a predictor of the factors Barfield and Morgan consider important to individuals contemplating retirement. Significant class differences emerge with regard to expected retirement income, expected economic situation at 65 years of age, health status, and expected retirement age itself. This assessment is based on a rigorous comparison of the explanatory power of class position relative to traditional social stratification and social gerontological emphases. The following chapter summarizes the findings and integrates them into critical theory.

CHAPTER V

SUMMARY AND CONCLUSIONS

The preceding analyses are based on the theoretical proposition that class position as defined by position in the social relations of production subsumes other factors which Barfield and Morgan insist are crucial to retirement decision-making. To translate this proposition into a viable methodological strategy, multiple regression analysis was used so as to examine the data under precise causal ordering of the factors people consider when contemplating expected retirement age.

Perhaps the most significant conclusion which can be drawn from this analysis, then, is the suggestion that class position is a useful tool for understanding retirement decision-making and its component dimensions. Although it is not the intention of this research to question the validity of prior research in this area, it is difficult to ignore the class-induced cleavages observed in consequential aspects of the retirement decision-making process to which social gerontologists repeatedly refer, nor can the substantial additions to the R^2 in expected retirement age when class position is included with Barfield and Morgan's set of predictors be easily dismissed.

Barfield and Morgan notwithstanding, analysis of the data reveals that class position is the strongest predictor of expected retirement age considered. As Table 31, page 145, shows, class position adds 4.5 percent to the explained variance in expected retirement age in the total sample, while expected retirement income accounts for only 1.7

percent, followed by expected economic situation at 65 years of age (1.3 percent), health status (.4 percent), and income (.3 percent). For the 50-59 aged subsample (Table 31, page 145) class position increases the R^2 in expected retirement age by 7.9 percent. None of Barfield and Morgan's predictors contribute more than 1.0 percent to the explained variance in expected retirement age when class position is included in the model.

When the class model is compared directly with Barfield and Morgan's entire model (Tables 32 and 33), class position adds 4.1 percent to the R^2 in expected retirement age in the total sample and 7.2 percent in the 50-59 aged cohort. This represents increases of 50 and 80 percent, respectively, in the explained variance over their set of predictors.

It was found that class position is a significant determinant of the economic variables--income, expected economic situation at 65 years of age, and expected retirement income--which Barfield and Morgan argue are the salient components of retirement decision-making. Class position was a more powerful predictor of these variables than occupational status, which is a major stratification and social mobility concept in the dominant sociological perspectives. When health status was considered important class-induced differences also emerged. The influence of class position on each of these variables remained fairly stable even when a variety of personal characteristics such as occupational status, age, sex, race, and education were held constant.

For example, even when extensive controls are in place,

employers earn almost $3,000 per year more than core workers and virtually $3,500 more than peripheral workers. Comparable figures for the gaps between managers and both sectors of the working class are $2,029 and $2,521, respectively. Although there is no systematic relationship between income and retirement plans, there is a strong positive relationship between expected retirement income and early retirement preferences. And, as Table 19, page 115, reveals, employers are able to transform current income into expected retirement income more efficiently than either core or peripheral workers when age, sex, race, occupational status, and education are controlled. Consequently, it is no surprise to find employers' annual expected retirement incomes to be over $1,700 more than those accruing to core workers and about $2,000 above that observed for peripheral workers, while the gaps between managers and core workers ($432) and peripheral workers ($658), though less, are still substantial. When expected economic situation at 65 years of age is considered--a variable which, from a conceptual basis may be the most important economic dimension of retirement decision-making (see Chapter IV)--employers and managers report the most favorable expectations, whereas core and peripheral workers view their economic positions at this traditional retirement age in the least favorable terms. As noted in Chapters II and IV, Barfield and Morgan argue that a high expected retirement income and a favorable perception of one's economic conditions at 65 years of age are positively related to early retirement plans.

With respect to health status the class differences are not as

consistent, though employers and managers do seem to enjoy better health than core workers and especially peripheral workers. When the effects of age, sex, race, and income are removed (Table 24, column 3, page 125), employers and managers report the most favorable health among all classes, followed by core workers. Peripheral workers, on the other hand, report the poorest health. Now Barfield and Morgan insist, and most research supports their claim, that good health encourages late retirement plans. But as Table 28, page 137, shows, Barfield and Morgan's hypothesis only holds for employers, core workers, and most notably managers. Peripheral workers, however, seem to plan early retirement--in fact, the earliest of any class position--with increasingly better health when age, sex, race, and expected retirement income are held constant.

In summary, managers and employers occupy privileged positions relative to core and peripheral workers regarding the factors Barfield and Morgan assert are important determinants of retirement decision-making, positions which should encourage plans for early retirement. But the data clearly show that employers and managers do not express retirement plans significantly different from those of core and peripheral workers when no controls are used (Table 29, column 1, page 138). When the economic dimensions of retirement decision-making, along with health status, age, sex, and race are held constant (Table 29, column 5) significant differences in retirement plans among the class positions emerge, however. Here employers plan to retire almost

two years later than core and peripheral workers, and managers plan to retire approximately one and a half years later than these workers.

Perhaps Barfield and Morgan's set of predictors should be viewed as derivatives of position in the social relations of production which, in turn, provide the individual with varying degrees of autonomy in retirement decision-making. This seems to be a legitimate conclusion only if two assumptions are valid. First, one must accept class theory and the critical perspective from which it is drawn as "one" viable framework to orient our thinking about the retirement decision-making process. The positive findings regarding the importance of class position as a determinant of expected retirement age and its impact on Barfield and Morgan's dimensions of retirement decision-making point to the potential utility of this perspective. Second, because the data address expected rather than actual retirement age, one might suggest that class positions with less autonomy in the social relations of production and hence, according to the critical perspective, in the decision-making process would express earlier expected retirement ages, while positions obtaining relatively more autonomy in the sphere of decision-making might tend to express later expected retirement ages because of the open-ended situation they occupy. With the former positions retirement decision-making may take place in a situation characterized by certainty and absoluteness, whereas in the latter positions the process is essentially ambiguous. If these assumptions are indeed valid, we might achieve a better understanding of retirement decision-making by conceiving of it as a process embedded in positions of autonomy and authority in the productive process.

It would be misleading, however, to interpret these results as an unequivocal validation of class or critical theories and their application to retirement decision-making. This research only suggests that possibility. Although class position is a more powerful determinant of expected retirement age than Barfield and Morgan's set of predictors, there does exist the problem of a disjuncture between theory and data. For example, two central thrusts of Marx's class theory are class consciousness and class struggle. But the data analyzed here do not directly address the quality of class relations in the productive process, nor the degree of class consciousness within classes, if any. At the same time, however, the operationalization of class position outlined in Chapter III does rely on criteria which at the very least imply authority relations between employers and administrative technicians, on the one hand, and the non-propertied segment of the work force dependent on the wage labor system, on the other.

For Marx, the social relations of production are inherently power relations which define social reality. He addresses this proposition fully in the German Ideology (1958:218):

> The fact is, therefore, that definite individuals who are productively active in a definite way enter into these definite social and political relations. Empirical observations must in each separate instance bring out empirically, and without any mystification and speculation, the connection of the social and political structure with production. The social structure . . . [is] . . . continually evolving out of the life process of definite individuals . . . not as they appear in their own or other people's imagination, but as they really are; i.e., as they are effective, produce materially, and are active under definite material limits, presuppositions and conditions independent of their will.

> The production of ideas, of concepts, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life. Conceiving, thinking, the mental intercourse of men, appear at this stage as the direct afflux from their material behavior. . . . Consciousness can never be anything else than conscious existence, and the existence of men in their actual life process.

According to Marx, the motives behind man's behavior are largely unconscious, and consciousness is for the most part "false" consciousness, that is, ideology and rationalization. Motivation is rooted in the social organization which directs consciousness in certain directions while leaving untapped an awareness of certain facts and experiences. This, according to the theoretical argument guiding this research, is the "stuff" from which retirement decision-making emerges. Individuals may rationalize that their decision to retire is made autonomously, but from Marx we glean the notion that the degree of autonomy a person legitimately claims is largely a function of position in the social relations of production which, in turn, determines the actual condition of men/women; i.e., expected retirement income and other economic factors as well as life style dimensions accruing to various class positions. Perhaps of equal importance is the possible impact of authority in the system of class relations within the productive process in determining expected retirement age. You will recall that significant differences in retirement plans are obtained when expected retirement income, expected economic situation at 65 years of age, health status, age, sex, and race are held constant. This might be interpreted as the affect of class position in and of

itself on retirement decision-making. It is to this possibility and its implications that we turn our attention.

Toward a Critical Social Gerontology

Keeping in mind that the data analyzed here do not directly address the issues of class struggle and consciousness, and recalling as well the second assumption discussed above equating early retirement plans with a lack of autonomy in retirement decision-making, we can briefly outline the parameters of a critical social gerontology. Of course, given the data limitations, much of the discussion to follow is speculative. Nevertheless, the findings of this research do suggest that a re-orientation of social gerontology is called for.

As noted in Chapter I, the study of gerontology has historically been founded in the functionalist paradigm with its emphasis on stability and equilibrium. Gerontologists assume that the institutions which made up the existing social order are basically sound and that if there is injustice it results merely from the accidental exclusion of certain groups from the distribution of social resources. Thus, the traditional focus of social gerontologists embraces three areas of concern: image enhancement, which involves gaining acceptance of the aged and integrating them into the existing order; a detailed examination of the specific programs addressed toward the elderly; and finally, efforts to enhance the aged's adjustment to their diminished social status as well as the traumas of physiological change, death and institutionalization (Reasons and Perdue, 1981).

Each of these concerns is legitimate. But they do tend to fragment the issues involved in the aging process separating consequences from causes and the elderly from other groups who are structurally excluded.

To examine the problems of aging in general, and retirement decision-making in particular, from a critical perspective requires an effort to search for the relationships between consciousness and social structure. Most social gerontologists accept the existence of an ideology of ageism resting on the belief that the elderly are inferior to the young. But social gerontologists tend to ignore the significant questions: What are the sources of ageism? Whose interests does it serve? What does it sustain? Perhaps investigation should be re-directed away from the aged and toward the structural contradictions of capitalist society; and maybe change is required of the corporate sphere which exerts the dominant flow of influence in capitalist society rather than individual change.[32]

Critical theory draws a distinction between the "level of appearances" and the underlying social reality generating those appearances by emphasizing the structural mechanisms producing

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[32]In referring exclusively to "capitalist" society we are not suggesting that the aged's plight in the Soviet Union, for example, is any better. Nothing could distort our intentions more. The critical sociologist--at least one who does not allow Marxist ideology to become his/her intellectual opiate--would address the contradictions of Soviet society with equal vigor. The social relations of production in the Soviet Union are certainly structured along different criteria than is the case in the United States, but these relations would be given analytical priority, nevertheless. Remarks in this study are limited to capitalist society only because the data for this research are drawn from a capitalist society.

immediately encountered reality. Social gerontology, at least in its current state, is limited to the appearances themselves. This is not to imply that appearances are inconsequential. Retirants experience depression and adjustment problems at the level of appearances. But a critical approach is grounded in the revelation and explanation of the social structures underlying those appearances. Adjustment assumes a necessary set of social conditions. A critical social gerontology might enunciate a theory of the contradictions among structures that produce social relations which reduce autonomy in retirement decision-making for substantial segments of the aged population. The problems associated with aging are experienced earlier, more frequently, and more deeply by those at the bottom of the system of productive relations than by those at the top. Social gerontologists, if they consider class at all, relate it to age only as each constitutes two distinctive social status phenomena. This research suggests that this approach is too restrictive, that we must integrate the concepts of aging and class. The relationship between age and class can best be understood as a consequence of the position of labor in capitalist society as representing simply an element in the cost of production. Those at the bottom of the class structure are unable to influence the conditions of work. They are merely an appendage to the mechanization of the labor process (see Chapter III) and the bureaucratic process (Braverman, 1974).

Retirement decision-making takes place in a certain kind of environment, an environment conditioned by capitalist society. In this

society, the primary source of legitimacy is a logically consistent set of rules constructed in a specialized fashion; in short, rationality is the source of legitimacy in capitalist society given the erosion of traditional mechanisms for social control. Retirement decision-making is embedded within the parameters set by capitalism's rationalization of the life cycle.

Rationalization of social relationships is facilitated by the mechanization of the labor process which increases productivity while simultaneously diminishing workers' control in the labor process. Knowledge and autonomy are removed from workers and concentrated in capital; the subjective organization of labor by workers is replaced by an objective, scientifically managed organization of work. Labor views itself as a component of large-scale industrial production rather than the active agent in production. Consequently, workers fail to comprehend their diminishing autonomy; capital supersedes their historical memory, concealing the class nature of production. Workers, whose consciousness increasingly is unable to penetrate the level of appearances (Mann, 1970), view the division of labor as merely technical supervision.

Economic rationality defines the parameters of culture; that is, the infrastructure sets the limits within which certain cultural forms are probable. Instrumentalism--efficiency and productivity emerge as the major social values--is the driving mechanism of economic behavior, and as capitalism becomes hegemonic, evolves as the core of culture in capitalist societies.

The implications for the construction of reality are profound. Instrumentalism operates as an anaesthetic on consciousness. Workers sense that their ability to make autonomous decisions erodes with the wave of standardization, but they feel no pain. They come to see themselves as a commodity to be purchased, used, and disposed of all in the interests of capital. Reality is the social relations of production.

At the level of appearances, the worker's experience of reality is conditioned by the rationalization of the life cycle. Hence, he/she comprehends neither the totality of the social forces which limit autonomous decision-making nor alternative structures which may increase autonomy. The person is not outside the structure of capitalist society, only compromised by it. Such compromise is inherent in the social relations of capitalist production; forced to sell their labor power in return for economic rewards, workers develop a dualistic consciousness in which money and autonomy are separated. Dualism in the worker's consciousness undercuts autonomous retirement decision-making. Co-existing with a passive, fatalistic consciousness rooted in the worker's experience is his/her economic dependence on the capitalist at a factual and normative level (Mann, 1973). Autonomous retirement decision-making is diminished by this interdependence as capital dictates decisions in accordance with the imperatives it confronts. Whether the individual retires before age 65 or after is not the issue here, rather the issue is autonomy in the decision-making process. A critical social gerontology views individual autonomy in retirement decision-making as an essential dimension of human dignity and the

maintenance of self-esteem. This research suggests that class position may indeed be the dominant social structure defining the material limits and perhaps the consciousness of individuals involved in retirement decision-making. But is it possible, in a speculative manner, to move beyond this point?

Perhaps the question should be posed again: whose interests are served by the lack of autonomy in retirement decision-making? Essentially, the corporate structure controlled by the capitalist class and its managerial functionaries. What is sustained? The capitalist mode of production giving rise to social relations which operate to the benefit of these classes.

O'Conner (1973) maintains that capitalism must reconcile an inherent contradiction if it is to survive: the need to accumulate capital and also preserve legitimacy.

This is not the place for an extended discussion of the capital accumulation process; however, in Capital, Marx depicts the individual capitalist as compelled by structural forces to constantly extend his capital, in order to preserve it, by means of progressive accumulation. Sweezy and Baran (1966) seek to apply Marx's thesis to monopoly capitalism. They maintain that monopoly capitalism must be considered a rational and progressive system--not as a result of price competition, but because of the dynamics of market sharing. The firm with the lowest costs and the highest productivity is able to divert more capital than other firms into strategies designed to control a larger slice of the market, thereby appropriating increasingly higher profits. Such firms can afford the advertising, research, development

of new product lines, and extra services necessary to fight for market shares. Profits tend to be proportional to the amounts invested on these strategies.

To accomplish this, the forces of production are continually developed. As noted earlier, this removes knowledge and autonomy from workers, but the effect of technological advancement is also the obsolescence of skills (Bell, 1976; Touraine, 1971). A new category of obsolete workers--usually the older worker--is formed at a rate parallel to technological innovation. Consequently, retirement facilitates capital's disposal of people who simply do not fit into the emergent social relations of production resulting from the development of the productive forces. Hence, we find one structural source of the ideology of ageism rooted in the imperative to accumulate capital. The position of the aged worker is not an inherent consequence of industrialization, by contrast, it is a by-product of the scientific management of labor in an effort to maximize capital accumulation.

With the development of the productive forces there is less demand for human labor. Human labor is continually replaced by machine labor. Consequently, there is likely to be a high level of unemployment, which may thrust a crisis of legitimacy on the system.

The passage of the Social Security Act of 1935 was followed by the institutionalization of a "retirement age," usually 65. This was done to reduce the unemployment rate among younger workers (Nusberg, 1978). The institutionalization of retirement also serves to replace many highly paid older workers with younger workers paid reduced wages.

Social security statutes were amended in 1956 and 1961 to allow those retiring early to receive benefits. In each case, these benefits were designed partially to solve a crisis of unemployment (Reasons and Perdue, 1981). Consequently, as Friedman and Orbach (1974) note, the distinction between voluntary and involuntary retirement is superficial. Retirement is less and less a consequence of an individual's decision and more and more a decision from forces external and unknown to the worker.

To summarize, retirement decision-making takes place on the level of appearances, but the structural mechanisms defining the social reality individuals experience are embedded in the capital accumulation process. In the classes at the bottom of the authority hierarchy, a loss of autonomy--their commodity status--creates a personal vacuum in decision-making; as the capital accumulation process intensifies, the retirement decision is made by capital more and more. Corporate mandatory retirement policies, as well as the proliferation of private and public programs designed to encourage early retirement reveal the class nature of retirement patterns and the erosion of individual autonomy. This may explain why classes dependent on the wage labor system--specifically, core and peripheral workers, semi-autonomous employees, and lower-level managers (supervisors)--plan to retire earlier than classes controlling the productive process--employers, upper-level managers, and the petite bourgeoisie--even when Barfield and Morgan's predictors of expected retirement age are held constant.

Relevance of the Research

This study is relevant both theoretically and practically. Theoretically, as noted earlier, it builds on recent works by Wright (1976; 1978a; 1978b), Wright and Perrone (1977), Koo and Hong (1980), and Kalleberg and Griffin (1980), who present class models derived from Marx demonstrating the usefulness of class as a predictor of various phenomena.

Practically, the research is important because it begins to address retirement decision-making from a perspective sensitive to the significant structural and demographic changes occurring simultaneously in Western societies which affect retirement patterns in contradictory ways. For example, dramatic structural changes in the economic production of the United States will continue to occur as the forces of production develop unabated. Economic growth is shifting from commodity-producing to information processing industries, a trend that is reflected in the economic decline of the industrialized northeast and midwest--witness the depression-like conditions in the automotive and steel industries--and the economic explosion on the West Coast where electronic and telecommunication industries are located. To survive, the traditional growth industries must perpetuate, even accelerate, the accumulation of capital. But structural changes in the economy will make it increasingly difficult for them to do so. Consequently, management may attempt to intensity its control over labor as firms strive to reduce costs and increase productivity. If this indeed takes place, significant job displacement would continue in

these industries, making the social relations of production a salient factor in retirement decision-making in the future.

Demographically, the aging of industrial societies generates a contradiction to the imperatives of the capital accumulation process in that pressure will be put on people to delay retirement. In fact, this is already the situation in some areas of the economy.

In most industrial societies the age dependency ratio--an indication of the responsibilities carried by working adults or supporting non-productive age groups--has steadily increased. Industrial societies are aging because birth rates are falling while life expectancies rise. Estimates for the United States predict that the proportion of the population over 65 will double between 1960 and 2025 (United Nations, 1973).

The Reagan administration at this writing recognizes the pressure on retirement systems exerted by early retirement in concert with these demographic trends. Policies are currently being formulated to reduce the growth in retirement benefits, relax mandatory retirement, and encourage late retirement. But as long as unemployment continues as a chronic problem the situation is likely to remain a no-win contradiction. To the extent late retirement becomes the future norm, the graying of the work force will be defined as a barrier to entry and advancement and the potential for generational conflict will be increased. The manner in which class interacts with the contradiction presented by economic, political, and demographic changes to affect retirement decision-making is an issue which requires examination.

Perhaps this study will stimulate future research into this gap in our knowledge.

Limitations of the Research

In addition to the disjuncture between theory and data alluded to in this study, there are two other limitations that should be mentioned: the operationalization of class and the age of the data.

Two problems complicate construction of an adequate operationalization of class position. First, and the most practical problem, is the difficulty one encounters in obtaining any relevant data on the control dimensions of the social relations of production. The United States census, for example, does not ask questions dealing with autonomy or control over the labor process, although it does gather data on the formal criterion of self-employment. Most data sets based on national samples, as is the case in Barfield and Morgan's, display similar limitations. By using The Dictionary of Occupational Titles this problem was partially overcome in this research; nevertheless, such an indirect approach is not as satisfactory as obtaining objective data on all of the dimensions of the social relations of production.

Stemming from the lack of data incorporating the control dimensions, a second problem in operationalizing class relations is the highly ambitious nature of the boundaries between classes, especially, as Wright (1978b) notes, those separating proper classes from the contradictory class situations. Exactly how much control, autonomy, or supervisory capacity are we talking about? For example, several labor

historians (Perlman, 1928; Braverman, 1974; Edwards, 1978) note that only a minority of the working class was ever completely excluded from some control in the labor process. Even coal miners, surely a prime example of the exploitation and oppression of the working class, have always managed to wrestle a degree of residual control in the labor process simply because of the horrendous work conditions associated with coal extraction. It seems unwise, then, to refer to a complete absence of autonomy in the working class. On the other hand, how much autonomy is required to place an individual in the semi-autonomous class position? Certainly, we do not want to rely on arbitrary classifications. To overcome this difficulty The Dictionary of Occupational Titles was used again. But even this strategy is not as adequate as having concrete information about the amount of autonomy an individual obtains within the social relations of production. And we are not in an enviable position with respect to the lack of empirical grounding required to specify boundaries between class positions in terms of the control dimensions. More research is required into this gap in our knowledge. But these measurement problems could have had only a conservatizing impact on the comparison of the class position model of retirement decision-making to the one Barfield and Morgan advocate. The influence of class was probably diminished rather than exaggerated. In fact, it is possible that the lack of precision in measuring class imposed by the data is partially responsible for the minimal differentiation on expected retirement age observed between both segments of the working class and semi-autonomous employees.

The fact that the data are fifteen years old does not present a problem in and of itself. There is indeed a substantial tradition of historical social research found among various critical perspectives (Sweezy, 1942; Mills, 1953). But there is some justification to an objection that the social dynamics present in 1966 affecting retirement decision-making are different from those of 1982. Inflation, unemployment, and significant structural damage to the national economy were not as forceful problems in the late sixties as is the case today. However, it may be that inflation, for example, does not affect retirement patterns as much as one might assume (Mauch, 1979). At any rate, as noted earlier, the social relations of production should be a valuable conceptual tool in understanding the retirement decision-making process in the decades to come. Only by comprehending the dynamics of the past can we legitimately examine the present and speculate about the future.

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