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CLASS VERSUS SOCIAL ECONOMIC ATTAINMENT
PROCESSES: A MODEL OF ALTERNATIVE TECHNICAL
OF INTERGENERATIONAL ATTAINMENT.

THE LOUISIANA STATE UNIVERSITY AND
AGRICULTURAL AND MECHANICAL COLLEGE, PH.D. 1972
CLASS VERSUS SOCIOECONOMIC ATTAINMENT PROCESSES: 
AN ANALYSIS OF ALTERNATIVE MODELS OF 
INTERGENERATIONAL ATTAINMENT

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
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Doctor of Philosophy

in

The Department of Sociology

by

Kevin Burt Smith
B.S. Texas A&M University, 1974
M.A. Louisiana State University, 1976
August, 1979
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ABSTRACT

The main issue of concern in this study is the intergenerational perpetuation of social inequality. In particular, this research focuses on attainment processes; that is, the interrelationships of factors which are instrumental in the acquisition of a position in a stratification system. Two opposing theories of social inequality were discussed with respect to the structure of social inequality. These were the socioeconomic and the Marxist class theories. Based on the theories, two models of attainment were formulated. The first, the socioeconomic model, addressed the issue of how individuals come to occupy socioeconomic positions and receive differential social rewards. The second, the Marxist class model, focused attention on the attainment of class positions. Data obtained from a metropolitan sample and a national sample were used to empirically evaluate the variable relationships in each of the models. Four socioeconomic attainments were analyzed: educational attainment, initial occupational attainment, current occupational attainment, and income attainment. Educational attainment was significantly influenced by origin socioeconomic inequalities. Initial occupational status was notably influenced by father's occupational status (indirectly) and educational attainment (directly). Likewise, current occupational status was moderately affected by several origin socioeconomic variables (indirectly), but was heavily influenced by educational attainment (directly). Income attainment was largely independent of other variables. For the class model, educational attainment was not significantly related to origin social class. Likewise, initial social class was not significantly
affected by origin social class, but was significantly influenced by educational attainment. Current class position was significantly related to origin class. This effect was not mediated by educational attainment or initial class, although both produced small direct effects on the dependent variable. Overall, it was concluded that socioeconomic attainments are mainly achievement-based, while class attainment are mainly ascription-based. Other theoretical discussion, implications, limitations, and suggestions for future research were also presented.
CHAPTER I

INTRODUCTION

Statement of the Problem

A preeminent concern of sociologists throughout history has been structured social inequality. This concern traces back to the early European social theorists such as Karl Marx, Max Weber, and Herbert Spencer. Although these scholars developed differing and even competing theories, the problem they addressed was the same. Likewise, the early American sociologists including Lester Ward, William Graham Sumner, and Thorstein Veblen shared this concern and interest in structured social inequality. Following these traditions, contemporary sociologists continue to study the causes and consequences of social inequality.

In the broadest sense, social inequality refers to organized patterns of social behavior which result in differential access to and attainment of scarce goods in a society. Two issues are central to the study of social inequality and stratification. The first is the structure of social inequality. How and on the basis of what structural units is a society stratified? Although this structural issue is logically prior, social mobility is a second area of concern. The question now becomes how and why individuals and groups move upward or downward in a stratification system between two or more points in time. Social mobility may be intragenerational or intergenerational; however, before mobility is to be understood it is necessary to theoretically identify the structure of the stratification system. As Noble (1975:75) argued: "The concept of social mobility demands to be interpreted within an analysis of social stratification".

1
Although countless theories of the structure and nature of social inequality have been developed, two of them command the most attention. The first of these to be developed was the Marxist theory of social inequality. According to this perspective, inequality hinges on the existence of a class structure. Broadly speaking, classes are defined in terms of their relationship to a historically specific mode of social and economic production. In advanced capitalist societies, there are two fundamental classes: the capitalist class and the working class.

In contrast to the Marxist theory of social inequality is the socioeconomic theory. This perspective traces back to Weber's and Sorokin's theories of multi-dimensional inequality. More recently, the works of Parsons and Davis and Moore provide a foundation for this perspective. Briefly, this theory maintains that in advanced societies there exists a complex multiplicity of socioeconomic positions, each differentially ranked and rewarded with respect to its contribution to society. Socioeconomic rewards accrue to the functionally more important positions in a society. This perspective has inspired the vast majority of current stratification and mobility research. The socioeconomic theory either denies or relegates to a lesser importance the idea of homogeneous classes. A continuous image of the structure of inequality is advocated in this perspective.

The importance of these differing images of structured social inequality should not be slighted. Research on mobility and attainment processes has been overwhelmingly dominated by the socioeconomic perspective. Conceptually, this research has focused on the mobility and attainment patterns of individuals occupying divergent socioeconomic positions. However, very little, if any, mobility and attainment research has examined the movement of individuals from one class position
to another if classes are defined according to Marxist criteria.

Mobility and attainment patterns can be studied intragenerationally or intergenerationally, but it is the latter form which is of concern in this study. In recent years, a majority of the research on intergenerational mobility and attainment has been status attainment studies. Beginning with the notable work of Blau and Duncan (1967), this research has been influential in identifying the processes through which an origin socioeconomic position is transmitted to an attained socioeconomic position. However, one feature of virtually all socioeconomic attainment studies is the unquestioned acceptance of the socioeconomic perspective of inequality. The intergenerational transmission of Marxist class positions has not been examined.

The main purpose of this study is to develop an alternative model of intergenerational attainment, namely a class attainment model. The theoretical basis of the class model is substantively different than that of the socioeconomic model since each is based on a different theory of the structure of social inequality. This study will assess the theoretical and empirical adequacy of both models.

Significance of the Problem

The issues to be raised and examined in this study are significant for two reasons. Perhaps the most salient aspect of this investigation is the presentation and comparison of two alternative models of intergenerational attainment. Criticism and debate over the class versus socioeconomic issue has had a long and notable history in the discipline (see Barber, 1959; Heberle, 1959; Nisbet, 1959). Part of the reason for

1 The recurrent debate over the functional theory of stratification is another example of the debate between the two positions.
this continuing debate is certainly the scarcity of direct empirical support for the opposing positions. This is particularly the case for Marxist analyses. Quantitative studies of social mobility and attainment using Marxist concepts are noticeably lacking.

The problem under study is significant for another reason, namely, that social mobility and attainment studies appear to be relatively content with the socioeconomic image of social inequality. Almost in a Kuhnian "normal science" manner, attainment studies routinely incorporate measures of socioeconomic positions. Certainly there is no consensus among stratification theorists over the "correct" perspective of social inequality, nor should there be among mobility and attainment theorists and researchers. Before moving further in this investigation, it is necessary to briefly discuss several of the concepts which will be used in this study.

A Note on Concepts

Throughout this study, several terms and concepts will be utilized. Thus, to avoid confusion, it is necessary to draw some initial conceptual distinctions. The first of these is the distinction between "social mobility" on the one hand, and "class or socioeconomic attainment" on the other. In the broadest sense, social mobility refers to the social movement of individuals or groups (e.g., entire classes) in a stratification system over a specified period of time. Two fundamental types of mobility are worthy of note: "structural mobility" and "exchange mobility" (cf. Kahl, 1957; Duncan, 1966; Collins, 1975; McClendon, 1977).

Structural or "forced" mobility refers to mobility which results from changes in the structure or composition of the stratification system over time. Social movement is attributed to changes in the class
or socioeconomic structure. For instance, Dahrendorf (1959:51-57) among others has argued that a substantial change in the size of the "middle class" has taken place since the time of Marx. This expansion, according to Dahrendorf, "opens up" middle class positions which are filled by members from other classes. This constitutes a form of mobility. Accompanying any structural change in a stratification system is corresponding social mobility.

A second type of social mobility is exchange or "free" mobility. This kind of mobility is not the result of structural changes in the stratification system, but rather refers to the zero-sum circulation of individuals and groups, typically on the basis of merit. Of course, the total amount of mobility, be it socioeconomic or class, is the combination of both structural and exchange mobility.

Due to a shift in substantive interest coupled with several methodological advances, attainment research has gained popularity. In contrast to mobility studies, attainment studies focus on the processes and factors which mediate between origin and attained positions. As Duncan (1966) noted, analyzing the relationship between origin and attained positions allows inferences to be drawn concerning the degree to which attained positions depend upon origin positions. Attainment studies also consider the mediating influence of other factors which intercede between origin and attained positions. In the simplest form, attainment models examine the mediating influence of education on the correlation between origin and attained positions. Thus, attainment studies do not address the issue of how much mobility exists in a society or whether mobility is structural or exchange. Rather, attainment studies examine the relative influences on the attainment of a position in a stratification system.
Obviously, mobility and attainment processes are interwoven, but the issues of concern are somewhat different.

Another conceptual distinction which needs to be made is between "class" and "socioeconomic" attainment. As should be obvious, the distinction is a theoretical one based on two differing views of structured social inequality. As noted earlier, socioeconomic attainment refers to attainment processes in which both origin and attained positions are conceptualized according to the socioeconomic theory of social inequality. On the other hand, class attainment refers to attainment processes in which both origin and attained positions are conceptualized according to Marxist class criteria. Further theoretical distinctions are presented in subsequent chapters.

A final note concerns the concept of "attainment". For the purposes of this study, the use of this term centers around its neutrality. Linton's famous distinction between "achieved" and "ascribed" positions is extremely relevant in mobility and attainment research; however, the degree to which a position is achieved or ascribed is an empirical issue. Thus the concept "attained" is utilized.

Order of Presentation of the Study

This study is presented in eight chapters. Following this introductory chapter, the second chapter is concerned with the theoretical foundation of the socioeconomic image of social inequality, and in particular, its application in mobility and attainment research. In conjunction with this theoretical discussion is an overview of extant research which has utilized this perspective. Four major theoretical propositions are presented which taken together constitute a
socioeconomic model of attainment. This model is presented and discussed at the end of the second chapter.

These same issues are discussed from a Marxist class perspective in the third chapter. The class structure of advanced capitalist societies is discussed along with a specific analysis of four major class positions. In addition, mobility and attainment from a class perspective are also reviewed. Similar to the socioeconomic model, a class model of attainment is developed. This model is based on three major propositions. Thus two alternative perspectives on attainment processes are presented.

These divergent models of attainment are compared and contrasted in the fourth chapter. A review of several debates is presented along with an empirical framework for the analysis of the two models. The methods and procedures utilized in the study are reviewed in the fifth chapter. Information on the samples, operationalization, and analytical techniques is given. Results and findings of the statistical analysis are presented and discussed in the sixth and seventh chapters. Results of the analysis of the socioeconomic model are given in Chapter VI and findings from the analysis of the class model are presented in Chapter VII. The eighth and final chapter includes a review of the two theories and corresponding models as well as an overview of the major empirical findings. Implications of the study, limitations, and suggestions for future research are also presented.
CHAPTER II

THE SOCIOECONOMIC THEORY OF INEQUALITY AND SOCIOECONOMIC ATTAINMENT

Introduction

In the previous chapter, a fundamental distinction was drawn between two differing theories of social inequality. The significance of this distinction for mobility and attainment research was also noted. In this chapter, the first of these theories, the socioeconomic theory, is presented and discussed. In the following chapter, the second theory, the Marxist class theory, is examined.

To present the socioeconomic theory, this chapter is divided into six major sections. Following this introduction, the second section is devoted to tracing the theoretical development of the socioeconomic theory. Beginning with the writings of Max Weber, the development of the socioeconomic theory is followed to its present form. In addition to Weber, the influences of several early American social theorists, especially Sorokin, along with the functionalist ideas of Parsons, and Davis and Moore are reviewed for their contributions to the theory. Given the theoretical influences, an overview of the general socioeconomic theory of inequality is presented. After this discussion, the fourth major section, devoted to a review of several socioeconomic measurement scales, is presented. It is argued that a significant part of the socioeconomic theory is implied in the conceptualization and construction of these scales. The National Opinion Research Center (NORC) occupational prestige scale, Duncan socioeconomic index, United States Census socioeconomic status scale, and several accompanying scales are discussed. Additionally, the usage of these scales in status attainment
research is also reviewed in this section. Contrary to Coser's (1975) contention that status attainment research is a "method without a substance", it is argued that such research, given the theoretical implications contained in the measurement of socioeconomic positions, is solidly entrenched in a long-standing tradition in stratification theory (see Horan, 1978). The fifth major section in this chapter is devoted to a review of extant research which has utilized the socioeconomic theory of inequality to explain and empirically evaluate attainment processes. The final section presents a summary of the theoretical and research literature as well as an integrated set of propositions from which a socioeconomic attainment model is formulated.

Theoretical Influences on the Socioeconomic Theory of Inequality

The socioeconomic theory of social inequality, as reflected in recent conceptual and methodological efforts, is a product of several discernable trends in stratification theory. Such key tenets as multiple interrelated dimensions of inequality, an emphasis on continua or strata as opposed to discrete classes, and the idea of "functional importance" of social positions are all evident in earlier stratification theories. In this section, beginning with the work of Max Weber, several of these theories are reviewed and discussed.

Max Weber

One of the earliest social theorists to contribute to the socioeconomic theory of inequality was Max Weber. Since Weber's writings postdated those of Marx and since they shared many common interests, several scholars have contended that Weber engaged in a lifelong debate
with the "ghost of Marx" (see Salomon, 1945; Zeitlin, 1968). Indeed, several of Weber's ideas, at least implicitly, called into question some of Marx's. However, for the most part, Weber's insights were complementary, not intended as a refutation as much as an extension and elaboration of Marx (cf. Aron, 1970:257). To an appreciable extent, this was the case with Weber's writings on social inequality. In fact, Marx and Weber shared a great deal in the way of thoughts concerning social inequality. As was the case with Marx, Weber's writings on the topic of stratification are rather sketchy and incomplete. His major statements on the topic were published posthumously in two short passages in Economy and Society (1968).²

From the vantagepoint of the socioeconomic theory of inequality, Weber made two notable contributions. First, he developed and argued for a multi-dimensional perspective regarding social inequality. For Weber, social inequality involved the distribution of "social power" and this distribution stemmed from three social dimensions. Secondly, and perhaps more importantly, he conceptually developed and integrated into his theory the idea of "social status" or "prestige". For the purpose of developing and tracing Weber's influence, these contributions along with a brief discussion of his theory of social inequality will be presented.

As mentioned above, the theme of social power is central to Weber's discussion of social inequality. By social power, Weber meant "the ability of an individual or group of individuals to realize their own will in a social action even against the resistance of others who are

²One of these passages is an outline, ostensibly used by Weber as a guide in writing his famous chapter: "Class, Status, and Party".
participating in the action" (Weber, 1968:926). According to Weber, the
distribution of social power eminates from three social bases: economic,
status, and political. Furthermore, the relationship among these three
bases is variable. As Weber (1968:926) remarked:

"'Economically conditioned power' is not, of course, identical with 'power' as such. On the contrary, the emergence of economic power may be a consequence of power existing on other grounds. Man does not strive for power only in order to enrich himself economically. Power, including economic power, may be valued for its own sake".

Corresponding to Weber's tripartite conceptualization of the distribution of power are three major types of social organization: classes, status groups (strata), and parties. As will be seen later, the idea of homogeneous classes or groups is not included in the socioeconomic model of inequality, but the ideas of multiple dimensionality and differential status or prestige have been retained.

Weber (1968:930) felt that the first and most important dimension of social inequality was the economic dimension. The organizational form corresponding to this dimension was the economic "class". It is fairly evident that Weber considered classes to be the most significant form of social organization relative to the distribution of power.

Economic classes were not "communities" according to Weber, but rather were comprised of groups of individuals with common "class situations" which under certain conditions could be translated into bases

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3 For an extensive discussion of Weber on social classes, see Jones (1975).

4 "Community" was used in this sense to denote a group of people with endogamous social intercourse and collective consciousness. Weber did note one exception to this rule. He spoke of "social classes" which referred to economic classes which were conscious of their shared class interests. This will be discussed later.
for collective social action. Although he wavered somewhat in his analysis, classes were defined in terms of the relationship of actors to an economic marketplace. By this, Weber meant that classes refer to the market position of groups of individuals represented by common economic interests in the form of possession of goods or capital and opportunities for income (such as unique marketable skills). As will be seen later, this departs from Marx's conceptualization of social classes.

Weber maintained that ownership and lack of ownership of property which is usable for returns in an economic market constituted the two fundamental categories of all class relations, but he insisted that further subdivisions were identifiable (Weber, 1968:927-928). Thus, the first and most important subdivision which Weber noted was between the "positively and negatively privileged" property classes. Positively privileged property classes were made up of rentiers, who derived incomes from the ownership of property (including slaves, land, factories, etc.) (Weber, 1968:303). As the title suggests, negatively privileged property classes were devoid of property or capital ownership. Occupying a conceptually difficult place in Weber's property/propertyless class schema were the "middle classes". Although Weber was unclear on this point, it appears that the middle classes consisted of groups of individuals who possessed a quantitatively smaller amount of property.

A second class subdivision, according to Weber, lies in the distinction between positively and negatively privileged "acquisition" (or "commercial") classes. Instead of a property or capital

5Although not of particular importance in this study, Weber (1968:928-932) did outline the empirical conditions leading to social action, especially class conflict, on the part of economic classes.
monopolization, the positively privileged acquisition classes monopolized skills and talents, and in particular, entrepreneurial skills. Like property, these skills could be offered on a market for economic returns. Weber (1968:304) included merchants, bankers, professionals, and even highly specialized and skilled workers in the positively privileged acquisition classes. On the other hand, members of the negatively privileged acquisition classes were typically laborers, which Weber further subdivided into skilled, semi-skilled, and unskilled classes. Again, Weber alluded to a middle class which included various officials and self-employed farmers, but he did not adequately develop his thoughts concerning this class.

For Weber, a final type of economic class was the "social class". Social classes were composed of a plurality of class situations (property and acquisition) (Cox, 1950:224). Although his discussion of social classes is sketchy, it appears that he was referring to "class conscious" classes in the Marxist sense. Unlike Marx, Weber envisioned this class consciousness as a variable phenomenon (Bendix, 1974; Giddens, 1973:43). That is, class consciousness tended to emerge under certain historical conditions, but association and class action did not necessarily result from these conditions. Four social classes were identified by Weber (1968:305) including the "working class", "petty bourgeoisie", "propertyless intelligentsia and specialists", and "privileged classes".

The second major dimension through which social power is distributed is the "status" or social honor dimension. As will be seen later, the importance of this dimension for the socioeconomic model of inequality

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6 Weber (1968:305) acknowledged Marx and even uses the term "class consciousness" in his discussion of social classes.
lies in the development of occupational status or prestige scales. Weber (1968:305,932) maintained that "status" refers to "an effective claim to social esteem in terms of positive or negative privileges". The social organizational form corresponding to the status dimension is the status group (or stratum). Therefore, status distinctions do not refer to "classes", but rather to "groups" and the difference is important. Groups, as opposed to classes, possess a sense of "community". Once again, the distribution of power according to status distinctions may or may not overlap with economic distinctions. In fact, Weber (1968:932) noted that two individuals from differing economic classes may belong to the same status group and vice versa.

The distinguishing characteristic of status groups is the possession of a common "lifestyle" or "patterns of consumption". By this, Weber meant that members of the same status group are imbued with certain expectations regarding social intercourse. In addition to a common lifestyle, formal education and occupational prestige constitute two other bases on which social esteem may be founded (Weber, 1968:305-306). Outside of the distinction between positively and negatively privileged strata, Weber did not further subdivide status groups.

The third and final dimension of the distribution of social power is the political dimension. The social organizational form corresponding

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7 According to Weber (1968:933), the most extreme example of a status group is the caste.

8 Although some authors have referred to this dimension as the "power dimension" (e.g. Gordon, 1958:14; Matras, 1975:67), Giddens (1973:44) is correct in noting that "power" is not a separate dimension. Power, as defined before, refers to the capacity or ability to realize a will in a social action and this capacity can be based on several dimensions.
to the political dimension is the "party". Parties refer to purposive associations (and corresponding activities) of individuals designed to obtain and retain power. According to Weber (1968:938), a social club as well as a state may be composed of parties. Parties can represent classes or status groups, but they need not represent either. Therefore, parties constitute a potentially independent source of social power.

From this brief review of Weber's theory of social inequality, several items should be noted because of their relevance for the socioeconomic theory of inequality. In particular, the contributions of multiple bases of inequality and the development of the concept of social status are significant. Of course, the ties and points of agreement between Weber's theory and the socioeconomic theory are not overwhelming. In fact, in many respects, Weber's thoughts are closer to Marx's than they are to the socioeconomic theory. Nevertheless, several contributions to socioeconomic theory can be traced to Weber's writings.

A final comment on Weber is worth noting. Weber wrote very little on the topic of mobility. However, in one brief passage he indicated that mobility among class positions varies greatly and that this had consequences for the unity of the classes (weber, 1968:302). In more popular terminology, the formation of class cohesiveness or unity varies directly with the extent and degree of social mobility. Although Weber did not address the issue, it logically follows that mobility can also occur along status and party lines.

Early American Sociologists

The influence of Weber on early American sociologists, and particularly those interested in stratification and mobility, was not immediate. Of course, this does not mean that the early American
sociologists were not concerned with the issue of social inequality. On the contrary, most were intimately concerned with this issue. In fact, the recurrent debate between the Marxists and the Social Darwinists was nowhere better evident than in the writings of Ward, Small, and Veblen on the one hand, and Sumner and Giddings on the other (see Page, 1969). Weberian thought, albeit indirect, was represented in the writings of many early American sociologists. For example, Veblen's (1953) provocative analysis of the "leisure class" was, using Weberian terminology, an insightful and detailed study of the (conspicuous) consumption patterns and lifestyles of the American upper classes. Yet from the perspective of the socioeconomic theory of inequality, few major influences were evident in the writings of the early American sociologists. Furthermore, concern on the part of these sociologists for the issues of mobility and attainment processes was minimal. However, there was one notable exception -- Pitirim Sorokin.

Sorokin was probably the most important and influential early American stratification and mobility theorist. It was his contention, like Weber's, that stratification could be analyzed according to three fundamental dimensions. However, Sorokin and Weber disagreed on the nature and form of the three dimensions. For Sorokin, the first dimension which could be used to locate an individual in what he termed the individual's "social space" was the economic dimension (Sorokin, 1964:11 and passim). Stratification on the basis of this dimension

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Sorokin claimed no indebtedness to Weber, although he apparently had read Weber. Moreover, in one footnote he critically commented on Weber's use of the concept of social class (Sorokin, 1953:664).
referred to the division of society into "upper and lower social layers" on the basis of objective economic conditions (Sorokin, 1964:11). For Sorokin (1964:11), these conditions were "differences in incomes, economic standards, and the existence of rich and poor strata". Unlike Marx and Weber, Sorokin was not too concerned with the reasons for differential incomes and economic standards.

The second form of stratification noted by Sorokin was political (or "legal") stratification. As Sorokin (1964:11) commented:

"If the social ranks within a group are hierarchically superposed with respect to their authority and prestige, their honors and titles; if there are rulers and ruled, then whatever are their names (monarchs, executives, masters, bosses), these things mean that the group is politically stratified, regardless of what is written in its constitution or proclaimed in its declarations".

Thus, as Gordon (1958:53-54) noted, Sorokin did not analytically distinguish between status and power dimensions. This point is further evidenced in Sorokin's third and final form of stratification, occupational stratification. Sorokin (1964:11) distinguished this form from the other two by noting that:

"If the members of a society are differentiated into various occupational groups, and some of the occupations are regarded as more honorable than others, if the members of an occupational group are divided into bosses of different authority and into members who are subordinated to the bosses, the group is occupationally stratified".

Therefore, occupational stratification, like political stratification, is based on authority and status differentials. Consequently, the major distinguishing point between these two forms of stratification is the organizational context in which the differentiation is observed.

For Sorokin (1964:337-341), stratification, in the general sense, was the result of three fundamental "causes": the necessity for
organization, innate differences among members of a society, and environmental factors. Sorokin did not integrate these "causes" into his multidimensional image of stratification, although most likely he felt that these three "causes" were to be found in conjunction with each specific form of stratification. For instance, the necessity for organization resulted in economic, political, and occupational stratification. Although the significance of Sorokin's writings on stratification should not be slighted, his major contribution was in the area of social mobility.

Sorokin's (1964) work entitled Social Mobility marked the first systematic theoretical and empirical analysis of social mobility in American sociology. Furthermore, his book represents a key influence on the socioeconomic theory of inequality, social mobility, and attainment research. According to Sorokin (1964:346), there were several factors which should be considered in order to explain the vertical mobility of individuals or groups. These factors included demographic variables (especially differential fertility and mortality), innate qualities (both physical and mental), environmental changes (especially the "anthropo-social"), and the differential "defective" distribution of individuals (e.g. low intelligence). Furthermore, he argued that the various social institutions operated as "channels" which facilitated social mobility (see Sorokin, 1964:Ch.VIII). Sorokin analyzed the army, the church, the school, the family, professional organizations, and wealth-making organizations concerning their role in the vertical

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10 These four factors were considered to be "permanent and universal". Sorokin also acknowledged that there may be "secondary, local, and/or temporary factors" influencing the rate and extent of vertical mobility.
mobility of individuals and groups. Interwoven with his numerous theoretical ideas were a multitude of empirical studies which, as Gordon (1958:55) noted, "corroborated the generalization that the upper classes (economic, political, and occupational) were superior to the lower classes in a number of physical, mental, and vital qualities". Furthermore, on the basis of his literature review, he concluded that there was a definite tendency towards a decrease of hereditary transmission of occupation from father to children over time, but, that there was still a strong relationship (Sorokin, 1964:Ch.XVII). This finding is still observed among socioeconomic attainment researchers. However, his empirical generalizations should be taken with caution due to numerous sampling and measurement problems. Nevertheless, the issues and questions which Sorokin raised are the same ones addressed by current mobility and attainment researchers.

From the perspective of the socioeconomic theory of inequality and attainment, Sorokin is important for at least two reasons. To begin with, he was the first American sociologist to develop and analyze a multi-dimensional model of inequality. Secondly, he was the first to compile and summarize numerous theoretical and empirical studies of mobility, including intergenerational mobility tables and detailed analyses of the channels of mobility. Thus, the empirical analysis of social mobility and attainment is heavily indebted to the work of Sorokin.

Parsons and the Functionalist Theories of Inequality

In the 1940's, two theories presenting the functionalist perspective on social inequality were developed. The first of these was the "Analytical Approach to the Theory of Social Stratification" articulated
by Talcott Parsons (1940, 1953, 1970). Complementing Parsons' views was a second functionalist theory, developed by Kingsley Davis and Wilbert Moore (1945). As Lenski (1966:16) noted, Parsons' theory differed more in terms of form than substance from that of Davis and Moore.

Parsons (1953:93) maintained that stratification, in its valuational aspect, referred to the "ranking of units (status-role complexes) in a social system in accordance with the standards of the common value system". The key, albeit problematic, assumption for Parsons is the notion of value consensus. Values, from Parsons' vantagepoint, emerge from the "needs" of the social system and consequently, in order for the social system to survive and flourish, relative consensus is necessary. In other words, value consensus is functional in the sense that it promotes the survival potential of the social system. Stratification then is functional because the rewards which individuals receive are a result of the degree to which their qualities, performances, and possessions are congruent with the commonly agreed upon standards of the social system (Parsons, 1953:94). Qualities, according to Parsons (1953:94) are basically ascribed properties of a unit. An example would be innate intelligence. Performances refer to achievements and possessions are "situational objects which are intrinsically transferable and to which an actor (or collectivity) in a social system has a specific relationship of 'control'..." (Parsons, 1953:95). The specific form a stratification system takes depends upon the needs of the social system and their priority. As mentioned before, the value system

11 Parsons admits that there are other aspects, but the most important determinant of a unit's evaluation is its rank in terms of a transcendent value system (Parsons, 1953:95-97).
corresponds to these needs. Parsons noted that universalism and achievement are the most predominant value orientations in the United States. The importance of value consensus for the socioeconomic model of inequality can be observed in the development of consensually-derived occupational prestige scales. Horan (1978) has noted that this consensual evaluation is evident in the uni-dimensional image of occupational inequality as measured by prestige or status scales.

Another contribution of Parsons to the socioeconomic theory of inequality is the continuum view of social inequality. For Parsons (1953:103,120-121), prestige continua are the proper structural units for stratification analysis and social classes are merely heuristic categories which can be spoken of only in terms of broad classifications. In contemporary American sociology, most stratification, mobility, and attainment research has adopted the continuum model of inequality (see Reissman and Halstead, 1970:297).

A second and more widely recognized functional theory of stratification was developed by Davis and Moore (1945, see also Davis, 1948 and Moore, 1963). The concept of "functional importance" is of paramount concern in this theory. It is Davis and Moore's thesis that societal rewards (both material and nonmaterial) accrue to those positions (occupational) which are functionally more important and involve a scarcity of qualified personnel. Since not every member of a society has the talents which can be translated into the skills appropriate to occupy the functionally more important positions, differential rewards are necessary as inducements. According to Davis and Moore (1945:243), the rewards which a society has to offer consist of those items which contribute to sustenance and comfort, humor and diversion, and self respect and ego expansion. Although not specifically defined by Davis
and Moore, functional importance refers to the contribution a position makes to the requisite needs of the society. Consequently, it becomes necessary for a "sufficient number" of positions to be filled by skilled individuals if the society is to survive. Since undoubtedly each position varies in functional importance (and thus societal rewards), a continuum image of the structure of social inequality is advanced by the Davis and Moore theory. Furthermore, as several authors have noted (e.g., Eckland, 1965), the Davis and Moore theory is based on meritocratic principles in that the innately talented members of a society ultimately receive a relatively higher amount of societal rewards.

For the most part, research on the socioeconomic theory of inequality has not been directly concerned with the issue of functional importance due to the methodological difficulties in operationalizing the term. Nevertheless, the influence of both Parsons and Davis and Moore on the socioeconomic theory of inequality is evident. The authors of the highly significant NORC occupational prestige scale and its revision acknowledge and draw heavily from the works of the functionalists (see Hodge et al., 1966:327; Hatt, 1970:71; see also Barber, 1978).

Davis and Moore (1945:244) recognized the difficulty in defining functional importance and offered two "clues" for determining it: 1) the degree to which a position is functionally unique and 2) the degree to which other positions are dependent upon the one in question.

The influences of Weber, Sorokin, Parsons, Davis and Moore, and others on the socioeconomic theory of inequality are not to be denied; however, none of these theorists fully articulated the theory. As mentioned earlier, there are theoretical underpinnings implied by research efforts, but they are not the result of any one specific theoretical model. Weber and Sorokin's idea of multi-dimensionality as well as the functionalists' notions of value consensus, functional importance, and continua are all included in the socioeconomic theory. In the next section, the works of these theorists are summarized in a broad socioeconomic theory of social inequality.

Towards a Socioeconomic Theory of Inequality

The works of Weber, Sorokin, Parsons, and Davis and Moore can be integrated and summarized into a socioeconomic explanation of social inequality. At the heart of this explanation is the evolutionary perspective of the increasing complexity of societies. As a result of population increases, technological advances, industrialization, and increased communication, societies evolve from rather simple social systems to extremely complex systems. Along with this transformation is an increase in the form and complexity of social inequality. This complexity is most evident in productive technology. Since, in general, technological advances produce more efficient means of production, this evolutionary change results in a heightened survival potential for the society. But with technological changes comes changes in the form and composition of the occupational structure. This process has been noted since the writings of Durkheim on the division of labor in society.

With increasing technology and a more complex division of labor, task specialization is also produced. In all spheres of society,
production becomes more and more fragmented and skills become more complex. Therefore, the knowledge and training necessary for the successful performance of these tasks also increases. As a result, ascription becomes an inefficient and potentially detrimental mechanism for locating individuals in a production process. Highly specialized, perhaps functionally important, positions attained on the basis of inheritance or some other form of ascription threaten the survival and stability potential of the society. To insure survival and stability, it is necessary for positions to be filled on the basis of merit.

Blau and Duncan (1967), Treiman (1977), and others have found that in complex societies, positions are generally acquired on the basis of merit rather than ascription. The functionalists have referred to this as the tendency towards achievement and universalism as dominant value orientations. What becomes important is that a decisive majority of occupational positions are occupied by talented, skilled members of the complex society. Of course, positions vary with respect to skills and qualifications necessary for an adequate performance.

However, the theory of socioeconomic inequality is not as meritocratic as some have argued (e.g., Crowder, 1974). The acquisition of skills or resources can be tied to ascriptive mechanisms without jeopardizing the stability or survival potential of the society. As long as a sufficient proportion of positions in a society are filled by qualified individuals, it does not matter whether the occupants acquired their skill because of an advantageous origin position. For example, educational attainment can be significantly related to background social inequalities without placing unskilled or unqualified individuals in highly skilled or functionally important positions. In fact, strong familial bonds increase the likelihood of ascription.
The possession of needed skills or resources enables certain individuals in a complex society to acquire a disproportionate share of the socioeconomic rewards in a society (cf. Weber, 1968:304). The differential possession of socioeconomic rewards results in multiple dimensions of overt socioeconomic inequality. These socioeconomic rewards are numerous but at a minimum include differential prestige (the result of a common value system), material possessions (including income), social power, and the opportunity to insure that subsequent generations will also receive the training or resources necessary to acquire similar positions.

In this theory social classes do not exist because the highly specialized division of labor removes any source of common identity. In addition, a high rate of social mobility also weakens the basis for class emergence. Of course, this perspective identifies occupational positions as the unit of analysis. It follows that a multi-dimensional continuum view of socioeconomic rewards is advocated in this theory.

Many of the concepts in this theory are not amenable to empirical research. The notions of functional importance, societal stability and survival potential, and even societal complexity are difficult to operationalize. However, empirical support for the theory has been generated. This support is largely due to the socioeconomic scales, especially occupational scales, which are currently used in socioeconomic research. In the following section, the development of these scales is presented and discussed.

Socioeconomic Measurement Scales

In research, the socioeconomic theory of inequality is expressed in
terms of several socioeconomic scales. The most important of these are occupational scales. The development of occupational scales has had a long history in sociology. The three most important scales are the NORC prestige scale, the Duncan socioeconomic index, and the U. S. Census socioeconomic status scale. These scales share several common features which are significant from the perspective of the socioeconomic theory of inequality (cf. Gusfield and Schwartz, 1963; Featherman et al., 1975). First, they are based on a continuous model of the structure of social inequality. Secondly, they are solidly based on the concept of status or prestige. Lastly, the units of analysis for these scales are highly specialized and differentiated occupational positions. Three major occupational scales and several accompanying socioeconomic scales are reviewed in this section.

One of the earliest and most widely recognized occupational scales was developed by North and Hatt in 1947. This scale, referred to as the NORC scale, was formulated to ascertain the relative social prestige of a large number of common occupations. As it was originally conceived, the NORC scale bears a close approximation to Weber's conception of social status and Parsons' notion of consensually derived occupational prestige. The NORC scale was by no means the first occupational scale to be developed in the United States. To a certain degree, it was influenced by prestige scales developed by Counts (1925) and Smith (1943).

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14Socioeconomic scales have existed for some time in American sociology. For the most part, the early scales include some measure of occupation along with several other measures of socioeconomic status. Since these are not utilized in current socioeconomic attainment research, they will not be discussed. Examples of these scales include: Hollingshead's "Index of Social Position" (Hollingshead and Redlich, 1958), Warner's "Index of Status Characteristics and Evaluated Participation Scale" (Warner et al., 1960), and Chapin's "Living Room Scale" (Chapin, 1935).
However, in terms of scope, reliability, and generalizability, the NORC scale was vastly superior.

The scale was developed by asking a quota drawn sample of 2920 respondents to judge each of 90 occupations in terms of their own personal opinion regarding the general standing of each occupation (NORC, 1953).\(^\text{15}\) A five point Likert scale, coupled with a "don't know" option was used to rate each occupation. Admittedly arbitrary numerical values of 100 for an "excellent" response, 80 for a "good" response, 60 for an "average" response, 40 for a "somewhat below average" response, and 20 for a "poor" response were assigned, summed and averaged for each of the 90 occupations. Thus each occupation received a numeric as well as a ranked score. The most prestigious occupation was "Supreme Court Justice" and the least prestigious was "shoe shiner".

A replication and comparison of the 1947 NORC scale was reported by Hodge, Siegel, and Rossi in 1964. By exactly replicating the procedures of North and Matt, Hodge and his associates were able to examine the stability of the occupational prestige hierarchy between 1947 and 1963.\(^\text{16}\) As might be expected, the relationship between the two scales was extremely strong (r=.99) (Hodge et al., 1966). Although specific

\(^\text{15}\)Goldthorpe and Hope (1974:11-12) are most likely correct in noting that most respondents do not evaluate occupations with a distinctive "prestige" frame of reference. Rather, in consideration of a variety of occupational attributes, most respondents order occupations in terms of some rather "unspecific better-worse" dimension. Thus prestige scales most probably measure the "general desirability" of the occupation.

\(^\text{16}\)Hodge et al. (1966) also drew several inferences concerning the stability of occupational prestige over a longer period of time by utilizing the prestige scales developed by Counts (1925) and Smith (1943). The smallest correlation between any two of the four scales (Counts, Smith, NORC 1947, NORC 1963) was over .93.
fluxuations were uncovered, by and large, the scales were extremely close. 17

Due to the extensiveness of the occupations considered in the NORC scales, they become very popular as standardized methods of measuring occupational prestige. In addition to the methodological advantages of the scales, they were also theoretically grounded in the concept of status. Lastly, the continuous nature of the scales was extremely compatible with the functionalist image of the structure of social inequality.

Despite their immediate appeal, the NORC scales were not without their critics (see Reiss, 1961:Ch. II). One major criticism was that the 90 occupations were not exhaustive of the universe of occupational titles (Duncan, 1961:110). This limitation provided the impetus for the development of another occupational scale -- the Duncan socioeconomic index.

Since Duncan noted that less than half of the occupations in the labor force were represented by the NORC scales, he felt it necessary to develop a socioeconomic index for all occupations. Using census data on detailed occupational characteristics, Duncan outlined a procedure for establishing prestige rankings on the basis of several socioeconomic factors. The procedure involved using NORC prestige ratings as a criterion for deriving weights for census characteristics pertaining to

17 Treiman (1977) has recently developed an international prestige scale in order to lend compatibility to cross-cultural analyses.
each occupation (Duncan, 1961:114). The two census characteristics considered in Duncan's scale were education and income (since occupation intervened between the two). The education predictor consisted of the percentage of individuals in each occupational category who were at least high school graduates. In a similar fashion, income referred to the percent of individuals in each occupational category reporting incomes of at least $3,500 in 1949 (Duncan, 1961:120). Both education and income were adjusted for the age distribution of each occupation. With this variable specification, Duncan utilized 45 NORC classifications which had corresponding census values and computed the relationship between the two predictor variables and the prestige criterion. Together, education and income accounted for approximately 83% of the variation in the dependent variable (Duncan, 1961:124). The multiple regression equation which Duncan uncovered was: 

$$\text{Prestige} = 0.59 \text{Income} + 0.55 \text{Education} - 6.0.$$  

This procedure, according to Duncan, could be extended to any occupation for which education and income data was available.

Of course, the relationship between the Duncan socioeconomic index and the NORC scales was extremely high (see Featherman and Hauser, 1976b). The Duncan socioeconomic index is probably the most frequently used occupational scale in contemporary stratification, mobility, and attainment research. Despite Duncan's (1961:139) admonition that it is a gross oversimplification to conceptualize the stratification system

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18 Duncan (1961:117) felt that instead of using the "raw" NORC scores as a criterion, the percent indicating "good" or "excellent" for a given occupation was more desirable since earlier studies had concluded that respondents were more reluctant or unable to make negative judgments than positive judgments.
of any society on the basis of a single socioeconomic variable, many researchers, including Duncan himself, have done just that.\(^\text{19}\) The notable Blau-Duncan model of status attainment was referred to by its authors as a model of the "process of stratification" (Blau and Duncan, 1967:170).

The third and final socioeconomic scale for the measurement of occupations is the United States Census socioeconomic status scale (U.S. Bureau of Census, 1963). This scale is based on income and education distributions for each occupation, with no explicit concern for occupational prestige. However, this scale correlates with Duncan's socioeconomic index at .97 indicating an extremely high degree of similarity between the two.

The socioeconomic theory of inequality is not a uni-dimensional model of social rewards. Thus, it is not uncommon to observe measures or indices of parental education, family income, respondent's education, respondent's income, race, sex, ethnic background, family possessions, so on included along with occupational status. At a minimum, most measures of socioeconomic position include both occupational prestige and educational attainment.

Socioeconomic and Status Attainment Models

The determination of socioeconomic position by the utilization of occupational scales in conjunction with measures of educational attain-

\(^{19}\)In fairness to Duncan, the Blau-Duncan model of status attainment also incorporated a measure of father's education (or son's education) as an additional measure of socioeconomic background (or socioeconomic attainment). Others referring to status attainment models as "models of stratification" include Duncan and Duncan (1968), Hauser (1970), and Featherman, (1972).
ment, income, and so on has been a characteristic of socioeconomic attainment research over the past decade. As mentioned previously, this research is concerned with the processes by which individuals attain socioeconomic positions. Given the methodological determination of socioeconomic positions, it is possible to empirically analyze the relationship between parental and filial occupational prestige, educational attainment (either actuals years or credentials), income, and perhaps several other statuses. Furthermore, it is theoretically and empirically possible to analyze the influence or effect of intervening or mediating variables between an origin and attained socioeconomic position. Most of the research on attainment processes has utilized Duncan's socioeconomic index as a measure of origin and attained occupational position. Additionally, measures of parental and attained education and income are often used along with occupational prestige as measures of socioeconomic position. However, when these measures are considered together, they theoretically specify a socioeconomic image of the structure of social inequality. Therefore, the place of socioeconomic attainment research in the study of stratification, according to Haller and Portes (1973:55) "lies in the effort to specify the casual sequence through which individuals reach their positions in status hierarchies". In this section, the two most widely recognized models of attainment are reviewed. Both of these models

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20 The term "status" as used by most status attainment researchers is not to be confused with the Weberian usage of the term. As Haller and Portes (1973:51) define "status", it refers to "inequalities among units, such as persons or families, which are more or less institutionalized within the larger social system". Consequently, statuses include occupation, education, income, and so forth. To avoid this confusion, the term "socioeconomic" was used instead of "status" in referring to attainment processes.
incorporate a socioeconomic image of the structure of inequality. The two models are the Blau-Duncan model of the process of stratification and the Wisconsin model of status attainment.

The first and most influential model was developed by Blau and Duncan in 1967 in their book entitled *The American Occupational Structure*. Blau and Duncan's (1967:165-177) basic model of the process of stratification consisted of only five variables. The variable specification is depicted in Figure 1. The model posited that origin socioeconomic position (father's education and occupation) would significantly influence the respondent's educational attainment. Further, the respondent's initial occupation was hypothesized to be influenced by father's occupation and respondent's educational attainment. Lastly, it was proposed that the respondent's current (1962) occupation would be significantly affected by father's occupation, respondent's education, and respondent's first occupation. Taken together the variables accounted for approximately 43% of the variation in current occupational status. Furthermore, Blau and Duncan found that a sizable portion of the influence of father's occupation and education on respondent's 1962 occupation was indirect, mediated by respondent's education and first occupation.

Despite the apparent simplicity of the Blau-Duncan model, its influence on subsequent socioeconomic attainment research was overwhelming. The method of path analysis coupled with the increased precision in measuring occupational position led to a multitude of attainment models and analyses. For the most part, these will be discussed in the next section. However, one notable contribution to attainment theory and research was the model developed by Sewell and his colleagues at the University of Wisconsin (Sewell et al., 1969; Sewell et al., 1970;
Figure 1. The Blau-Duncan Model of the Process of Stratification

Sewell and Hauser, 1972).

Blau and Duncan's model of status attainment was an "objective positional" one in that no social psychological variables were explicitly considered. This "limitation" provided the impetus for a second model of status attainment which included both objective positional and social psychological variables. Sewell and his associates developed a recursive model of status attainment which in its most elaborate form consisted of 14 variables (Sewell and Hauser, 1972). In addition to measures of father's occupation and education, the Wisconsin model also included parental income and mother's education as additional measures of origin socioeconomic status. In the 1972 version, three measures of attained socioeconomic position were used as dependent variables. Educational attainment, occupational attainment (prestige), and 1967 earnings were included as measures of attained socioeconomic position. Mediating between the origin and attained positions were (in sequence): mental ability, high school grade average, significant others' influence (parents' and teachers' encouragement and friends' college plans), and educational and occupational plans (or aspirations), Figure 2. The model was successful in accounting for variation in educational attainment \( (r^2=0.540) \) and occupational attainment \( (r^2=0.423) \), but totally unsuccessful in explaining income attainment \( (r^2=0.070) \).

The Blau-Duncan and Wisconsin models of attainment are prime examples of the use of the socioeconomic theory of the structure of social inequality in the analysis of attainment processes. Since the work of Blau and Duncan and the Wisconsin researchers, numerous attainment studies have appeared in the literature. In the following
Figure 2. The Wisconsin Model of Status Attainment

*Lines of influence not included

Source: Sewell et al., 1972.
section, a brief summary and review of this growing body of literature is presented.

Review of Literature on Socioeconomic Attainments

In their most simplistic form, the Blau-Duncan and Wisconsin models of status attainment can be conceptualized as three-stage processual models consisting of background, intervening, and outcome variables. Over the past decade, a sizable body of empirical research and literature has been amassed concerning attainment processes. This literature consists largely of efforts to empirically examine background, intervening, and outcome variables which were either not considered, unavailable, or only approximated by Blau and Duncan and the Wisconsin researchers. However, virtually all of these studies have retained the socioeconomic image of the structure of inequality as discussed earlier. Duncan, Featherman, and Duncan (1972:10-15) have summarized the crucial variables at each of the three stages in the attainment process. Using their outline, studies which have extended, modified, or replicated the Blau-Duncan and Wisconsin models are presented and reviewed in this section.

Background Variables

As noted earlier, Blau and Duncan measured background (or origin) socioeconomic position on the basis of two variables: father's occupation (measured according to Duncan's socioeconomic index) and father's educational attainment. Sewell and his associates (1969; 1970) added mother's educational attainment and a measure of family income to father's occupation and education in order to construct an aggregate
index of socioeconomic status. In addition, both sets of researchers limited their analyses to white males. Since these seminal studies, subsequent researchers have refined and extended the measurement of background socioeconomic status by considering and evaluating other measures. In addition to socioeconomic background, several other noteworthy origin variables such as family size (or number of siblings), race, sex, ethnicity, region, residence, and so on have been examined.

The first and most important of the background variables is socioeconomic status. Of course, all attainment research begins with a measure(s) of origin position. Since the work of Blau and Duncan and the Wisconsin researchers, several additional measures of socioeconomic status have appeared in the literature. For instance, measures of "family possessions" or "acquisition indexes" have been examined in several studies concerning educational attainment (e.g., Alexander et al., 1975; Wilson and Portes, 1975; Portes and Wilson, 1976; Alexander and Eckland, 1977). Typically, these measures include the actual number of specific possessions which appeared in the origin home of the respondent. However, for the most part, the explanatory power of these measures, above the occupation and education measures, is minimal.

21 In an earlier model of status attainment, Sewell and his associates (1969) did not utilize a measure of family income, but rather employed a perception of the economic status of the family and the respondent's perception of possible financial support should he/she chose to attend college. In addition, the early versions of the Wisconsin model included a measure of intelligence as a background variable, but in the 1972 version, it was included as an intervening variable.

22 Alexander and Eckland (1977:178) noted that family possession measures might be a proxy for family income. Portes and Wilson (1976:418) suggested that possessions might be a proxy for the "general quality of the home environment".
A second background variable which appears significant in the socio-economic attainment process is the size of the family of origin (or the number of siblings). Several studies have shown small, but significant depressant effects of family size on attainment patterns (e.g., Duncan et al., 1972; Featherman and Hauser, 1976b; 1976c, McClendon, 1976; Hogan and Featherman, 1977). Another family-related factor is the effect of broken homes on attainment patterns. In general, the influence of this variable appears minimal (Featherman, 1976; 1976b; Hogan and Featherman, 1977).

Both the Blau-Duncan and the Wisconsin models of status attainment were evaluated using data on white males. Consequently, several areas which have received attention are racial, ethnic, and sexual variations in attainment processes. Although, in general, the process of socio-economic attainment is fairly similar for whites and blacks, several fundamental differences have been uncovered (for specific differences, see Featherman and Hauser, 1976b). In general, attainment models have been far more successful in explaining all forms of attainment for whites than for blacks (Duncan and Duncan, 1968; Jencks et al., 1972; Porter, 1974; Stolzenberg, 1975; Featherman and Hauser, 1976b; Portes and Wilson, 1976).

Sex differences in attainment processes have also been documented. Once again, the basic process (especially education and occupational attainment) is somewhat similar for males and females (e.g., Treiman and Terrell, 1975a). However, studies have shown that compared to men, women's achievements are less related to background variables (Carter, 1972; Alexander and Eckland, 1974; Featherman and Hauser, 1976c; McClendon, 1976). Furthermore, sex comparison research has explored or contemplated "career contingency" considerations such as fertility, labor
force participation, age at marriage, and so on (see Falk and Cosby, 1975).

Ethnic and religious variations within the context of attainment research has received only a limited amount of attention (see Duncan et al., 1972:51-55). A study conducted by Featherman (1971a) analyzed various white ethnic groups (Jews, Italians, Catholics, Anglo-Saxon Protestants, and Mexicans) relative to their educational and occupational attainment patterns. He concluded that, particularly occupational attainment, can be accounted for by factors other than ethnicity which are presently included in most attainment models. However, educational attainment was significantly influenced by ethnicity with Jews and Anglo-Saxon Protestants receiving relatively higher educational attainments. Other than Featherman's research, further analyses of ethnic and/or religious variables are not available although their potential has been stressed by Duncan and his associates (1972) and Warren (1970).

A final set of background variables which has received attention since the work of Blau and Duncan and the Wisconsin researchers are called "time and space" considerations. By this, Duncan and his colleagues (1972) were referring to time-related variations in attainment processes as well as spatial variations such as regional, residential, and cross-cultural differences. A general conclusion has been that attainment models increase in explanatory power as the age of the respondent increases up to approximately 40-50 and then taper off (Duncan et al., 1972; Featherman and Hauser, 1976b). As might be expected, career analyses have been fairly successful in accounting for occupational attainment patterns. These studies have shown that the respondent's previous occupation is the best predictor of current occupational attainment (Blau and Duncan, 1967:177-188; Featherman,
1971b; Kelley, 1973). Another study (Henretta and Campbell, 1976) examined the attainment processes of retired respondents. They concluded that the factors which accounted for attainments prior to retirement are generally the same ones which explain attainments after retirement. Lastly, there have been a couple of studies which have examined changes in attainment processes between two or more periods of time. For example, Featherman and Hauser (1976b; 1976c) studied changes in attainment patterns between 1962 and 1973 and concluded that there has been a discernable trend towards increasing meritocratic relationships (e.g. the relationship between education and occupation increases over time).

Spatial variations in socioeconomic attainment processes have received a considerable amount of attention. Regional, residential, and cross-cultural studies have all been examined in recent literature. Attainment variations were analyzed by Blau and Duncan (1967) and Hogan and Featherman (1977) between Northern and Southern respondents in the United States. The influence of family residence has also been uncovered. Starting with the work of Sewell and his associates (1970), several studies have focused on residential variations. For instance, the inclusion of a "farm origin" variable is common in attainment studies (Featherman and Hauser, 1976c; Featherman and Carter, 1976). It has been shown that coming from a farm background will have a depressant effect on attainments. Others, such as Mueller (1974) have studied the influence of "city context" (or residence) on occupational and income attainment and observed a rather weak relationship. A final area of investigation has been cross-cultural analyses. Guided by the theoretical work of Treiman (1970) and Turner (1960), many of these studies have looked at the influence of societal-wide industrialization as well as
normative orientations which are prevalent in various countries. Studies by Hanson and Haller (1973), Jones (1971), Lin and Yauger (1975), and Treiman and Terrell (1975b) have compared attainment processes between such countries as the United States, Great Britain, Australia, and Costa Rica.

In sum, it can be seen that there have been several new foci of attention as well as additions and modifications since the original models of Blau and Duncan and the Wisconsin researchers. However, there have been very few major alterations in the conceptualization and measurement of socioeconomic position. Consequently, most of the recent literature has focused on the applicability of attainment models for various racial, sexual, and spatial groupings.

Intervening Variables

The second major group of variables in attainment models are the intervening variables. These variables are considered to be intervening because they channel or mediate the effect of origin variables on attainments. Six groups of intervening variables have been identified by Duncan and his associates (1972). These include: schooling or education; intelligence or scholastic ability; motivation and other social psychological factors; plans, aspirations, and intentions; social influences and "contextual effects"; and "career contingencies".

The argument which has been advanced is that industrialization will lead to achievement-based types of attainment relationships. Thus, the influence of education on occupational and income attainment should increase while the effects of background variables should diminish as industrialization occurs.
The intervening variable which has received the most attention in attainment research is schooling and education. Blau and Duncan, the Wisconsin researchers, and most subsequent investigators have examined the causes and consequences of education. Of course, the amount of education an individual receives can be construed as an attainment, similar to occupational and income attainment. However, education also has a significant instrumental value which places it in a category with other intervening variables. Virtually all socioeconomic attainment studies have included education in their analyses and many of these have focused exclusively on educational attainment processes (e.g., Hauser, 1970; Alexander and Eckland, 1974; Wilson and Portes, 1975; Portes and Wilson, 1976). The general conclusion reached by most researchers is that educational attainment both mediates a substantial proportion of the influence of the background variables on subsequent attainments and directly affects them, especially occupational attainment. In fact, time and again, educational attainment has been found to be the strongest predictor of occupational status.

A second set of intervening variables, which were considered in the Wisconsin study, includes intelligence and/or scholastic performance. Conceptually and empirically, these variables have been positively related to educational attainment and several other attainments. Again, most studies of attainment have included a measure of intelligence and/or academic performance (e.g., Jencks et al., 1972; Alexander et al., 1975). With the exception of education plans or aspirations, measured intelligence or one of its correlates has been shown to be the best predictor of educational attainment (see, Porter, 1974).

A third set of intervening variables which has received some attention in attainment research includes achievement motivation and other
social psychological traits (see Atkinson et al., 1976). For the most part, the relationship between these factors and other variables in the socioeconomic attainment process has not been explored in any great detail. Studies by Featherman (1971a; 1972) have concluded that no support exists for the contention that achievement orientations are significantly related to attainments, although the conclusion is still tentative. Future plans, aspirations, and intentions display a close conceptual affinity to achievement motivation and they have been found to be rather strong predictors of certain attainments. Other psychological and social psychological variables have been incorporated into attainment models with varying degrees of success. For example, Porter (1974) found rather small positive effects of "creativity and conformity" measures on educational and occupational attainment for both blacks and whites. Portes and Wilson (1976) noted that a measure of "self esteem" produced a small, albeit significant, positive influence on educational attainment for black males. A final example of a social psychological intervening variable employed in an attainment framework was the addition of a measure of "social integration" by Otto (1976). It was found that the variable did not make an appreciable direct contribution to the predictive power of the model, but that it did mediate the effects of other variables in the process. However, for the most part, the social psychological variables which have been utilized in socioeconomic attainment models have been poorly conceptualized and measured and thus inferences should be taken as tentative.

Another set of intervening variables which has received a large amount of attention in social psychological models of attainment includes what Duncan and his colleagues have referred to as "social influences".
By this, they were referring to "patterns of social interaction between an individual and relevant 'others' in his social milieu that may influence his dispositions or direct his attention to opportunities" (Duncan, et al., 1972:13). Also included as social influences are the so-called "contextual effects". Analyses pertaining to significant other influences can be found in the Wisconsin study and most other social psychological attainment studies. These variables have been shown to be important as both direct and indirect influences on aspirations and attainments, especially educational attainment. Parents, teachers, and friends have received the most attention relative to their influence, encouragement, or role-modeling effect on aspirations and attainments. Of these significant others, friends appear to have the largest impact on subsequent plans and attainments (Sewell and Hauser, 1972; Alexander et al., 1975).

From the socioeconomic attainment perspective, contextual effects, have been treated as between-school variations as opposed to within-school variations with respect to specific attainments or performances (see Hauser, 1970; Alwin, 1974; Sewell et al., 1976:part III). Research findings have shown that certain specific contexts produce small, but significant, influences on educational attainment. For instance, Alexander and his colleagues (1975) found that the "ability" context of a school produced a negative effect while the "social status" context produced a significant positive effect on educational attainment.

Finally, there is research which identifies other social influences which might be important in socioeconomic attainment processes. Differential curriculum placing or tracking has been demonstrated to be influential in educational attainment patterns (Alexander, et al., 1978). Likewise, participation in extracurricular activities has been
shown to produce a significant direct and indirect effect on both educational and occupational attainments (Otto, 1976; see also Spady, 1970).

The final set of intervening variables which has been discussed in the context of socioeconomic attainment includes what Duncan and his associates have called "career contingencies". These contingencies refer to decisions which may have a potentially significant bearing on subsequent attainments (Duncan et al., 1972:13; Falk and Cosby, 1975). These decisions include considerations such as when to enter the labor force, selecting a place of residence, when to begin a family, whether to marry, and a host of others. Many of these contingencies have not been analyzed and others have only been partially studied. As might be expected, age of entry into the labor force appears to be negatively related to occupational attainment, usually due to the lack of higher education (Duncan et al., 1972:210-224). Fertility has been shown to produce negative effects on the educational attainment of wives, but rather trivial effects on husbands' attainments (Duncan et al., 1972:236-244).

In sum, since the work of Blau and Duncan and the Wisconsin researchers, numerous studies have been conducted relative to intervening variables. Although the significance of many of these intervening variables is debatable; nevertheless, their consideration has broadened the scope of attainment models.

Outcome Variables

The third and final major set of variables considered in attainment models includes the outcome or attainment variables. For Blau and Duncan and the early Wisconsin researchers, only educational and occupational
attainments were looked at. Since these studies, income has also been examined as well as several other outcomes.

In general, socioeconomic attainment research has been fairly successful in predicting occupational attainment, and particularly, early occupational attainment. In several studies, roughly half of the variation in early occupational attainment has been accounted for with the "common" background and intervening variables (see Sewell and Hauser, 1972). As mentioned before, several studies have examined intragenerational occupational attainment, studying occupational changes in the career development of a respondent, and have been fairly successful in accounting for these changes (Featherman, 1971b; Kelley, 1973). As might be expected, the strongest effect on occupational attainment (outside of prior occupation) is produced by educational attainment. In addition, several other background and intervening variables have been shown to produce significant direct and indirect effects.

Although socioeconomic attainment research has been generally successful in accounting for variation in occupational attainment, it has been largely unsuccessful in accounting for variation in income attainment or earnings. The most recent version of the Wisconsin model of status attainment, with its extensive set of background, intervening, and outcome variables was only able to account for seven percent of the variation in earnings. Other studies have done only slightly better (see Jencks et al., 1972; McClendon, 1975; Spaeth, 1976). In the Wisconsin model, occupational attainment and family (background) income produced the largest, although rather small, effects on income attainment.

Besides occupational and income attainment, other outcome variables have also been examined in the context of attainment research. Duncan
and his associates (1972:14) have identified several of these including: job satisfaction (see Jencks et al., 1972:ch. 8), feelings of economic and/or status security, and social class identification (subjective appraisals). In addition, "career alienation" has also been examined. Otto and Featherman (1975) were quite successful in accounting for variation in two dependent variables designed to measure "self estrangement" and "powerlessness".

In sum, it can be seen that the research on socioeconomic attainments has moved in many directions since the work on Blau and Duncan and the Wisconsin investigators. However, the basic models which were outlined by these researchers remain fairly well accepted. In the next section, a summary of this chapter as well as a set of propositions is presented to guide the current research on socioeconomic attainment processes.

Summary and Propositions

In this chapter, the socioeconomic theory of social inequality was examined. It was shown that the development of the theory could be traced to the influences of Weber, Sorokin, and the functionalists. Although there has been no singular spokesman for this theory, nevertheless, several notable trends and influences were uncovered. Characteristics such as multiple bases of inequality, continuous as opposed to discrete rankings, and the notion of consensual evaluations were all noted.

It was also stressed that the occupational prestige scales which have been utilized to measure both origin as well as attained positions are imbued with several of the characteristics of the socioeconomic theory of inequality. Three occupational scales were reviewed. The NORC prestige scale, the Duncan socioeconomic index, and the U.S. Census
socioeconomic scale were discussed relative to their construction and usage in attainment research. Following this discussion was a summary of socioeconomic attainment research. The Blau-Duncan and Wisconsin models of status attainment were presented along with a summary of research which has been conducted since these models. Various background, intervening, and outcome variables were examined relative to their usage in extant research and it was concluded that even though slight racial, sexual, and spatial variations may exist, in general, the variable specification and inferences based on the Blau-Duncan and Wisconsin models are still accepted in attainment research.

One issue which has not been addressed is the relative adequacy of the Blau-Duncan model compared with the Wisconsin model. As mentioned earlier, the Blau-Duncan model consisted basically of what Haller and Portes (1973:53) called "objective positional" factors. In other words, psychological and/or social psychological variables were not included in its specification. On the other hand, the Wisconsin model included both positional and social psychological variables. Haller and Portes (1973:58) felt that the Wisconsin model moved into the "less 'safe' realm of social psychological variables". Since these two models, subsequent research has also been fairly well split between the positional and social psychological camps. ⁴ The question as to which type of model is "better" is debatable, although the issues are

⁴ For example, the Occupational Changes in a Generation (OCG) data of Blau and Duncan and the more recent OCG II data of Featherman and Hauser have been utilized for the positional models of attainment, while the Wisconsin data set, the Educational Testing Service national sample, and the Youth in Transition data sets have been utilized for social psychological analyses.
clear. First, although the Blau-Duncan model is more parsimonious, it
does not directly deal with the issues of how origin socioeconomic
position influences educational and occupational attainment or what
effects mental ability, academic performance, significant others'
influence, and so on have on this overall process (Haller and Portes,
1973:58). However, on the other hand, causally specifying social
psychological variables can be conceptually and methodologically
difficult (cf., Woelfel and Haller, 1971; Henry and Hummon, 1971;
Land, 1971). Furthermore, measurement of many of the social psychological
variables is crude and even problematic. Consequently, the positional
models are probably more accurate, while the social psychological models
are theoretically more complete. Of course, one major difficulty is
obtaining social psychological information for certain respondents.
For instance, in order to obtain "accurate" information on significant
others' encouragement, it is necessary to secure data while the respondent
is young and perhaps still in school. Thus a longitudinal sample of
school-age respondents is desirable. Consequently, most social psycholo-
gical studies use cohorts of school-age respondents. Of course, there
is a trade-off because school-age respondents are incapable of providing
information on socioeconomic attainments, especially occupational and
income attainments. Such attainment data is best obtained from cross-
sectional labor force samples. Cross-sectional samples are used in the
present study. Consequently, a positional model of socioeconomic
attainment, similar in form to those of Blau and Duncan (1967) and
Featherman and Hauser (1976b; 1976c) is evaluated in this research.
This model can be summarized in the following set of propositions:
Proposition 1: The multiple dimensions of origin socioeconomic status
will produce significant positive effects on educational attainment.
Proposition 2: The multiple dimensions of origin socioeconomic status and educational attainment will produce significant positive effects on the socioeconomic status of an individual's initial occupational position, with educational attainment mediating a substantial proportion of the effect of the origin socioeconomic factors.

Proposition 3: The multiple dimensions of origin socioeconomic status, educational attainment, and initial occupational status will produce significant positive effects on the socioeconomic status of an individual's current occupational position, with educational attainment and initial occupational status mediating a substantial proportion of the effects of antecedent factors in the model.

Proposition 4: The multiple dimensions of origin socioeconomic status, educational attainment, initial occupational status, and current occupational status will produce significant positive effects on an individual's income, with educational attainment, initial occupational status, and current occupational status mediating a substantial proportion of the effects of antecedent factors in the model.

These four propositions are diagrammatically displayed in Figure 3. From these propositions, numerous testable hypotheses can be derived.

Up to this point, only the socioeconomic theory of inequality has been considered. However, as was mentioned in the previous chapter, there is a second, alternative theoretical position from which attainment processes can be viewed. This is the Marxist class perspective. In the following chapter, the theoretical and empirical basis for a class model of attainment is presented.
Figure 3. A Model of Socioeconomic Attainment
CHAPTER III

THE MARXIST CLASS THEORY OF INEQUALITY
AND CLASS ATTAINMENT

Introduction

The purpose of this chapter is to present the theoretical foundation for a Marxist model of class attainment. Class analysis represents a second fundamental theoretical perspective regarding social inequality. After the introductory section, the first major concern in this chapter is with the structural determination of Marxist class categories. The next section focuses on class mobility and class attainment. Several passages from the writings of Marx and Engels are presented to help formulate a class attainment model. Based on three basic propositions, this model is developed and presented in the last section.

Before moving into a specific discussion of the structure of social inequality according to Marx and Engels, a few preliminary comments are worth noting. Class attainment is related to class mobility. A high rate of mobility means that an attained class is more independent of an origin class than does a low rate of mobility. Although Marx and Engels did not specifically address either mobility or attainment, they did make several allusions to them. Most likely, the basic reason why Marx and Engels did not specifically address these processes is that regardless of the amount or extent of social mobility, capitalism will continue to exist. Exploitive class relations will be found regardless of a high or low rate of mobility (see Poulantzas, 1978:32-33). Taken a step further, this means that stratification analysis should focus on
capitalism itself and not on social mobility. However, class mobility is a part of capitalism and varies with its growth and development. Moreover, it can be a mechanism of social stability. A couple of examples should make these points clear.

First, social mobility and attainment processes are related to the historical development of capitalism. In early stages of capitalism, social mobility is quite extensive, especially upward social mobility. This observation was noted by Marx in *The Eighteenth Brumaire of Louis Bonaparte* (1972a:444) with specific reference to the pre-Civil War United States:

"...in the United States of North America though classes indeed already exist, they have not yet become fixed, but continually change and interchange their elements in a constant state of flux."

The reason for a high rate of social mobility is because of capitalism itself. In its early stages, capitalism requires a relatively small initial capital investment to enter into commodity production. Thus, more non-capitalists are able to become capitalists. This represents upward social mobility which promotes stability because there is no class polarization taking place.

Something happens as capitalism progresses towards a monopoly stage. Social mobility becomes virtually nonexistent and class attainment becomes largely the result of ascriptive mechanisms. Because of technological advances producing what Marx called a growing organic composition of capital, upward mobility all but ceases. The initial capital necessary to enter into competition in the production of commodities becomes overly prohibitive (see Marx, 1967:309). This produces a consequence for social stability. As Noble (1975) remarked, a lack of social mobility is
indicative of a pre-revolutionary stage in capitalist development. Class polarization occurs in such a period and class antagonism builds.

Other fluxuations in class mobility rates are also tied into the growth of capitalism. For instance, with the development of capitalism, a growing split takes place between the ownership and control of the means of production. This suggests that there is a growth in the managerial class of wage-laborers and thus structural mobility. Another example is the growing concentration of capital. According to Marx and Engels, as capitalism develops, the smaller capitalists and the petty bourgeoisie are forced into the ranks of the wage-laborers because of an inability to successfully compete with the larger capitalists. In mobility terms, this means a structural decrease in the size of the capital-owning classes and a corresponding increase in the size of the wage-labor classes. This also produces mobility. Other examples could also be noted. The point is that mobility and attainment studies are extremely valuable to Marxist analyses. Certain rates of mobility and types of attainment processes correspond to certain stages in the development of capitalism. Moreover, they are intimately tied into social stability in capitalist societies. Therefore, contrary to Charles Anderson's (1974:141) reasoning that there are larger questions which must be answered first, it is felt that mobility and attainment studies should be integrally tied into Marxist theory.

Class Structure in Capitalist Societies

Marx and Engels were by no means consistent with their usage of the concept "class". In certain passages, they used it synonymously with other concepts such as stratum and social group. In general, they appeared to assume that there was common agreement as to its meaning.
In fact, only a fragmentary sketch at the end of the third volume of *Capital* was devoted specifically to the topic of social classes. Yet despite their inconsistent, ill-defined usage of the term, there is a common theme running throughout their writings which enables one to grasp the essential meaning of the concept.

The concept of social class occupied a fundamental role in the writings of Marx and Engels. The history of all societies was the history of classes and their struggles. For Marx and Engels, all history - past, present, and future - was comprehensible only in terms of classes and their social relationships. They argued that history had witnessed several revolutionary changes in the structural nature of the social classes. Although structural changes had taken place, the basic class relationship had persisted. This relationship was exploitation which resulted in the oppression of one class by another.

The class structure of central concern to Marx and Engels was that characteristic of the capitalist mode of production. Capitalism was a relatively recent mode of production having been predated by an Ancient and a Feudal mode among others. However, unlike other modes of production, capitalism possessed a couple of unique features. Most significantly, capitalism was characterized by "free labor" (Marx, 1967:78). Contrary to earlier modes, workers in a capitalism were legally free to sell their labor power, that is, their potential for labor, to a capitalist in return for a wage. The capitalist purchased this labor power along with the other materials necessary to produce commodities.

Marx (1967:35) referred to capitalism as the stage of history characterized by commodity production. This represents the second unique
feature of capitalism. According to Marx, commodities were goods and products which satisfied human needs. In addition, commodities possessed a quantitative "exchange value". In other words, commodities were produced in order to satisfy the needs of someone other than the producer. In Marx's words, they were produced because they had a "use value" for someone else. Today, as in Marx's time, production in capitalist societies is not for immediate consumption, but rather for exchange. The class structure of capitalist societies hinges on the process of commodity production.

In order to produce any commodity, the capitalist must legally own the means of productions. The means of production are acquired through an initial capital investment. In other words, the owner of capital purchases those items necessary to produce the commodity. The decision as to which commodity will be produced will depend on market condition and the probability of realizing a profit. The means of commodity production consist of raw materials, tools of production, buildings, and most importantly, labor power. The key to commodity production for Marx and Engels rested in the so-called "labor theory of value" (Marx, 1967:167). Borrowed from the conservative English economists, the labor theory of value maintains that the exchange value of any commodity equals the quantity of labor socially necessary to produce it, with skilled labor being taken as a multiple of simple labor (Mandel, 1976:20). In the crudest sense, this means that human labor and only human labor

\footnote{Following the labor theory of value, the worth of the laborer equals the amount of labor necessary to produce him/her; in other words, the amount of labor necessary to meet basic needs (Marx, 1967:170-171).}
can create value. Moreover, the value of any human creation equals the amount of labor embodied in it.

In the process of commodity production, the capitalist purchases the raw materials, technology, tools, and so forth necessary for the specific production. Following the labor theory of value, the true worth of these materials equals the amount of labor it took to produce them. Thus these materials are commodities also. However, the labor embodied in these materials is spent labor or "old labor" (Marx, 1957: 209). Consequently, the true value of these materials is constant from one production to another. The capital advanced by the capitalist to purchase these materials is what Marx called "constant" capital (Marx, 1967:209-212).

A new commodity can be produced by adding "new labor" to the "old labor" which is embodied in the raw materials. The newly produced commodity has a true value equal to the amount of "old" plus "new" labor. The "new labor" which creates value is provided by the wage-laborers (Marx, 1967:167). The portion of initial capital expended on "new labor" (wages) is called "variable" capital (Marx, 1967:209). Therefore, the true value of the newly produced commodity equals the value already embodied in the raw materials plus the value added by the workers in the transformation of the raw materials.

In the process of commodity production, the wage received by the worker does not equal the true value of the labor which is added to the commodity. Rather, the worker receives only a fraction. The remainder or surplus part is appropriated or exploited by the capitalist. This portion Marx (1967:150) called "surplus value" or profit. This does not mean that the capitalist does not work, but rather that the capitalist does not add value to the commodity through the expenditure
of labor. Together, constant capital plus variable capital plus surplus value equals the value of the newly produced commodity (Marx, 1967:212). However, the actual value of the new labor equals variable capital plus surplus value. This is the essence of exploitation. Exploitation only involves variable capital and surplus value, not constant capital. It is not possible to exploit spent labor.

Marx noted that the process of commodity production followed a certain pattern or circuit. The most common circuit in capitalism is $M - C - M'$ where: $M$ equals an initial capital investment (usually in the form of money), $C$ equals the commodity, and $M'$ equals the initial capital investment plus surplus value realized after the sale of the commodity (Marx, 1967:105). A successful capitalist enterprise can only exist if $M'$ is sufficiently greater than $M$. Given the labor theory of value, the only way for such to be the case is for the capitalist not to pay the worker the true value of his/her labor. With surplus value or profit, the capitalist can meet personal needs as well as initiate other circuits with a larger initial capital investment.

Thus, the common class relationship in commodity production is exploitation. Taking Marx's economics a step further, the rate of exploitation equals the simple ratio of surplus value over variable capital ($S/V$) (Marx, 1967:216-220). This ratio can vary from zero to positive infinity; however, since surplus value depends upon variable capital, a ratio of zero would indicate no exploitation and the end of capitalist production.

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26There are other circuits of commodities such as direct barter ($C - C'$), and indirect barter through a money medium ($C - M - C'$). Exploitation is not found in these circuits. Exploitation is found in a final circuit. This is an interest-bearing circuit ($M - M'$) (Marx, 1967:146,155).
Marx and Engels felt the true nature of exploitation is hidden in capitalist societies. With the actual producer being separated or alienated from the object of production, money, in the form of wages, serves to disguise the exploitive relationship (Marx, 1967:76). A second and more basic feature of capitalist societies which functions to mask or justify exploitive class relations is an ideological superstructure.

For Marx and Engels, every major change in economic production produces changes in the ideological superstructure of the society. This belief is the essence of historical materialism. As Fromm (1966:12) defined it: "the way man produces determines his thinking and desires". Thus changes in the way man produces will alter modes of thought. The ideological superstructure includes the nonmaterial aspects of a society such as values, laws, social institutions, religious beliefs, and so on.

In Marx's Preface to A Contribution to the Critique of Political Economy (1972b:4), a famous quote notes this relationship:

"The mode of production of material life conditions the social, political, and intellectual life process in general. It is not consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness".

Similar statements are made throughout the writings of Marx and Engels (e.g. Marx, 1972a:459; Marx, 1972c:118). Furthermore, and most significantly, the ideas embodied in the superstructure are not in the best interests of the majority class, but rather are in the interests of the dominant class. The ideological superstructure is basically supportive of the predominant mode of production (e.g. Marx, 1972c:137; Marx, 1972d:351). Class dominance and relationships, although ultimately based on economic production, are ideological as well. Therefore, ideology also serves to mask exploitive class relations.
As capitalism develops, commodity production changes. Greed and the insatiable pursuit of profit inevitably leads to intense competition among capital-owners (Marx, 1967:152-153). According to Marx and Engels, this competition will ultimately lead to the demise of capitalism. In order to successfully compete with other capitalists, it is necessary to produce a commodity of similar quality for a cheaper price. There are several ways to produce cheaper such as extending the length of the working day without raising wages (Marx, 1967:Ch. X), increasing task specialization (Marx, 1967:Ch. XIII), using cheaper labor such as children's (Marx, 1967:396), and obtaining raw materials from cheaper sources (usually through imperialism) (Marx, 1976:237). However, in all of these efforts the major thrust is for increased productive efficiency. The ultimate source of efficient production according to Marx was technology. Generally speaking, machines are more efficient than human labor in the production of commodities.

Marx felt that capitalists would increasingly turn to technology in order to produce more efficiently and compete more successfully (Marx, 1967:Ch. XV). Yet, replacing human labor with machine labor poses a problem for capitalism because surplus value is only produced through the exploitation of human labor. According to Marx, increased technology leads to an increased rate of what he called "the organic composition of capital". Simply put, the organic composition of capital refers to the amount of constant capital to the total capital investment (C/C+V). However, increased organic composition leads to a relative decrease in variable capital expenditures and thus a falling rate of profit.
(Marx, 1976b:Ch. XIII; Applebaum, 1978). This has several economic and sociological implications. First, with an increase in technology, the amount of capital necessary to enter into commodity production increases. As noted earlier, this limits upward class mobility. Secondly, because of harsh competition which favors the larger capitalists who can continually "revolutionize" technology, the smaller capitalists will be driven into the ranks of the wage-laborers (downward mobility). Thirdly, there will be an increasing concentration of capital into the hands of fewer and fewer capitalists leading to monopoly situations in many areas of production. Lastly, displaced laborers will increase the rate of unemployment, producing welfare capitalism and general dissatisfaction.

According to Marx and Engels, the aforementioned conditions will produce a growing polarization between the classes. The class structure will become increasingly characterized by the two fundamental classes. Lastly, the situation of the worker will become relatively worse and worse. At this point, Marx (1963:173) noted that an economically defined class (a class in itself) will become a revolutionary class (a class for

27 The falling rate of profit can easily be seen by considering the rate of exploitation (S/V) and the formula for profit (S/C+V). With an increase in constant capital relative to variable capital and with a constant rate of exploitation, the rate of profit will decrease over time. Even increasing the rate of exploitation will not stop this trend (see Marx, 1967:Ch. XIII).

28 Empirical support for this trend has been provided by Mandel (1976: 36-37). He has noted that there has been an uninterrupted decrease every five years in the percentage of self employed Americans over the past 60 years. According to the Statistical Abstract of the United States, the percentage of non-agricultural male laborers who are classified as self employed has displayed the following decrease: 1950-13.5%, 1955-12.7%, 1960-12.7%, 1965-11%, 1970-8.5%, 1975-8.6%.
itself). This metamorphis involves the recognition of "true" class interests. The working class will recognize that the economic and ideological dominance of capitalism benefits only the minority capitalist class. It is important to keep in mind that classes according to Marx and Engels may or may not be conscious of their own interests. It is only when classes recognize true interests that revolution follows.

Given this brief overview of the class structure in capitalist societies, it is clear that social inequality according to Marx and Engels is class inequality. Other social inequities will emerge and fluxuate in capitalist societies; however, the basis for inequality remains class inequality. For instance, income will vary depending upon whether the individual has control over wages and profits. For those individuals who do not have control, income variations will fluxuate depending upon the value of the individual's labor power. Specific training, skills, experience, market situation, and so on will affect the productive efficiency of the individual's labor power and consequently the individual's income. However, income is not the cause of social inequality, a class structure is. In the next sections, the various class categories in capitalist societies will be discussed.

The Capitalist Class

The dominant class in capitalist societies is the capitalist class, the bourgeoisie. As discussed above, the capitalist class is the exploiting class which exists off of profits derived from the exploitation of wage-labor. In addition, the bourgeoisie is the ruling class whose interests are reflected in the ideological superstructure.
Historically, the capitalist class emerged from within feudalism and played a decisive role in destroying the feudal mode of production (Marx, 1972b:336). Early capitalist production quickly outstripped the productive capacity of the guild system by "revolutionizing" the means of production. Increased technology and a complex division of labor gave early capitalism a productive advantage over feudal production. However, capitalism required a "free labor" source which was unavailable in the feudal mode of production. A class struggle ensued between feudalism and capitalism which resulted in capitalism replacing feudalism as the dominant mode of production. Of course, this produced a new class structure. Engels (1972:89; 1975:171) formally defined the capitalist class in two passages:

"By bourgeoisie is meant the class of modern capitalists, owners of the social production and employers of wage-laborers"

"The class of big capitalists, who in all civilized countries are now almost exclusive owners of the means of subsistence and the raw materials and instruments (machinery, factories, etc.), needed for the production of these means of subsistence. This is the class of the bourgeois or the bourgeoisie".

For Marx and Engels, the capitalist class was a numerical minority with its ranks ever diminishing as capitalism developed. Yet despite the numerical disadvantage, the capitalist class was dominant over the other classes. In particular, wage-laborers were dominated by the capitalists.

According to Mark and Engels, the capitalist class was identifiable on the basis of legal ownership of capital which is necessary to enter into commodity production. Stated another way, capitalists own the means of production. Consequently, the capitalist legally owns the raw materials, instruments of production, labor power of workers, and of
course the commodity which is produced. Decisions regarding what commodity will be produced, how it will be produced, and who will produce it ultimately belong to the capitalist.\textsuperscript{29}

As mentioned above, members of the capitalist class (including their families) live off of surplus value appropriated from wage-laborers. However, the entire surplus value is not consumed. Typically, a portion is used to increase the initial capital outlay in a subsequent commodity circuit. Generally, this results in an ever-increasing scale of production.

Lastly, the superstructure of a capitalist society supports capitalist production. Therefore, the economic dominance is expanded to include cultural and political dominance as well (see Miliband, 1977; Poulantzas, 1978). Necessary sanctions and legitimations are supplied by this form of dominance. The capitalist class can only be understood in the context of the social relations of production. The very existence of the capitalist class hinges on the existence of a second major class, the working class.

The Working Class

According to Marx and Engels, the exploited class in capitalist societies is the working class, the proletariat. Like the capitalist class, the working class emerged from within feudalism as a necessary force for capitalist production. But, whereas the bourgeoisie was the decisive class in destroying feudalism, Marx and Engels felt that the

\textsuperscript{29} Obviously, these decisions are not made capriciously, but rather reflect objective market conditions.
proletariat would ultimately be the class which would topple capitalism.

Marx and Engels offered several formal definitions of the working class:

"By proletariat (it is meant) the class of modern wage-laborers who, having no means of production of their own, are reduced to selling their labor power in order to live" (Engels, 1975:89)

"...the proletarian, i.e., the man who, being without capital and rent, lives purely by labor and by a one-sided, abstract labor..." (Marx, 1976b:71-72)

"(The proletariat is) the class of the totally dispossessed, who are compelled to sell their labor to the bourgeoisie in order to provide the necessary means of subsistence for themselves and their families" (Engels, 1975:171).

In contrast to the capitalist class, the working class constitutes the largest class in capitalist societies with its numbers ever increasing as capitalism develops. Members of the working class do not own the capital necessary to enter commodity production. Consequently, they cannot purchase the labor power of others and appropriate surplus value. They are forced to sell their only commodity in order to acquire the necessary means of subsistence for themselves and their families. This commodity is labor power, the abstract potential which was discussed earlier. As a result, in the production of commodities, members of this class create value by adding "new labor" to that which is embodied in the raw materials. However, a portion of this newly created value along with the commodity itself are surrendered to the capitalist. In return, the workers receive a wage, typically in the form of money, which is used to purchase necessary means of subsistence.

Workers in capitalist societies are characterized by a tremendous occupational diversity. Highly skilled professionals, like engineers,
along with unskilled laborers may both belong to the same class if they sell their labor power to a capitalist in return for a wage. However, the social rewards received by the various workers vary substantially. Wages, prestige, and other social rewards will vary depending upon the value of the labor power of the worker. Since skilled labor is generally more productive and efficient in the production of commodities than is unskilled labor, the value of skilled labor is worth more and thus commands a higher wage, prestige, and so forth. Of course, this is consistent with the labor theory of value as espoused by Marx (1967:44).

Not only is the working class economically dominated in capitalism, it is culturally and politically dominated as well. As noted before, the superstructure of capitalist societies supports the interests of capitalism and the capitalist class. Justifications and rationalizations for the disadvantaged position of the working class flourish in capitalist societies. An example from Marx (1967:737) attests to this:

"The advance of capitalist production develops a working class, which by education, tradition, habit, looks upon the conditions of that mode as self-evident laws of Nature".

The interests of capitalism - economic, cultural, and political - are not the interests of the working class. However, according to Marx and Engels, a revolutionary working class cognizant of its true class interests will ultimately emerge in capitalism. Several socio-historical processes will give rise to a class conscious working class. Competition among capitalists will produce increased exploitation. Technological advances will result in a rising rate of unemployment and increased relative misery. Lastly, a growing concentration of capital into the hands of fewer and fewer capitalists will lead to increased class polarization. These processes are not without their consequences. As Marx (1967:763) argued:
"Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all the advantages of the process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself".

Although for Marx and Engels the class structure of advanced capitalist societies was essentially dichotomous, they did recognize the existence of intermediate class and strata.

Intermediate Classes

Without question, Marx and Engels devoted most of their attention to the capitalist and working classes. These two "great classes" and their inherent contradictions form the essence of the class structure of capitalism. Despite their fundamental concern with these classes, Marx and Engels also acknowledged the existence and role of other classes or strata in capitalist production. Most of these "other" classes and strata are considered to be "intermediate" classes in that they occupy a position between the two "great classes" in capitalism (see Bukharin, 1925; Hodges, 1961; Oilman, 1968; Wright, 1976).

As noted earlier, the existence of intermediate classes hinges on the developmental stage of capitalism. Marx and Engels were emphatic in their belief that as capitalism progressed, the intermediate classes along with the smaller capitalists would be driven into the ranks of the wage-laborers. In advanced capitalist production, there are two fundamental intermediate classes. These are the petty bourgeoisie and the managerial class. Although these categories are referred to as "classes", they can also be conceptualized as segments or strata of the capitalist and
working classes. Like the capitalist class, the petty bourgeoisie is a capital-owning class and like the working class, the managerial class is a wage-labor class. However, despite this basic similarity, the two intermediate classes possess several structural features which distinguish them from the two "great classes".

The Petty Bourgeoisie

Throughout the writings of Marx and Engels are numerous references to the petty bourgeoisie. This class occupies an intermediate position in capitalist production (Marx and Engels, 1975:115). As the adjective "petty" implies, the distinction between this class and the bourgeoisie is one of scale. Both the capitalist class and the petty bourgeoisie are capital-owning classes and both are involved in commodity production. However, the petty bourgeoisie, unlike the capitalist class, does not exploit the labor power of wage-laborers.

So defined, members of the petty bourgeoisie do not legally own the labor power of others and consequently do not appropriate surplus value from wage-laborers. Labor utilized in petty bourgeois production is obtained from the capital-owner and his/her family. However, given the limited amount of labor in petty bourgeois production, the scale of production is relatively small. As a result, this type of production is less efficient than capitalist class production. When the petty bourgeoisie competes with the larger capitalists in the production of a specific commodity, it is unsuccessful. Therefore, petty bourgeois production diminishes as capitalism progresses. Moreover, it tends to concentrate in areas of production which do not attract the larger capitalists (such as areas with a limited potential for profits).
Lastly, this type of production typically is found in areas involving a limited initial capital investment.

There is an inherent antagonism between petty bourgeois production and capitalist production. Members of the petty bourgeoisie are fearful of the larger capitalists above them because of competition and the likelihood of being driven into the wage-labor classes. Consequently, members of the petty bourgeoisie will support the workers in their antagonism against the larger capitalists, but at the same time, they will not favor the abolition of capitalism as a mode of production. Thus as Marx and Engels (1976:100) stressed, this class is a reactionary class attempting to revert back to a simpler form of capitalist production. Small craftsmen, artisans, small family farmers, and the like are prime examples of members of this class.

The Managerial Class

The other major intermediate class is the managerial class. Marx and Engels were keenly aware of the role of managers and other supervisory personnel in the division of labor in capitalist production. In the first volume of Capital, Marx (1967:332) equated capitalist production with a military hierarchy to emphasize the function of supervisors:

"Just as at first the capitalist is relieved from actual labor so soon as his capital has reached that minimum amount with which capitalist production, as such, begins, so now, he hands over the work of direct and constant supervision of the individual workmen, and groups of workmen, to a special kind of wage-laborer. An industrial army of workmen, under the command of a capitalist, requires, like an array, officers (managers), and sergeants (foremen, overseers), who, while the work is being done, command in the name of the capitalist. The work of supervision becomes their established and exclusive function".
Since managers and other such personnel supervise production (and thus the labor power of workers) in the best interests of the capitalists, while at the same time selling their labor power to the capitalists for wages, they occupy an intermediate location between the capitalist and working classes. Thus, like members of the working class, managers are wage-laborers. They sell their labor power to capitalists in return for a wage just like members of working class. However, unlike members of the working class, managers supervise production and act as a sort of surrogate capitalist. Supervision equates with heightened productivity which is in the best interest of the exploiting class. Consequently, managers work in the best interest of the capitalist class.

As numerous authors have noted (e.g., Dahrendorf, 1959:41-48; Zeitlin, 1974; Wright, 1976:35-36), the development of capitalism produces a growing split between the ownership and control of production. The growth of the managerial class has accompanied this split. The significant element in this split is the issue of control. Although managers and other supervisory personnel possess a certain degree of control over production, the amount and extent of control are circumscribed by the capitalist. Ultimate control in capitalist production always remains in the hands of the capitalists, and the managers represent mere functionaries.

Following the work of Wright (1976; see also Wright and Perrone, 1977), a summary table of the main structural determinants of the major classes can be developed, Table 1.

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30 Since the interests of the managerial class are confounded between those of the capitalist and working classes, Wright (1976) has referred to this class as a "contradictory" class.
Table 1. Structural Determinants of Marxist Class Categories.

<table>
<thead>
<tr>
<th>Structural Determinant</th>
<th>Ownership of means of production (capital-owner)</th>
<th>Purchase of labor power</th>
<th>Sale of labor power (wage-laborer)</th>
<th>Control or supervision of labor power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalist Class</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Working Class</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Given this brief discussion of the class structure of capitalist societies, the next major issue in social inequality can be addressed. This is the issue of class mobility and attainment. In the remainder of this chapter, this issue is presented and discussed.

Class Mobility and Class Attainment

As mentioned before, Marx and Engels wrote very little on the topic of class mobility and attainment. Nevertheless, they were intimately aware of the relationship between origin and attained class positions. This awareness is evident in their concern over rights of inheritance. In their propagandistic writings, Marx and Engels advocated a strict abolition of inheritance rights (Marx and Engels, 1975:111; Engels, 1975:181). With inheritance rights, capital can be easily passed from one generation to the next creating a closed or ascribed system of class
mobility and attainment. The inheritance of capital enables a new
generation of capitalists to initiate a circuit of commodity production
using inherited capital as constant and variable capital (see Marx,
1967:146-155). On the other hand, if capital is not inherited, then
the new generation must enter production with their only commodity,
labor power (see Bertaux, 1976:392-393).

Using the above argument, it is easy to see why Dahrendorf
(1957:58-59) and others have maintained that for Marx, the class
position an individual attains is overwhelmingly determined by their
origin class position. Sons and daughters of workers become workers in
a closed system of attainment and mobility (see Marx, 1967:172,339,574).
However, this closed system interpretation is too restrictive. Marx
recognized that mobility does take place even in advanced capitalist
societies and that class attainments are not solely the result of origin
class positions.

One important mechanism for mobility is the existence of "interest-
bearing capital". For Marx, interest-bearing capital is money loaned at
a specific interest rate to be repaid after a certain period of time.
A profit is realized by the owner of interest-bearing capital. What is
important for mobility and attainment is that interest-bearing capital
can enable a non-capitalist to enter commodity production and exploit
the labor power of workers. Thus it is theoretically possible for even
a worker to move into a capitalist class position (Marx, 1967:750; see
also Davies, 1970:15). A portion of the surplus value appropriated from
laborers can be used to repay the borrowed capital. In the third volume
of Capital, Marx (1909:705-706) noted that borrowed capital could be used
to enter commodity production:
"Even in cases where a man without wealth receives credit in his capacity as an industrial or merchant, it is done for the confident expectation, that he will perform the function of a capitalist and appropriate some unpaid labor with the borrowed capital. He receives credit in his capacity as a potential capitalist. This circumstance, that a man without wealth, but with energy, solidity, ability, and business sense may become a capitalist in this way, is very much admired by the apologists of the capitalist system, and the commercial value of each individual is pretty accurately estimated under the capitalist mode of production. Although this circumstance continually brings an unwelcomed number of new soldiers into the field and into competition with the already existing capitalists, it also secures the supremacy of capital itself, expands its basis, and enables it to recruit ever new forces for itself out of the lower layers of society.

Furthermore, Marx (1909:706) argued:

"The more a ruling class is able to assimilate the most prominent men of a ruled class, the more solid and dangerous is its rule".

According to the above quotes, it is possible for non-capitalist class members to move into the capitalist classes. This mobility solidifies the rule of capitalism by equating mobility and attainment with individualistic rather than class characteristics. Failure to be upwardly mobile becomes an individual shortcoming rather than a class blockage. Although such movement is theoretically possible, the extent of it is limited and declines with the development of capitalism. As capitalism progresses, the potential for realizing a profit by extending interest-bearing capital to non-capitalists lessens due to the increasing competition among capitalists. Moreover, given the rising organic composition of capital, the amount of capital needed to enter commodity production also increases as capitalism develops. In certain areas of production, because of the enormous amounts of capital necessary to enter competition, obtaining interest-bearing capital is both unrealistic and
and virtually impossible for a non-capitalist. However, the extent of such mobility is an empirical question.

As discussed before, there are also processes which promote downward mobility. Of course the existence of downward mobility also renders the relationship between origin and attained class position far from perfect. Increasing competition, growing organic compositions of capital, and decreasing numbers of capitalists (concentration) produce a structural decrease in the number of smaller capitalists and petty bourgeoisie. However, the extent of this form of mobility is also an empirical question.

Assuming that mobility exists, the next question becomes one of attainment patterns. What factors mediate between an origin and attained class position and facilitate or restrict class movement? For Marx, given the above quotes, it is clear that "energy, solidity, ability, and business sense" are all factors which promote mobility and thus figure into class attainment processes.

Of course, the most important individual characteristics of a non-capitalist seeking to borrow capital are those which assure the owner of the interest-bearing capital a profit. Thus factors such as education, training, and experience are all desirable. A highly skilled, highly educated person with considerable experience would be more likely to succeed in capitalist production than would an unskilled, uneducated person with no experience (cf., Bowles and Gintis, 1976). However, the relationship between these characteristics and class attainment is an empirical issue. Before considering extant research on class attainment and mobility, it is necessary to consider the types of class mobility which are theoretically possible given the class structure of capitalist societies.
By cross-classifying the class categories presented in Table 1, it is possible to identify the various forms of class mobility. In Table 2, the typology is presented.

Table 2. Possible Forms of Intergenerational Class Mobility

<table>
<thead>
<tr>
<th>Origin Class Position</th>
<th>Attained Class Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capitalist Class</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>1</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>5</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>9</td>
</tr>
<tr>
<td>Working Class</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Petty Bourgeoisie</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>2</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>6</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>10</td>
</tr>
<tr>
<td>Working Class</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Managerial Class</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>3</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>7</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>11</td>
</tr>
<tr>
<td>Working Class</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Working Class</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>4</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>8</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>12</td>
</tr>
<tr>
<td>Working Class</td>
<td>16</td>
</tr>
</tbody>
</table>

If Dahrendorf is correct in his interpretation of Marx, then virtually all individuals in a capitalist society should fall on the left-to-right downward diagonal (Cells 1, 6, 11, 16). Each non-diagonal cell represents a form of class mobility and given the structural determinants of the various classes presented in Table 1, it is easy to ascertain the nature of the mobility. For example, one of the most extreme forms of class mobility is that represented in Cell 13. Given the structural determinants of class position, in order for this type of mobility to exist, an individual from a working class background must acquire capital, enter commodity production, employ the labor power of others, and appropriate surplus value. This is a formidable task in advanced capitalist production. Other forms of mobility can also be interpreted in a similar fashion.
Assuming mobility exists, it is important to consider class attainment processes. However, extant research on the relationship between origin and attained class position and the factors which mediate this relationship is extremely limited. The reason for this is that rather crude measures of class have been used in previous research. For instance, some researchers have defined class in terms of a manual-nonmanual distinction (e.g., Lipset and Zetterberg, 1966). Others have actually used the socioeconomic scales as a proxy for class positions (e.g., Bowles and Gintis, 1976; see also Heyns, 1978). Lastly, blue-collar/white-collar dichotomies, census categories, and even subjective appraisals have been used to study class mobility and attainment.

The theoretical and methodological work of Wright and Perrone (Wright, 1976; 1978; Wright and Perrone, 1977) has significantly improved upon the measurement of Marxist class positions. Although Wright and Perrone did not examine attainment processes, several relationships can be ascertained from their analysis. Wright and Perrone found a rather trivial association between educational attainment and class attainment. The correlation between educational attainment and a working class dummy variable was .05 and the correlation between education and a capitalist class dummy variable was -.09. In addition, Wright and Perrone (1977) uncovered a significant positive effect of class position on earnings even controlling for education, occupational status, and other variables commonly included in socioeconomic analyses. In a more recent study, Wright (1978) found that class position mediated racial variations in the rate of economic returns to education, even controlling for occupational status, age, seniority, father's occupational status, and other variables. Although not specifically addressing class
attainment, the work of Wright and Perrone opened new avenues for quantitative analyses of Marxist class categories. 31

Summary and Propositions

In this chapter an attempt was made to outline and discuss the works of Marx and Engels on social class, mobility, and attainment. In the first section, the class structure in capitalist production was discussed. This was followed by specific sections on the two "great classes" and the two major intermediate classes in capitalist societies. Drawing from the work of Wright and Perrone (Wright, 1976; Wright and Perrone, 1977), a table was developed which presented the structural determinants of the various classes.

In consideration of these classes, the next section dealt with class mobility and attainment. A typology of the possible forms of class mobility was presented. In addition, class attainment processes were discussed as was the rather limited extant research. By modifying the socioeconomic framework to the Marxist class framework, it is possible to develop theoretical propositions concerning class attainment processes. Three major propositions can be specified.

Proposition 1: Origin class position will produce a significant positive effect on an individual's educational attainment.

31 Wright and Perrone were not the first researchers to attempt to operationally define Marxist class categories. For example, Jackman and Jackman (1973) included a measure of "capital ownership" in their analyses. This concept was measured by whether the individual owned real estate, savings bonds, shares/stocks/bonds in a private company, patents/copyrights, and/or partnerships in a private company.
Proposition 2: Origin class position and educational attainment will produce significant positive effects on an individual's initial class position, with educational attainment mediating a substantial proportion of the effect of origin class.

Proposition 3: Origin class position, educational attainment, and initial class position will produce significant positive effects on an individual's current class position, with educational attainment and initial class position mediating a substantial proportion of the effect of antecedent factors.

Taken together, these propositions constitute a Marxist model of class attainment similar in form to the socioeconomic model. This model is schematically presented in Figure 4. In the next chapter, the two major theories and corresponding models of attainment are compared and contrasted.
Figure 4. The Marxist Model of Class Attainment
CHAPTER IV

CONVERGENCE AND DIVERGENCE IN THE SOCIOECONOMIC AND
MARXIST THEORIES OF INEQUALITY

Introduction

To this point, very little in the way of comparison between the socioeconomic and Marxist theories of social inequality has been presented. However, in this chapter, points and areas of convergence and divergence between the two theories are highlighted. In order to accomplish this, the chapter is divided into several sections. The first section includes a presentation and review of a notable theoretical debate between Robert Nisbet and Rudolf Heberle over the merits and shortcomings of the socioeconomic and class models of stratification. In many ways, this debate exemplifies and summarizes the major points of agreement and disagreement between the two theoretical perspectives.

Following this debate is a review of a body of literature which was conducted in order to empirically address the question of whether social classes are valuable analytical units for the study of stratification. Also included in this section is a brief theoretical discussion of several related issues which stem from the controversy surrounding the two theories of inequality. These include such topics as a Marxist interpretation of status and prestige inequality as well as the plausibility of class conscious groups given the socioeconomic theory. The following section includes a summary of several articles which dealt specifically and critically with socioeconomic attainment theory and research. The positions of Crowder, Coser, and Kerckhoff are reviewed in this section.
After the three sections pertaining to the degree of convergence and divergence between the two theories, the last section in this chapter is devoted to the specification of a framework for an empirical assessment of the two theories. Despite the fact that the two models address different substantive issues, it is shown that the variable specification is very similar.

Nisbet and Heberle on Socioeconomic Status Versus Class

As mentioned in the first chapter, one of the most significant and recurrent debates in the area of social stratification is that over the proper unit for stratification analyses. As noted throughout this study, the socioeconomic and Marxist theories differ with respect to this debate. Although the relative merits of each model have been continually argued throughout the decades, one of the most notable debates was that between Nisbet and Heberle.

It was Nisbet's (1959:11) position in an article entitled "The Decline and Fall of Social Class" that the concept of social class was "nearly valueless for the clarification of the data on wealth, power, and social status in the contemporary United States and much of Western society in general". Although this is largely an empirical issue, Nisbet confined his views to the theoretical basis for this contention. Basing his arguments largely on the definitions of social class given by Goldschmidt, Centers, Halbwachs, and Warner, Nisbet concluded that class boundaries, if classes do exist, are exceedingly difficult to identify. Even today, most socioeconomic theorists share this belief. Nisbet maintained that most Western societies are characterized by stratification systems which are structurally based on continuous socioeconomic criteria.
and that the search for class boundaries is the result of sociological tradition. Thus, Nisbet's sentiments are closely aligned with the socioeconomic theory of inequality.

Nisbet (1959:13) argued that the tenacity of the social class concept largely stemmed from the impulse it received after the French Revolution from some of the seminal minds of modern social theory. One of these minds belonged to Marx. Nisbet (1959:14) argued that Marx's theory of social classes and class development, although perhaps appropriate for the historical context in which he wrote, was "grotesquely belied by the facts" in the development of modern capitalist societies. Socio-historical forces such as growing national democracy, economic and social pluralism, ethical individualism, and an ever widening educational front, coupled with a growing split between ownership and control of property and the rise of tertiary occupations all rendered Marx's projections inaccurate (Nisbet, 1959:14-15).

Turning his attention to more modern usages of the concept, Nisbet also took issue with Warner's conceptualization of the concept of social class. He felt that Warner's social class boundaries were too ambiguous and arbitrary due to the fact that there was as much variation within as between his "classes" with respect to a host of social characteristics. In other words, Warner's class boundaries were extremely difficult to establish such that the resulting classes were socially homogeneous.

In conclusion, Nisbet (1959:17) noted:

"We are living in a society governed by status, not class values, and that class lines recede everywhere in almost exact proportion to the reality and urgency of individual status considerations. As a consequence of its disengagement from class, social status has been simultaneously more individual, more autonomous, and is, on any realistic basis, almost as multiple and diverse as is American culture".
Heberle's (1959) reply was not specifically directed at Nisbet, but rather at recent stratification analyses which had confused the term "social class" with other stratification concepts. Heberle felt that the concept of social class, if properly conceptualized, remains valuable for understanding the distribution of wealth, power, and social status. However, he felt that the concept had been grossly misused in recent years. Heberle's definition of social class was a Marxian definition. His definition of a social class was:

"...a social collectivity composed of persons in like or similar class positions; class position is determined by a person's property relationship to the means of production, or stated differently, by a person's function in the economic system and consequently by the (predominant) source of his income" (Heberle, 1959:18).

Heberle felt that Nisbet, Warner, and others had tended to conceptually blur Weber's original distinction between social class and social stratum. According to Heberle, status evaluations have been attributed far too much significance, and class, too little significance in recent theory and research. Of course, this does not mean that the study of status patterns is not important. On the contrary, Heberle (1959:23) remarked:

"Certainly for some purposes, a study of what may be called 'style-of-living strata' is of importance, but I object to the identification of these with social classes. A Southern planter belongs to the class of large landlords, regardless of whether he lives in an antebellum home or a modern bungalow. I am of course aware of the fact that for his wife's acceptance by the Natchez garden club this may make a great difference".

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32 See also Barber (1959) and Duncan (1959) for comments and criticisms of Nisbet's and Heberle's positions.
To reiterate, Heberle's main point was that the concept of social class, as defined by Weber and Marx, is oftentimes confounded with the concept of social status. Indeed, many of the researchers cited by Nisbet, particularly in their efforts to operationalize the class concept, had failed to adequately distinguish between social class and social stratum. Two notable examples from Nisbet make this point clearer. The theories of Halbwachs and Centers argue that class position hinges upon a subjective placement provided by the individual in question. Although this theory has methodological advantages, it is unacceptable as a Marxist definition of class. Of course, Marxists define class in objective terms. Subjective appraisals are based on estimations of social worth or honor and thus fall in Weber's category of social status. A second example from Nisbet's critique is the concept of social class as defined by Warner and his associates (1960). Although Warner referred to his groupings as social classes, they are status groups (strata) from a Weberian perspective. Warner's formulas for determining the social class configuration of a community were based largely on the notion of social participation. Warner used measures such as a judge's evaluation of an individual's group memberships and "status" in the community to determine social class groupings. Like before, these groupings are based on estimated social honor or lifestyle rather than objective positions in economic production and thus are status groupings according to Weberian criteria.

33This example refers specifically to Warner's "Evaluated Participation scale" although his "Index of Status Characteristics" is also applicable.
The original issue posed by Nisbet as to whether the concept of social class is useful in clarifying the data on wealth, power, and social status was not answered by Nisbet or Heberle, nor could it have been. The issue is an empirical one. In the literature, there have been several attempts to empirically ascertain the existence of social classes. In the next section, three of these studies are reviewed and critiqued.

Empirical Assessments of Class Versus Socioeconomic Theories

Twenty-five years ago, Cuber and Kenkel (1954:306-308) stated several reasons why categorical theories of stratification (including class theories) should be rejected and continuum theories (including the socioeconomic theory) should be adopted. They listed four such reasons:

1) "All data, even from studies which claim to have found discrete classes, are consistent with the continuum theory. By this we mean that all data which have been reported by researchers yield results along a continuum. This is true of income, wealth, education, possession of goods, attitudes, power, occupational prestige, and general reputational prestige".

2) "Claims that the society 'divides itself' into these oft-discussed class categories seem to be unsubstantiated by the methods which the researchers have said they used".

3) "A number of studies, notably Lenski's, Kenkel's, and Hetzler's (see below), using careful, checkable statistical techniques, have presented impressive evidence favorable to the continuum theory".

4) "Most of the objective studies of stratification, which have largely sidestepped the issue of categorical versus continuum theory, have yielded materials which are in no way incompatible with the continuum theory".

If Cuber and Kenkel's reasoning is correct, then it seems that class theories of social inequality are inadequate. The empirical basis for their reasoning was provided by several studies. Most notably, the research of Lenski (1952), Hetzler (1953), and Kenkel (1954) has been cited as evidence supporting continuum theories and rejecting categorical theories. However, before completely rejecting all categorical schemes,
it is necessary to critically examine these studies.

Lenski

In his doctoral research, Lenski (1952) was one of the first to empirically examine the issue of whether social classes exist in American society. At the time of Lenski's study, American stratification research was dominated by empirical class studies, particularly those of Warner and Hollingshead. Despite the pervasiveness of their influence, both Warner and Hollingshead presupposed the existence of social classes prior to any research endeavor. Not surprisingly, their studies revealed the presence of numerous social classes each typified by certain socio-cultural characteristics. Lenski, however, felt that it was not necessary to accept, a priori, the existence of social classes. Rather, he felt the issue could be resolved empirically.

Lenski initiated his research with the tenuous assumption that if social classes exist in a community (Danielson, Connecticut), then all "well-informed" members of the community must be aware of their existence and constitutive membership. Using a sample of "well-informed" judges, Lenski (1952:142-143) found that the informants were unable to agree upon the number of social classes in the community (the range was from 3-7). Moreover, there was virtually no agreement among the judges over the placement of various community families into the "social classes". Thus, on the basis of these findings, he (1952:142) concluded that the community had an absence of any discrete social classes. However, Lenski (1952:143) felt justified on the basis of his research to conclude that a "well-

34 For a detailed summary of Lenski's research, see Cuber and Kenkel (1954:Ch.5).
defined prestige system was uncovered" since the relative ranking of community families was highly stable across judges. Therefore, he ended his study by noting that a continuous prestige system was a more accurate way of conceptualizing stratification than was a class system.

Hetzler

A year after Lenski's study, Hetzler (1953) conducted an analysis which addressed the issue of whether discrete categories or continuous rankings were the most valid way of conceptualizing the structure of stratification in the United States. More precisely, Hetzler's (1953: 493) research was concerned with whether American society consisted of a few fairly discernable "social strata or classes", or a multitude of overlapping "social positions". Using a technique called "profile analysis", Hetzler asked a sample of respondents to indicate where they felt they should be located with reference to their perceived "social position" and "social class" on a one-foot scale. The scale was subjectively anchored at one end by the respondent's perception of the least desirable "social position" or "social class" and at the other by their perception of the most desirable. The subjects were then instructed to indicate where they felt they should be located on the unmarked scale. Following the respondents' indications of their position and class, the scale was marked off in one-inch units each representing a separate "category". By plotting the frequency of responses by scale scores (or one-inch categories), Hetzler found a unimodal curve tending towards a normal distribution, regardless of whether the subjects were indicating their "social position" or their "social class". Hetzler's thesis was that if discernable social classes existed, then the plot should be
multimodal. If the plot was unimodal, then the existence of classes was problematic. Thus, on the basis of his research, Hetzler concluded that neither "social positions" nor "social classes" existed in terms of discrete categories. The stratification system was better depicted as continuous structure.

Kenkel

A year after Hetzler's research was published, a third empirical study on the class versus continuum issue appeared in the literature. In his doctoral research, Kenkel (1954:Ch.7) addressed the issue of whether a continuous or categorical stratification system existed in Columbus, Ohio. Kenkel's methodology was quite simplistic. By plotting North-Hatt occupational prestige scores by their observed frequency, he was able to determine that groupings or classes did not exist since the plot revealed no clusters, modes, or cleavages. According to Kenkel's findings, it would be impossible to determine where one class boundary ended and a second began. Moreover, a plot of the rental value of the respondent's dwellings and the "desirability" of the various dwelling areas by their observed frequencies; likewise, did not point out any discrete groupings or multimodal configurations. Finally, Kenkel found that the majority of respondents did not chose as "close associates" individuals with similar (plus or minus 5 North-Hatt prestige points) social status. On the basis of these findings, Kenkel concluded that the stratification system of Columbus, Ohio, was continuous, not discrete.

A Critique of the Empirical Research on Class Versus Continuum

All three studies reported above reached the same basic conclusion; namely, that discrete social classes were non-existent in American society.
However, these studies are theoretically and methodologically flawed. There are two related criticisms which can be raised concerning these studies. First, all three studies either directly or indirectly criticized previous stratification research for presupposing the existence of social classes and then confirming their existence. Although this may be a valid criticism, all three of these studies made similar a priori assumptions concerning the nature of social stratification. Lenski assumed that social classes were "widely-recognized" and known to all "knowledgeable members" of a community. Likewise, Kenkel assumed that occupational positions which were differentially ranked according to continuous prestige units formed the structural basis of social inequality. Hetzler's research also involved an a priori assumption concerning social inequality. He assumed that individuals were cognizant of their social class position and that clusters of like-positions were indicative of a social class. Given these presuppositions, their research on the existence of social classes was as logical as trying to empirically determine the existence of prestige categories on the basis of social classes. Thus, all three researchers invoked theoretical presuppositions which influenced their findings.

The second criticism of these studies is related to the first. Before determining the existence or non-existence of classes or other discrete social groupings, it is necessary to specifically define the nature of the class or group and then generalize only to the established limits of the definition. None of the researchers did an adequate job of defining "social class" (or even a "status continuum"). Operational definitions ranged from a subjective assessment of the "desirability" of a respondent's dwelling area to the similarity in occupational prestige between a
respondent and his/her "close associates". Thus while the findings of these studies may apply to residential or subjective theories of social class, they do not apply to other class theories, especially the Marxist class theory. Therefore, the empirical research on the existence of social class or continua, despite the closure granted by Cuber and Kenkel, is far from conclusive.

Related Theoretical and Conceptual Issues

In addition to the empirical studies, in order to assess the relative merits of the class and socioeconomic theories of social inequality, several theoretical and conceptual issues need to be addressed. Prestige, it will be recalled, is a fundamental concept in the socioeconomic theory of inequality. Although Marx did not specifically write on the concept of prestige, he was aware of it. However, Marx probably felt that the distribution of rewards and evaluations reflected class position and the productive efficiency of labor power. Marx did not disavow the existence of prestige or status, but treated them largely as epiphenomenal. As Mills (1956:83) put it: "prestige is the shadow of money and power".

Another concern which is crucial in terms of drawing a contrast between the two theories is the issue of emergent class consciousness. From the perspective of the socioeconomic theory, the emergence of class consciousness as well as the recognition of opposing class interests is problematic. Since there are no classes, there is no basis for class antagonism. If anything, the socioeconomic theory denies such processes. Of course, this is incompatible with the Marxist theory of class formation and historical development.
On the other hand, Marxist class theory has difficulty in accounting for the minute status differentials which ostensibly exist in Western societies. Marxist class theory does not acknowledge multiple bases of inequality, particularly a prestige dimension.

Lastly, it is important not to confuse Marxist classes with occupational groups. A person's occupation does not define his/her class position. It is, of course, possible for two people with the same occupation to occupy different classes. As noted earlier, class position hinges upon the ownership of means of production and the employment of wage-labor, not on occupations. However, occupational positions are at the heart of the socioeconomic theory and individuals in the same occupation occupy the same position in the stratification system.

In sum, the empirical research presented in this section is of questionable utility in reaching closure on the issue of whether social classes exist in American society. However, the points raised by the empirical studies and the theoretical discussion are significant. In the next section, three critiques of socioeconomic attainment theory and research are reviewed and discussed.

**Critiques of Socioeconomic Attainment Research**

As mentioned earlier, socioeconomic attainment research has been the predominant form of stratification and mobility research over the past decade. Yet, with a few notable exceptions, this research has generated very little in the way of criticism. In the past few years, three major critiques have appeared in the literature. Articles by Crowder (1974), Coser (1975), and Kerckhoff (1975) have raised several theoretical as well as methodological criticisms of socioeconomic attainment research and thus deserve mention.
Based on his doctoral research, Crowder (1974) critically reviewed the stratification theory and research of Duncan. Although Crowder's comments were directed specifically at Duncan, the scope of his criticisms included virtually all socioeconomic attainment research. According to Crowder, Duncan's theory and research is ingrained with a conservative, functionalist bias. Crowder referred to this bias as an "American egalitarian achievement ideology" and noted that Duncan's stratification theory stressed the emergence of universalism and achievement value orientations in American society. Crowder maintained that such meritocratic presuppositions led Duncan to fail to consider the structural constraints engendered by an occupational structure. According to Crowder (1974:37), these structural constraints include such considerations as the ratio of particular income level jobs to the number of individuals who ought to obtain that income if Duncan's linear model is applicable. Other systemic constraints noted by Crowder include race and sex blockages.

Crowder also criticized (Blau and) Duncan for his failure to consider income, which according to Crowder, is the primary reward distributed by the occupational structure. Blau and Duncan's (1967:6) contention that an occupation is the best single indicator of all aspects of social inequality cannot be accepted as justification for the omission of income in socioeconomic attainment models since most research has found rather small relationships between occupational prestige and income (see Duncan, 1969; Sewell and Hauser, 1972). Somewhat surprisingly, Blau and Duncan's data set for the American Occupational Structure did not contain a single measure of origin or attained income, earnings, or wealth.
Turning his critique towards Duncan's methodology, Crowder noted that the linear model utilized by Duncan in subsequent research to account for income attainment was most likely inappropriate. Crowder's (1974:34) reanalysis of Duncan's data using non-linear models slightly improved the explanatory power of the income attainment models. Mainly, Crowder felt that Duncan's lack of success in predicting socioeconomic attainments was the direct result of omitting structural factors. In addition to structural factors, Crowder (1974:37) felt that other individualistic considerations would improve income attainment models. These include: job performance as determined by those who controlled and distributed income and the income recipient's level of conformity to the norms of persons and institutions controlling the distribution of income.

Coser

In his Presidential Address to the American Sociological Association, Coser (1975) criticized status attainment for being a "method without a substance". Drawing on Goldthorpe's conceptual distinction between "distributive" and "relational" aspects of social class, Coser argued that status attainment has been overly preoccupied with the former at the expense of the latter. By "distributive aspects", Coser (1975:694) was referring to studies of the differential influence on individual careers of such factors as parental resources, access to educational institutions, and the like. These studies, including most socioeconomic attainment research, emphasize individual characteristics with no particular attention to the individual as a social class member. Coser, (1975:694) defined the second aspect of stratification, the relational aspect, as the "ways in which differential class power and social advantage operate in predictable and routine ways. through specifiable social
interactions between classes and interest groups, to give shape to
determinate social structures and to create differential life chances".

Coser, like Crowder, felt that concern over the distributive
aspects of stratification, as in the case of socioeconomic attainment,
directed attention away from the structural conditions in a society
which circumscribe the "life chances" of individuals and groups.
According to Coser (1975:695), both aspects of stratification, distribu-
tional and relational, must be considered in order to comprehend the
scope and pervasiveness of a stratification system. Coser pointed out
that this involves both theoretical and methodological considerations.
He felt that status attainment researchers have developed and refined the
methodological tools necessary for the study of distributive aspects
without a corresponding emphasis on developing methodological tools for
the study of relational aspects of social stratification.

Kerckhoff

Although considerably more sympathetic to socioeconomic attainment
research than either Crowder or Coser, Kerckhoff (1976) nevertheless
raised several limitations of current attainment research and advocated
a few strategies to overcome them. In a somewhat analogous fashion to
Crowder's "structural factors" and Coser's "relational aspects",
Kerckhoff stressed the need for a more serious consideration of the
"allocation processes" in attainment models. He argued that the most
popular version of socioeconomic attainment is the "socialization model",
exemplified by the Wisconsin researchers (e.g., Sewell et al., 1969;
the socialization model, is based on the theoretical stance of social
interactionism in which the "link between origin and attainment is
sought in the socialization process". Consequently, socialization models stress "significant other" influences and corresponding motives and intentions in accounting for attainment patterns.

On the other hand, the allocation model views attainments as the result of structural limitations and selection criteria (Kerckhoff, 1976:369). Therefore, considerations of importance include those "social forces which identify, select, process, classify, and assign individuals according to externally imposed criteria" (Kerckhoff, 1976:369). Probably the clearest example of an allocative model is one in which racial comparisons are made. Rather than accounting for racial variations in terms of differential socialization, allocation models stress such structural constraints as racial discrimination.

Like Coser, Kerckhoff noted that a synthesis between socialization and allocation models would be the most desirable form of attainment research. However, considerable theoretical and methodological advances need to be made in the area of allocation processes before such a synthesis is possible.

Summary

All three critics of socioeconomic attainment research stressed a common theme, namely, the need for an emphasis on structural constraints as they relate to attainment processes. Current attainment research has considered racial, sexual, residential, and related variations, but largely in the context of differential socialization interpretations. Class attainment research and even socioeconomic attainment research within specific class groupings offers an alternative to strict socialization models and interpretations. In the next section, an effort is made to formulate testable models of both socioeconomic and class attainments.
A Framework for the Empirical Analysis of the Socioeconomic and Class Attainment Models

The socioeconomic and Marxist class models of attainment can both be empirically evaluated relative to the strength and statistical significance of the relationships between their respective variables. In addition, to the extent possible, the two models can be compared as to their adequacy in accounting for "stratification processes". Of course, as stressed throughout this study, the two models differ fundamentally in the questions they address. Nevertheless, both models purport to explain stratification and the processes by which a position is attained in a stratification system. Moreover, both models share certain general relationships. For example, both models emphasize the influence of origin or background positions on subsequent attained positions. Further, both models stress that this influence is mediated by educational attainment.

Of course, the explanations for these relationships vary depending upon the theoretical model in question. For instance, the two models differ with respect to their interpretation of the relationship between education and occupational or class attainment. The socioeconomic attainment model interprets a significant positive relationship between education and occupation as evidence in support of a meritocratic or achievement-based stratification system. The Marxist class model interprets the same relationship as evidence supporting the contention that education merely serves to perpetuate and legitimate an existing class structure (see Bowles, 1972).

At the conclusion of the two previous chapters, a set of propositions was presented. Taken together, each set forms an attainment model. Given these major propositions, the remainder of this study is devoted to
an empirical assessment of the two models of attainment. In the following chapter, the methods and procedures necessary for the empirical evaluation of the models are presented and discussed.
CHAPTER V

METHODS AND PROCEDURES

The Samples

Data utilized in this study were obtained from two independent sources. The first source was primary data collected from a sample of labor force participants residing in a metropolitan area in Tennessee. In addition to the metropolitan sample, data from a national sample were also used. Data from the national sample were secondary data originally collected by the National Opinion Research Center (NORC) and published as part of the 1972-1977 Cumulative General Social Survey. The use of these two complementary sources allowed for both depth of conceptual analysis and broad generalizability. Individuals in the metropolitan sample were questioned in greater detail than those in the national sample with respect to many of the major concepts of interest in this study. The national sample, although not allowing as much conceptual detail, permitted certain findings to be generalized to a broader national population.

Metropolitan Sample

As mentioned above, the metropolitan data were obtained from a sample of labor force participants residing in an urban area with a population of over 700,000. A stratified random sampling technique was employed to select 900 potential respondents from a 1978 city directory for the area.

35 Only 1977 data were utilized because of data limitations for the other years.
Listings in the city directory were first stratified with respect to whether or not the potential respondents were owners or proprietors (including presidents, board members, major company officials, etc.) of businesses or industries. Since this information was available in the city directory, it was used as a basis for stratifying the population to assure an adequate representation in all class categories (capital-owning classes and wage-labor classes). From each of these two homogeneous groups, 450 potential respondents were randomly selected. Using information from the city directory, individuals who were unemployed, retired, or students were omitted from the sampling population. If married, the reported major money-winner in the respondent's family was the subject of the analysis. If not married, the respondent was the unit of analysis. In addition, only full-time workers were included in the samples.

The use of the city directories as a source for identifying a population from which to draw a sample has both advantages and disadvantages. In terms of advantages, these directories provide social researchers with one of only a few sources which can be used to identify a population.

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36 The United States census definition of a "self-employed" worker was used as the criterion for determining whether or not a subject was an owner or proprietor. This definition is: "Persons who work for profit or fees in their own unincorporated business, profession, or trade, or who operate a farm. Included here are the owner-operators of large stores and manufacturing establishments as well as small merchants, independent craftsmen and professional men, farmers, peddlers, and other persons who conduct enterprises of their own. (Included also are) persons who consider themselves self-employed but work for a corporation – in most cases will own or be part of a group that owns controlling interest in the corporation" (Subject reports: Occupational Characteristics, 1970 United States Census, Appendix C).
In addition, as Parten (1950) has noted, city directories tend to be up-dated on an annual basis and cross-checked for reliability. Furthermore, these directories are compiled largely from information obtained from door-to-door interviews and thus include data on both the interviewee and any other adult member(s) of a household. Additionally, those individuals residing in dwellings without telephones are also included. Lastly, city directories have the advantage of providing the researcher with selected information on a host of socio-demographic characteristics of the respondent and other adult members of a particular dwelling. Thus, information on an individual’s occupation, employer, employment status, marital status, and so forth is readily available.

There are also several disadvantages in drawing a sample from a city directory. Changes of address, death, name changes, changes in an individual’s socio-demographic characteristics, the construction of new dwellings, omitted or overlooked dwellings, and so on are responsible for inaccuracies or a lack of thoroughness on the part of city directories. Moreover, the socio-demographic information contained in the directories may be of questionable reliability and usefulness. However, as Kish (1965:352) estimated, only about 5% (with local variations) of the dwellings in an area covered by a city directory are missing.

Acquiring detailed information on socioeconomic and class attainment variables was the major concern in the metropolitan questionnaire design. An eight page instrument was mailed to the sample members. Following this initial mail-out, a follow-up postcard encouraging nonrespondents to complete and return their questionnaires was mailed four days later. Since bulk-mail rates were used to minimize postage costs and because the non-delivered bulk-mail was not returned to the original sender, it was impossible to determine the final rate of questionnaire return. In a
pre-test using first-class mail, seven out of 25 (28%) questionnaires were returned undelivered and six were completed and returned. However, in an effort to improve these rates, mailing addresses for the sample members were cross-checked (where possible) using telephone directory listings. Out of the 900 mailed questionnaires, 252 were answered and returned for a return rate of 28%. However, it is estimated that the return rate for delivered questionnaires approached 40%. Unfortunately, the actual return rate for delivered questionnaires is unknown.

One way to estimate the accuracy of the sample is to ascertain the existence of any bias in return rates for the two class groups which were used to stratify the sample. Examining Table 3 shows that 87 "owners" or capitalists (using city directory class designations) completed and returned their questionnaires compared to 95 completed and returned questionnaires for the working class members. This suggests no serious return bias. An additional 26 questionnaires were not identifiable (due to the respondent having exercised an option to maintain anonymity). Furthermore, in Table 3, it can be noted that the class designations assigned using city directory information were accurate in over 86% of the cases when compared to the class designations using information supplied by the respondent. Consequently, it appears that the procedure

37In addition, 39 respondents were not classifiable due to missing or incomplete data. Five other questionnaires were received so late that they were not included in the metropolitan data set.

38An effort was also made to compare respondents and nonrespondents with respect to occupational prestige. However, the city directory information regarding an individual's occupation was virtually impossible to code according to any meaningful occupational prestige scale. For example, it was very common for the occupation of the respondent to consist of the name of the company that he/she worked for. In other cases, the given occupation was so vague as to be useless (e.g., "employee"). Lastly, over 10% of the questionnaires were returned anonymously, thus making respondent identification impossible. Other possible comparisons using the socio-demographic information were not of interest to this study (e.g., marital status, sex, etc.).
Table 3. Subject's Class Position by Assigned City Directory Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Subject's Class Position</th>
<th>Working Class</th>
<th>Capital-Owning Classes</th>
<th>Not known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>41.1 (39)</td>
<td>5.8 (5)</td>
<td>19.2 (5)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>46.3 (44)</td>
<td>8.1 (7)</td>
<td>19.2 (5)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>3.2 (3)</td>
<td>10.3 (9)</td>
<td>15.4 (4)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>9.5 (9)</td>
<td>75.9 (66)</td>
<td>46.2 (12)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.1</strong></td>
<td><strong>100.1</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td><strong>(95)</strong></td>
<td><strong>(87)</strong></td>
<td><strong>(26)</strong></td>
</tr>
</tbody>
</table>

a=includes Working Class and Managerial Class  \[ \chi^2 = 102.94; 6 \text{ d.f.}; p < .000 \]

b=includes Capitalist Class and Petty Bourgeoisie  

c=due to respondent anonymity
used to stratify the sample was successful. A copy of the questionnaire and follow-up postcard are included in Appendix A.

National Sample

The national sample data utilized in this study were originally collected in 1977. All noninstitutionalized, English-speaking people residing in the Continental United States, 18 years of age or older constituted the population from which the sample was drawn (NORC, 1977:156). The data were part of the Cumulative General Society Survey and were distributed by the Interconsortium for Political and Social Research (ICPSR).

The national data set was collected using a stratified, multistage, area probability sample of clusters of households (NORC, 1977:158). At the first stage, Standard Metropolitan Statistical Areas (SMSAs) and nonmetropolitan counties were grouped according to size strata within each of the nine major United States Census Regions. Within each stratum, groupings based upon geographic location or racial characteristics (or both) were identified. Then, these groupings were stratified with respect to population size. Within each of the 89 distinct strata, census block groups or enumeration districts were selected. The census blocks or enumeration districts were then stratified by geographic location, income, and race. Then blocks and enumeration districts were selected with probabilities proportional to size in numbers sufficient to satisfy survey demands for households expected throughout the decade. Households from each block or enumeration district were randomly selected and respondents were questioned by trained interviewers (for more detail on the sample, see NORC, 1977). In total, data was collected on 1530 respondents. Since only major family money-winners were analyzed,
this sample size for the analyses was considerably smaller.

Operationalization of the Variables

There were two major sets of variables in this study - those comprising the socioeconomic model and those in the Marxist class model. In addition, two data sources were used. Thus, in this section, the variable operationalization procedures are presented for each of the two models with respect to each of the data sets. Because of data limitations, certain variables were not available for the national data set. The missing variables are also noted in this section.

Operationalization of the Variables in the Socioeconomic Model

To statistically evaluate the socioeconomic model, the following operationalization procedures were used. Based on previous research, origin socioeconomic status was measured on the basis of three variables: father's occupational status, 

\[39\]

father's education, and mother's education.

Origin Socioeconomic Position (Metropolitan Sample)

The following three measurement procedures were used to operationalize origin socioeconomic position. They were:

Father's occupational status - Determined by the response to a question asking the subject to describe in detail the kind of work his/her father (or the main family money-winner) was doing when he/she was

\[39\] For the sake of brevity, the term "father" was used throughout this study to identify the origin socioeconomic and class position of the subject. In only a few instances, the subject's father was not the major money-winner in the origin family.
approximately 16 years old. The reported occupations were coded according to Duncan's (1961) socioeconomic index.

Father's educational attainment - Determined by the subject's indication of the highest educational level completed by his/her father. A quasi-credential measurement scale consisting of various levels of academic achievement was utilized. The categories were:

1. Less than 7th grade
2. 7th to 9th grade
3. Some high school, but did not graduate (completed 10th or 11th grade)
4. Vocational training, but did not graduate from high school
5. High school graduate or high school equivalent (e.g., GED)
6. Technical training after high school graduation
7. Some college but did not graduate (at least one full year)
8. College graduate (Bachelor's degree)
9. Graduate or professional degree.

Mother's educational attainment - Operationalized in a manner identical to father's education.

Origin Socioeconomic Position (National Sample)

Similar to the metropolitan sample, father's occupation and parental education were used to measure origin socioeconomic position. They were operationalized as follows:

Father's occupational status - Determined by the answer to a question asking the subject to describe the kind of work his/her father (father substitute) normally did while he/she was growing up. The reported occupations were coded according to the Hodge, Siegel, and Rossi occupational prestige scale (1960). Although the Hodge, Siegel, and Rossi occupations were also coded according to the United States Census Socioeconomic Scale; however, the Duncan codes were used for analysis since they displayed a stronger relationship with the other variables in the model.
occupational scale is different than the Duncan socioeconomic index, the latter was developed using the former and the two correlate at a very high level (see Featherman and Hauser, 1976b).

**Father's educational attainment** - Determined by the subject's indication of the highest grade that his/her father finished and received credit for. The categories ranged from: no formal education (=00) to eight years of college (=20).

**Mother's educational attainment** - Operationalized in a manner identical to father's educational attainment.

Consistent with the socioeconomic model outlined in the previous chapters, four attainment variables were considered in this study. These include: educational attainment, initial occupational status, current occupational status, and family income.

**Socioeconomic Attainments (Metropolitan Sample)**

For the metropolitan sample, four measures of attainment were used. They were operationalized as follows:

**Subject's educational attainment** - Operationalized in a manner identical to father's and mother's educational attainment.

**Subject's initial occupational status** - Determined by the answer to a question asking the subject to describe in specific terms his/her first full-time occupation (excluding part-time and Summer jobs). These responses were coded according to Duncan's (1961) socioeconomic index.

**Subject's current occupational status** - Determined by the answer to a question asking the subject to describe in specific terms his/her current occupation. These occupations were coded according to Duncan's (1961) socioeconomic index.
Family income - Determined by the answer to a question asking the subject to indicate (in thousands) his/her family's total taxable income for the last year (1977). 41

Socioeconomic Attainments (National Sample)

Three attainment variables were considered in the national sample model. They were measured as follows:

Subject's educational attainment - Operationalized in a manner identical to father's and mother's educational attainment.

Subject's initial occupational status - Unfortunately, information on the subject's initial occupation was not available in the national data set. As a consequence, initial occupational status was not included in the national sample analysis. Inferences concerning the relationship between initial occupation and other variables were based on the metropolitan data set.

Subject's current occupational status - Determined by the response to a question asking the subject to describe the kind of work he/she normally does. These responses were coded according to the Hodge, Siegel, and Rossi occupational prestige scale (1960).

Family income - Determined by the subject's indication of his/her total family taxable income bracket for the previous year (1976).

The income brackets were:

41 Because of the substantial missing data problem in the pre-test, it was decided that instead of asking for specific incomes for both the respondent and his/her spouse (if they were married), a family income figure would be preferable. To maintain comparability, family income was also used for the National sample, although subject's income was also evaluated and reported in footnotes. The zero-order correlation between subject's and family income was over .70 for the national sample.
Given the nature of the study, several control variables were also considered in the analysis. The subject's current age, age at first job, and seniority at current job were all considered. Information on these variables was obtained through biographical questions.

Operationalization of the Variables in the Class Model

In accordance with the theoretical models, several of the variables considered in the socioeconomic model were also included in the class model of attainment. Most notably, the subject's educational attainment was evaluated relative to its role in the class attainment process. However, several other variables which are unique to the class model are discussed in this section with respect to their operationalization. Foremost among these variables are the various measures of class position. Origin, initial, and current class position were all of interest in this study.

Class Position (Metropolitan Sample)

For the metropolitan sample, three class variables were considered.

42 The nine-point educational attainment scale used in the socioeconomic model was collapsed into a five-point scale for analysis in the class model. This was done in order to insure adequate cell frequencies in the various tabular analyses. The five categories are: 1) less than high school, 2) high school graduation, 3) post-high school education, 4) college graduation and 5) professional education. For the National sample, instead of the twenty-point education scale, a five-point quasi-credential scale was used. This scale was very similar to one for the Metropolitan sample.
Operationally, they were defined as follows:

**Origin class position** - Following the work of Wright and Perrone (1977; see also Wright, 1978), class position was determined by a combination of responses. Questions tapping three fundamental theoretical criteria were used for operationalizing class position. Consistent with Marxist theory, the first and most important criterion was whether an individual owned some means of commodity production or sold his/her labor power to someone who did. Operationally, to make this conceptual distinction, the subject's indication of whether his/her father was self-employed or worked for someone else when the subject was approximately 16 years old was used. Self-employed individuals were placed in capital-owning class positions (i.e., capitalist class or petty bourgeoisie). Those working for someone else were classified in the wage-labor classes (i.e., managerial or working classes).

Fathers who were self-employed were further divided into those who had employees who worked for and were paid by them and those who did not. The theoretical distinction here is whether the capital-owning member appropriated surplus value from others, through the process of exploitation, or whether they utilized their own labor power in commodity production.

Among subjects who were not self-employed, a key theoretical distinction was made between those who supervised others and those who did not. This distinction resulted in classifying individuals into either the managerial or working class. Similar to Wright and Perrone (1977), the following typological scheme was used to identify the class categories
as they related to the operationalization criteria. 43

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Capitalist Class</th>
<th>Petty Bourgeoisie</th>
<th>Managerial Class</th>
<th>Working Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employed</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Has Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>who work for</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>and are paid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisory</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Works for</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Someone else</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Questions referring specifically to the subject's father (or major family money-winner of origin family) were used to identify an individual's origin class position. The specific question wording can be found in Appendix A.

Initial class position - Operationalized in a manner identical to origin class position with the exception that the questions referred specifically to the subject's first, full-time class position.

Current class position - Operationalized in a manner identical to origin and initial class position with the exception that the questions referred specifically to the subject's current class position. 44

43 In addition to the four classes, there are other logical combinations which are theoretically uninterpretable. For instance, self-employed subjects who worked for someone else. These combinations occurred in very few instances and were excluded from the analysis.

44 Only the major class position of the subject was considered. That is, multiple class positions were ignored in this study. However, the extent of multiple class positions is probably extremely small. For instance, only about 4.5% of the labor force in 1976 reported two or more occupations (Statistical Abstract of the United States, 1976:398).
Class Position (National Sample)

For the national sample, two class variables were considered. They were measured as follows:

*Origin class position* - For the national sample, origin class position was determined by the subject's indication of whether or not his/her father was self-employed when the subject was growing up. This variable reflects the crucial distinction between the capital-owning and wage-labor classes. Unfortunately, the national data set did not contain information on whether the subject's father employed and paid others. As a result, it was impossible to distinguish between petty bourgeois and capitalist class members. Furthermore, information pertaining to supervisory responsibility was not available. Thus, the distinction between managerial and working class members was also blurred. However, the distinction between self-employed and working for others is, without question, the pivotal theoretical distinction in Marxist theory (see Mandel, 1976:36 for a similar operationalization).

*Initial class position* - Similar to the situation for the socio-economic model, information from the national data set concerning a subject's initial class position was not available. Because of this, information on the relationship between initial class position and the other variables in the class model was based on the metropolitan data set.

*Current class position* - Operationalized in a manner similar to the operationalization of current class for the metropolitan data set. Two questions were used to identify the four major class positions. The first question addressed the issue of whether the subject was self-employed or not. The second question was used to determine whether or not the subject supervised anyone as part of his/her formal job requirements.
With this information, it was possible to identify the four major class positions. Self-employed supervisors were identified as capitalist class members, self-employed nonsupervisors were identified as members of the petty bourgeoisie, nonself-employed supervisors were identified as members of the managerial class, and nonself-employed nonsupervisors were identified as members of the working class.

This procedure was less precise than that used for the metropolitan data set because of the lack of information concerning whether or not a subject had paid employees. Although the four categories were mathematically identifiable using only the two questions (instead of the three as in metropolitan data set), it was impossible to identify subjects who fell in theoretically ambiguous categories. Consequently, these subjects were not excluded from the analysis. However, previous research has shown that the percentage of subjects occupying these positions is most likely very small (see Wright and Perrone, 1977).

As was the case in the socioeconomic model, information on the subject's employment status, age, age at first job, and seniority at current job was obtained from simple biographical questions in the survey instrument. In the next section, the analytical techniques used to evaluate the two models of attainment are presented and discussed.

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45To the extent which they exist, ambiguous class locations were most likely the result of a misunderstanding of a question(s) with respect to the researcher's intentions and the subject's interpretation. For example, supervisory function was intended to refer to not simply the actual activity of supervising, overseeing, or managing others in a division of labor, but also the legitimate (legal via ownership rights) control over the entire division of labor.
Analytical Techniques

The propositions specified in earlier chapters were statistically evaluated using one or more of several analytical techniques. Following previous research, a multiple regression technique, path analysis, was utilized to evaluate the socioeconomic model for both data sets. Multiple regression, and in particular path analysis, is the most desirable form of statistical analysis for this model because of its ability to estimate parameters which indicate the relative influence of various independent variables on a specific dependent variable. The relative influence on a dependent variable produced by each of several predictor variables can be evaluated, compared, and tested for statistical significance. However, multiple regression requires that several assumptions be met. One of the most important is a level of measurement assumption. Multiple regression requires interval or ratio level measurement to achieve its maximum statistical power. For the most part, the variables in the class model of attainment did not conform to this assumption. Consequently, given their low-level ordinal measurement, it was necessary to use nonparametric analogs to parametric regression and correlation. In the next two sections, these statistical techniques are discussed.

The Technique of Path Analysis

Starting with the Blau-Duncan model, most researchers studying socioeconomic attainment processes have used path analysis, or a modification of it, as their primary analytical technique. For all intents and purposes, path analysis is no more than a theoretical application of multiple regression with variables measured in their standardized
form. Standardization allows for measurement on an equal metric and thus facilitates comparisons between the effects of several predictor variables in a given equation. The major advantage to path analysis rests with the theoretical assumptions involved in its usage. The researcher must explicitly state the sequential (or assumed causal) ordering of the variables such that it conforms to previously established theoretical assumptions.

Statistically speaking, the influence of one variable on another is measured by the amount of change in a dependent variable for a unit change in an independent variable. Beta weights (path coefficients) are estimated from sample data and are used to indicate the degree of change in a dependent variable for each standardized unit change in an independent variable, holding the influence of other predictor variables constant. The beta weights, like other parameter estimates, can be tested to determine whether they statistically differ from zero (no influence) given a specific level of significance.

To maximize the technique's statistical power, a number of assumptions must be made. These assumptions are common to all multiple linear regressions models. Heise (1969; see also Duncan, 1966; Land, 1969) has reviewed these assumptions and summarized them as follows:

1). In the system of interest, change in one variable must always occur as a linear function of changes in other variables (Heise, 1969:44).

2). The system of concern must contain no reciprocal causation or feedback loops; that is, if X influences Y; Y cannot influence X either directly or through a chain of other variables (Heise, 1969:45).

3). The causal laws governing the system must be established sufficiently to specify the causal priorities among variables in a way that is undefeatable (Heise, 1969:56).
4). The disturbances (errors) of dependent variables must be uncorrelated with each other or with the inputs, thus it is necessary that all system inputs are entered explicitly into the analysis (Heise, 1969: 56).

5). The usual methodological assumptions involved in multivariate regression analysis must be met. These include: interval measurement, independent sample units, homoscedasticity, the sources of variation for each variable must be sufficiently diverse so that the correlations between the (independent) variables are not extremely large in absolute magnitude (i.e., no multicollinearity), and of course reliable measurement (Heise, 1969:57).

Regression analysis is a fairly robust statistical technique and slight violations of its assumptions should not overly jeopardize the findings (Heise, 1969: Land, 1969; Bohnstedt and Carter, 1971). Of course, precautions were exercised to minimize such violations.

Stated in formal terms, the socioeconomic model can be reduced to the following null hypotheses. To denote the variables, the following symbols were used:

A= Occupational prestige of money-winner's father
B= Education of money-winner's father
C= Education of money-winner's mother
D= Money-winner's age
E= Money-winner's age at first job
F= Money-winner's experience (in years) at current occupation
G= Money-winner's education
H= Money-winner's initial occupational prestige
I= Money-winner's current occupational prestige
J= Money-winner's family income
The null hypotheses corresponding to the propositions stated at the end of Chapter II are:

1) \( H_0 : \beta_{GA.BCD} = 0 \) 
   where: \( \beta = \) regression coefficient

2) \( H_0 : \beta_{GB.ACD} = 0 \)

3) \( H_0 : \beta_{GC.ABD} = 0 \)

4) \( H_0 : \beta_{GD.ABC} = 0 \)

5) \( H_0 : \beta_{HA.BCDEG} = 0 \)

6) \( H_0 : \beta_{HB.ACDEG} = 0 \)

7) \( H_0 : \beta_{HC.ABDEG} = 0 \)

8) \( H_0 : \beta_{HD.ABCEG} = 0 \)

9) \( H_0 : \beta_{HE.ABCDG} = 0 \)

10) \( H_0 : \beta_{HG.ABCE} = 0 \)

11) \( H_0 : \beta_{IA.BCDEFGH} = 0 \)

12) \( H_0 : \beta_{IB.ACDEFGH} = 0 \)

13) \( H_0 : \beta_{IC.ABDEFGH} = 0 \)

14) \( H_0 : \beta_{ID.ABCEF} = 0 \)

15) \( H_0 : \beta_{IE.ABCDFG} = 0 \)

16) \( H_0 : \beta_{IF.ABCDEG} = 0 \)

17) \( H_0 : \beta_{IG.ABCDEPH} = 0 \)

18) \( H_0 : \beta_{IH.ABCDEPH} = 0 \)

19) \( H_0 : \beta_{IJ.ABCDEFGHI} = 0 \)
20) \( H_0 : \beta_{JB} = 0 \)
21) \( H_0 : \beta_{JC} = 0 \)
22) \( H_0 : \beta_{JD} = 0 \)
23) \( H_0 : \beta_{JE} = 0 \)
24) \( H_0 : \beta_{JF} = 0 \)
25) \( H_0 : \beta_{JG} = 0 \)
26) \( H_0 : \beta_{JH} = 0 \)
27) \( H_0 : \beta_{JI} = 0 \)

In addition to estimating standardized regression coefficients and testing them for statistical significance, zero-order correlations, means, and standard deviations were also calculated and used to evaluate the socioeconomic model. The decision to reject or fail to reject a null hypothesis was based on a specific test of hypothesis; however, the decision to reject or fail to reject a specific theoretical proposition was based not only on the test of significance, but also on the direction of influence. Since two data sets were used to evaluate the same theoretical model, a specific proposition could be supported for one sample and not for the other. As a result, it was possible for a theoretical proposition to receive partial support.

\[\text{Of course, the means and standard deviations for the metropolitan sample reflect the stratification procedures of the sample. Thus, for example, the means for most of the variables are inflated.}\]
Nonparametric Statistical Models

To statistically evaluate the class model of attainment, a series of contingency tables were constructed to analyze the relationship between the variables of interest in the stated propositions. The various measures of class position were all low-level ordinal rankings with the exception of "father's class position" for the national sample (a dichotomy). Educational attainment was treated as a continuous measure when it was the dependent variable; but for most analyses, the values of education were collapsed into an ordinal ranking. Consequently, most of the statistical analyses involved ordinal by ordinal contingency tables. Since there is no ideal nonparametric analog to parametric multiple regression and path analysis, several nonparametric measures of association were used to compute the degree of monotonic association between the various independent and dependent variables in the model.

After developing a table for each specified relationship and testing for the independence of row and column values using a $X^2$ test, three nonparametric measures of association were calculated—gamma, Spearman's rank order correlation (rho), and Somers' d (asymmetric). These three measures of association differ with respect to their computation and interpretation and are briefly reviewed below.

Gamma is a common ordinal-level measure of association which summarizes the differences in probabilities of concordance and discordance among untied pairs of observations (Blalock, 1972:424; Reynolds, 1977:74).

47 In such instances, parametric analysis of variance was used to ascertain the relationship between education and the predictor variables.
The formula for gamma is: \( \frac{C-D}{C+D} \) where, C equals the number of concordant pairs and D equals the number of discordant pairs in a given table. Gamma has the "advantage" of reaching unity (positive or negative) for

48 The number of concordant pairs in a cross-tabulation is the number of pairs of observations (considering all possible pairs) in which one observation is "higher" than the other with respect to its value on both the independent and dependent variables. Discordant pairs are those in which one observation is "lower" than the other with respect to its value on both the independent and dependent variables. Tied pairs (not of concern to gamma) are those pairs of observations in which one observation is "higher" with respect to its value on either the independent or dependent variable, but not on both. Tied pairs can be further divided into those tied only on the independent variable, those tied only on the dependent variable, and those tied on both. To identify the various pairs, Somers' (1962:803) example and formulas are illustrative. Given the following hypothetical frequency distribution:

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td>Y2</td>
<td>d</td>
<td>e</td>
<td>f</td>
</tr>
</tbody>
</table>

where: a, b, ... f = number of observations

The formula for determining the number of concordant pairs is: 
\( a(e + f) + b(f) \). The formula for determining the number of discordant pairs is: 
\( c(d + e) + b(d) \). The formula for determining the number of pairs tied on X is: 
\( a(d) + b(e) + c(f) \). The formula for determining the number of pairs tied on Y is: 
\( a(b + c) + b(c) + d(e + f) + e(f) \). The number of pairs tied on both X and Y can be obtained by subtracting the above number of tied pairs from the total number of pairs.
each of the three definitions as "perfect" correlation (Reynolds, 1977:74). However, others have criticized the statistic by maintaining that it wastes information on those pairs which are tied (see Wilson, 1969) and/or because it is possible to design frequency tables which result in a "perfect correlation" but which possess no substantive

49The three definitions of "perfect" correlation are the "strict positive (or negative)", the "asymmetrical positive (or negative)", and the "weak positive (or negative)". Using Reynolds' (1977:67) examples, "strict positive" correlation implies that an increase in one variable involves an increase in another and that when one does not vary, neither does the other. This form of correlation can only occur in square (i.e., rows-columns) tables. An example is:

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>

The second type of "perfect" correlation, "asymmetrical positive", implies that an increase in one variable always produces an increase in the other, but an increase in the latter variable does not always produce an increase in the former (Reynolds, 1977:67). The form of correlation occurs in nonsquare tables (i.e., rows-columns). An example is:

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium low</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Medium high</td>
<td>0</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>

The last form of "perfect" correlation, the "weak positive" type, implies that an increase in Y means only that X does not decrease (Reynolds, 1977:67). An example is:

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>0</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>0</td>
<td>50</td>
</tr>
</tbody>
</table>
meaning (Reynolds, 1977:69). Since gamma does not include tied pairs of observations, it tends to indicate a stronger relationship between two variables than do many other nonparametric measures of association which do consider ties. Another disadvantage of the statistic is that the sampling distribution for it is unknown and consequently, there is no generally accepted test of significance.

The second nonparametric measure of association which was computed was Spearman's rank order correlation (rho). Spearman's rho is derived by applying a formula for a parametric zero-order correlation to ranked data rather than to raw scores. The computational formula for rho is:

\[ \rho = 1 - \frac{6 \sum D_i^2}{N(N^2 - 1)} \]

where: 
- \( D_i^2 \) = squared differences between pairs of ranks,
- \( N \) = number of pairs (number of observations).

In addition, if \( N \) exceeds 10, the sampling distribution of rho has been shown to be approximately normal with a standard error equaling:

\[ \frac{1}{\sqrt{N-1}} \]

Thus, it is possible to test the null hypothesis that rho equals zero (see Siegel, 1956:202-213).

The third and final nonparametric measure of association which was used in this study was Somers' d. Because of several desirable qualities, Somers' d was the major statistic used to evaluate the class model of attainment. Like gamma and rho, Somers' d is a measure of monotonic correlation between two ordinal measures. In terms of advantages, the d statistic has been considered to be a nonparametric analog to a parametric regression coefficient (see Somers, 1962:804; 1974:232). Although the notion of slope has no substantive meaning in monotonic association, the d statistic does possess several properties of classical regression coefficients. For instance, it is possible to show that Kendall's tau is an ordinal analog to a zero-order correlation (see Hawkes,
1971) and just like \( b_{xy} b_{yx} = r^2 \), \( d_{xy} d_{yx} = \tau^2 \) (see Somers, 1962:804). In addition, unlike gamma, Somers' \( d \) takes tied pairs into consideration. By considering tied pairs of observations with respect to a dependent variable, it is possible to compute a \( d \) statistic for an asymmetrical hypothesis (Reynolds, 1977:75). In general, the \( d \) statistic is not misleadingly high (like gamma) or low and thus is a desirable measure of association. The computational formula for Somers' \( d_{yx} \) is:

\[
\text{Somers' } d_{yx} = \frac{C - D}{C + D + Y_0}
\]

where:
- \( y \) = dependent variable
- \( x \) = independent variable
- \( C \) = number of concordant pairs
- \( D \) = number of discordant pairs
- \( Y_0 \) = number of pairs tied on \( Y \) only

A final advantage of Somers' \( d \) is the availability of a partial option.

Somers (1970;1974) and Hawkes (1971) have developed a partial \( d_{yx,z} \) by considering the \( d \) statistic to be a special case of a generalized product-moment (zero-order) correlation system. Assuming this system, it is possible to obtain partial \( d \)'s by substituting bivariate \( d \)'s into any

\[50\] Like gamma, Somers' \( d \) reaches unity for "strict positive (or negative) correlation"; but unlike gamma, Somers' \( d \) does not necessarily reach unity for "asymmetrical positive (or negative) correlation" and never does it reach unity for "weak positive (or negative) correlation".
Following Somers (1974:232), the formula for a partial d is:

\[
\text{Somers' } d_{yx.z} = \frac{d_{yx} - d_{yz} d_{zx}}{1 - d_{xz} d_{zx}}
\]

where: 
- \( y \) = dependent variable
- \( x \) = independent variable
- \( z \) = control variable

Others such as Hawkes (1971) have extended the d statistic into higher order partial correlations, multiple correlations, and coefficients of determination. Furthermore, Smith (1972) has developed a standardized partial d statistic and used it as a nonparametric path coefficient.

There is some controversy among researchers over whether parametric formulas for partial (and multiple) correlation can be validly applied to ordinal measures of association (in particular, gamma, Kendall's tau-b, and Somers' d). This is an extremely complex debate which has not been completely resolved (for opposing views see Hawkes, 1971; Wilson, 1974; Kim, 1975). However, after reviewing the opposing positions, Reynolds (1977:108) concluded that for nonparametric partial correlations to most accurately describe the relationship among three variables (independent, dependent, and control), it is necessary to assume that the

\[51\]

A second strategy for computing nonparametric partial correlations has been developed by Quade (1974). Quade's procedure involves the development of a weighted average of d's for given levels of a control variable. For \( d_{yx.z} \), Quade's formula is:

\[
\frac{\sum_k (N_{c_k} - N_{d_k})}{\sum_k (N_{c_k} + N_{d_k} + Y_{o_k})} \text{ where: } k = \text{levels of a control variable}
\]

\( N_{c_k} \) = number of concordant pairs for the \( k \)th level of a control variable

\( N_{d_k} \) = number of discordant pairs of the \( k \)th level of a control variable

\( Y_{o_k} \) = number of pairs tied on \( Y \) only for the \( k \)th level

Unfortunately, the procedure requires a large number of observations to insure reliability and thus is impractical for the current study.
variables in question have a fixed number of categories or that the observed categorizations are reasonably representative of the underlying categorizations of the population. Since, in general, the categorization procedure for the various class measures conforms to Reynolds' rule of thumb, partial d's were calculated and used to evaluate the class model of attainment.

Using the various nonparametric measures of association, the strength of relationship was assessed between the variables in the class model of attainment. Moreover, by using partial d statistics it was possible to control for the influence of a third variable. Lastly, using test of significance for Spearman's rho, inferences were made about the statistical significance of the relationship between variables. In the next chapter, the statistical results of the socioeconomic model are presented and discussed. The results of the class model follow that chapter.
CHAPTER VI

EMPIRICAL ANALYSIS OF THE SOCIOECONOMIC MODEL OF ATTAINMENT

Introduction

The socioeconomic model was statistically evaluated for the two samples discussed in the preceding chapter. The specific variable relationships which were examined in this chapter were derived from the four major propositions stated at the conclusion of Chapter II. Results from the analysis of the empirical relationships are presented in this chapter. All employed major family money-winners in each separate sample were the data sources for the initial analysis. That is, in the first section of this chapter, the variable relationships were examined for the total metropolitan sample and the total national sample. Additionally however, due to a general conclusion from attainment research that socioeconomic models "work better" for males, in the second section of this chapter, the variable relationships were examined exclusively for the two male samples. Interestingly, the early socioeconomic attainment researchers did not even consider females in their studies. In fact, several of the early occupational scales (including the Duncan socioeconomic index) were constructed exclusively for males.

The basic issue in this analysis is the degree to which the multiple dimensions of attained socioeconomic status depend upon or are influenced by origin socioeconomic factors and the extent to which these influences are mediated by intervening factors and early attainments. Also of interest is whether attained socioeconomic status is the result of achievement or ascription or both.
Analysis of the Total Samples

As mentioned above, data from two different samples were used to statistically evaluate the socioeconomic model. The first, a metropolitan sample, afforded this research more substantive information regarding the conceptual issues under question. The second, a national sample, while not allowing as much conceptual information, permitted many of the findings to be generalized to a national population. The findings for the metropolitan sample are presented first, followed by those for the national sample.

The first of the four major propositions in the socioeconomic model stated that origin socioeconomic status will produce a significant positive influence on educational attainment. Potentially, this is a detrimental proposition to meritocratic views on educational attainment.

To ascertain the statistical relationship between the multiple dimensions of origin socioeconomic status and educational attainment, correlation and regression analyses were conducted. For the metropolitan sample, zero-order correlation coefficients, means, and standard deviations for the variables in the socioeconomic model are presented in Table 4. For the national sample, the same statistics are displayed in Table 5. For both samples, the zero-order correlations between the origin socioeconomic status variables (father's occupation, father's education, and mother's education) and educational attainment were fairly strong and statistically significant. They ranged in magnitude from .293 to .449, Tables 4 and 5. This finding indicates a significant positive linear association between the origin socioeconomic variables and educational attainment.

Perhaps theoretically more important than the linear association
Table 4. Zero-Order Correlations, Means, and Standard Deviations of Variables in the Socioeconomic Model - Metropolitan Sample (N=184)

<table>
<thead>
<tr>
<th>Variables</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>----</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>0.501**</td>
<td></td>
<td></td>
<td>0.402**</td>
<td>0.664**</td>
<td></td>
<td></td>
<td>0.244**</td>
<td>0.197**</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.046</td>
<td>-0.127*</td>
<td>-0.100</td>
<td></td>
<td></td>
<td></td>
<td>0.075</td>
<td>-0.047</td>
<td>-0.049</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>0.367**</td>
<td>-0.088</td>
<td></td>
<td>0.363**</td>
<td>-0.101</td>
<td></td>
<td>0.424**</td>
<td>0.359**</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>0.411**</td>
<td>0.368**</td>
<td>0.309**</td>
<td>-0.070</td>
<td>0.375**</td>
<td>-0.011</td>
<td></td>
<td>0.302**</td>
<td>0.226**</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>0.227**</td>
<td>0.062</td>
<td>0.071</td>
<td>0.028</td>
<td>0.568**</td>
<td>0.353**</td>
<td></td>
<td>0.330**</td>
<td>0.285**</td>
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<tr>
<td>G</td>
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</tr>
</tbody>
</table>


*The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=age of money-winner at first job, F=years experience at current occupation, G=education of money-winner, H=first occupation of money-winner, I=current occupation of money-winner, J=family taxable income.

**p<.01
*p<.05
Table 5. Zero-Order Correlations, Means, and Standard Deviations of Variables in the Socioeconomic Model - National Sample (N=529)

<table>
<thead>
<tr>
<th>Variables\ A</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td></td>
<td>.539**</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td>.657**</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td>-.005</td>
<td>-.332**</td>
<td>-.372**</td>
<td>----</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.293**</td>
<td>.449**</td>
<td>.386**</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.226**</td>
<td>.175**</td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.078*</td>
</tr>
</tbody>
</table>


aThe variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=education of money-winner, F=current occupation of money-winner, G=family taxable income.

**p≤.01
*p≤.05
between the variables is the amount of influence of the origin socioeconomic variables on educational attainment. To determine the degree and significance of influence for this and subsequent relationships in the socioeconomic model, a multiple regression technique, path analysis, was used. This technique estimates regression coefficients in standardized form (Beta coefficients) thus allowing comparisons to be made between the effects of several predictor variables on a specific dependent variable.

For the metropolitan sample, father's occupation produced the lone significant influence on educational attainment (Beta=.320), Table 6. The two parental education measures, although positively associated with the dependent variable, failed to produce a significant effect. Together, the predictor variables accounted for approximately 23% of the variation in educational attainment.

The effect of the origin socioeconomic variables on educational attainment revealed a somewhat different pattern for the national sample. As was the case for the metropolitan subjects, all three national sample origin socioeconomic variables produced positive influences on educational attainment. Moreover, the coefficients of determination for the two samples were virtually identical, Table 7. However, for the national sample, the two parental education variables were considerably more influential than father's occupation with respect to their effects on the dependent variable. Father's education (Beta=.298) and mother's

---

52 In this and subsequent regression equations, one or more control variables were included. These include age, age at first job, and years of experience at current job. These are not of immediate substantive importance and consequently are not discussed.
Table 6. Standardized Regression Coefficients and Coefficients of Determination for Variables in the Model of Socioeconomic Attainment - Metropolitan Sample

<table>
<thead>
<tr>
<th>Predetermined Variables</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>J</th>
<th>J</th>
<th>J</th>
<th>J</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>.320**</td>
<td>.254**</td>
<td>.165</td>
<td>.239**</td>
<td>.007</td>
<td>.005</td>
<td>.182</td>
<td>.138</td>
<td>.135</td>
</tr>
<tr>
<td>B</td>
<td>.006</td>
<td>-.007</td>
<td>-.004</td>
<td>.005</td>
<td>.002</td>
<td>.009</td>
<td>.153</td>
<td>.145</td>
<td>.143</td>
</tr>
<tr>
<td>C</td>
<td>.188</td>
<td>.138</td>
<td>.124</td>
<td>.102</td>
<td>-.000</td>
<td>-.000</td>
<td>.003</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>D</td>
<td>.008</td>
<td>.006</td>
<td>.000</td>
<td>.103</td>
<td>.116</td>
<td>.127</td>
<td>.126</td>
<td>.130</td>
<td>.131</td>
</tr>
<tr>
<td>E</td>
<td>.279**</td>
<td>.198**</td>
<td>-.002</td>
<td>-.169**</td>
<td>-.194**</td>
<td>.199*</td>
<td>.160</td>
<td>.157</td>
<td>.175</td>
</tr>
<tr>
<td>F</td>
<td>.005</td>
<td>.001</td>
<td>.000</td>
<td>.007</td>
<td>.008</td>
<td>.008</td>
<td>.008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>.324*</td>
<td>.600**</td>
<td>.559**</td>
<td>.159</td>
<td>.153</td>
<td>.101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>.123</td>
<td>.002</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I</td>
<td>.009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.234</td>
<td>.238</td>
<td>.357</td>
<td>.110</td>
<td>.363</td>
<td>.373</td>
<td>.199</td>
<td>.217</td>
<td>.217</td>
</tr>
</tbody>
</table>

The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=age of money-winner at first job, F=years experience at current occupation, G=education of money-winner, H=first occupation of money-winner, I=career occupation of money-winner, J=family taxable income.

**p<.01
*p<.05
Table 7. Standardized Regression Coefficients and Coefficients of Determination of Variables in the Model of Socioeconomic Attainment - National Sample

<table>
<thead>
<tr>
<th>Predetermined Variables(^a)</th>
<th>E</th>
<th>F</th>
<th>F</th>
<th>G</th>
<th>C</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.008</td>
<td>0.009</td>
<td>0.005</td>
<td>-0.005</td>
<td>-0.008</td>
<td>-0.008</td>
</tr>
<tr>
<td>B</td>
<td>0.298**</td>
<td>0.173*</td>
<td>-0.001</td>
<td>0.191**</td>
<td>0.109</td>
<td>0.110</td>
</tr>
<tr>
<td>C</td>
<td>0.166**</td>
<td>0.108</td>
<td>0.001</td>
<td>0.003</td>
<td>-0.001</td>
<td>-0.001</td>
</tr>
<tr>
<td>D</td>
<td>0.000</td>
<td>0.207**</td>
<td>0.205**</td>
<td>0.183**</td>
<td>0.182**</td>
<td>0.158**</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>0.611**</td>
<td></td>
<td>0.275**</td>
<td>0.205**</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.114</td>
</tr>
<tr>
<td>R²</td>
<td>0.221</td>
<td>0.101</td>
<td>0.392</td>
<td>0.043</td>
<td>0.101</td>
<td>0.110</td>
</tr>
</tbody>
</table>

\(^a\)The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=education of money-winner, F=occupation of money-winner, G=family taxable income.

**p < .01
* p ≤ .05
education (Beta=.166) both produced statistically significant positive influences on educational attainment.

Consequently, considering both samples, some empirical support was uncovered for all three of the origin socioeconomic status variables relative to their influence on educational attainment. Although the degree of influence was not extremely large, support was uncovered for the proposition that origin socioeconomic status positively influences educational attainment.

The second major theoretical proposition stressed the positive effect of origin socioeconomic status and educational attainment on initial occupational status. In addition, it was asserted that the influence of origin socioeconomic status on initial occupational status will be substantially mediated by educational attainment. Beginning with Blau and Duncan (1967), most socioeconomic attainment researchers have noted the fundamental role which initial occupational status plays in attainment processes. As noted in the previous chapter, inferences pertaining to this proposition were based solely on the metropolitan data set because of the lack of information on subject's initial occupation in the national data set.

The zero-order correlation of each of the four predictor variables with initial occupational status was moderately strong, positively directed, and statistically significant. The correlations of the three origin socioeconomic status variables with initial occupation ranged from .309 to .411 and the correlation between educational attainment and initial occupation was somewhat larger at .513, Table 4. These correlations point to a strong linear association between the predictor variables and initial occupation.
For this proposition, the regression analysis was divided into two equations. The first regressed initial occupation on the three origin socio-economic variables. Educational attainment was added to these predictors in the second equation to ascertain the degree to which educational attainment mediates the influence of the origin socio-economic variables on initial occupation as well as to determine its direct effect on the dependent variable. Of the predictors in the first equation, only father's occupation produced a statistically significant effect on initial occupation (Beta=.254), Table 6. Both parental education variables failed to significantly influence the dependent variable. In the second equation, with educational attainment added to the origin socio-economic variables, the magnitude and statistical significance of father's occupation was changed. The amount of influence was reduced by a third and the statistical significance vanished. This points to the substantial mediating effect of educational attainment.

In addition, educational attainment produced the largest direct effect on initial occupational attainment (Beta=.324). Given the previous finding, this indicates the importance of educational attainment as both a mediating and direct influence on the dependent variable. Considering all predictors, over 35% of the variation in initial occupational status was accounted for. Generally speaking, partial support was uncovered for the second proposition. Father's occupational status as well as educational attainment produced significant positive effects on initial occupational status. Moreover, the influence of father's

53 See Alwin and Hauser (1975) for a discussion of direct and indirect effects in path analysis.
occupation on the dependent variable was largely indirect, mediated by educational attainment.

The third theoretical proposition stated that origin socioeconomic status, educational attainment, and initial occupational status will exert significant positive effects on current occupational status. In addition, it was proposed that a substantial proportion of the influence of origin socioeconomic status and education will be indirect, mediated by subsequent variables. Without question, this proposition is of paramount importance in socioeconomic attainment theory and research. It is generally conceded by attainment researchers that current occupation is one of the most, if not the most, important attainments which individuals experience in their social lives. Primarily, this is because an individual's occupation confers social identity, links the individual into a complex social division of labor which is functionally necessary for a society, and because it is the status which mediates between and affects other aspects of social inequality.

As noted in Tables 4 and 5, the zero-order correlations between current occupation and the three origin socioeconomic measures ranged from .222 to .302 for the metropolitan sample and from .175 to .226 for the national sample. The correlations between occupational attainment and educational attainment were .568 and .591 for the metropolitan and national samples, respectively, indicating a strong linear association between the two variables. Lastly, using the metropolitan data, a correlation of .353 was found for the relationship between initial occupational status and current occupational status. All of the above-mentioned correlations were statistically significant thus providing initial support for this proposition.
Turning to the regression analyses, three equations were estimated for the metropolitan sample and two were estimated for the national sample (since initial occupational information was not available). In the first equation, for both samples, only the origin socioeconomic variables were included. For the metropolitan sample, father's occupational status produced a highly significant positive effect on occupational attainment (Beta=.239), Table 6. As predicted, by adding educational attainment to the origin socioeconomic status variables in the second equation, this influence virtually disappeared (Beta=.007). This supports the notion that educational attainment substantially mediates the effect of the origin socioeconomic variables. At this stage, educational attainment produced a very strong influence on occupational attainment (Beta=.600). Adding initial occupation status to the origin socioeconomic variables and educational attainment (equation 3) reduced the direct effect of education about 7% suggesting a slight mediating effect of initial occupation. However, in this full-form equation, only educational attainment produced a significant direct effect on the dependent variable (Beta=.559). Over 37% of the variation in occupational attainment was accounted for in this equation.

For the national sample, in the first equation, only father's education produced a notable influence on occupational attainment (Beta=.173), Table 7. This effect was reduced to almost zero by adding educational attainment to the origin socioeconomic variables. Not only did education mediate almost the total influence of the origin socioeconomic variables, it also produced an extremely large direct effect on occupational attainment (Beta=.611). Of course, this finding was similar to that uncovered for the metropolitan sample. Over 39% of the variation in occupational
attainment was accounted for in the full-form equation. Overall, some support was found for this proposition. At least one origin socio-economic status variable produced a significant influence on occupational attainment in each sample. In addition, this influence was substantially mediated by educational attainment for both samples. Moreover, at least a slight portion of the effect on educational attainment on occupational attainment was mediated by initial occupational attainment and, lastly, educational attainment produced a rather large direct effect on the dependent variable in both samples.

The fourth and final proposition in the socioeconomic model stated that origin socioeconomic status, educational attainment, initial occupational attainment, and current occupational attainment will either directly or indirectly produce a significant positive effect on income attainment. As noted in the literature review, socioeconomic attainment research has been largely unsuccessful in accounting for income attainment. Income represents the last major socioeconomic attainment considered by most researchers. Substantively, income represents one of the most fundamental and overt manifestations of social inequality. Consequently, it is of major importance to most researchers.

Generally speaking, the zero-order correlations between the various predictor variables and income were weaker than those observed for earlier attainments. Nevertheless, most of the correlations were statistically significant. For the metropolitan sample, the correlations between the origin socioeconomic variables and income ranged from .226 to .330, Table 4. Additionally, the correlations between income and education, initial occupation, and current occupation were .307, .253, and .247 respectively, Table 4. For the national sample, the linear association between income and the three measures of origin socioeconomic
status ranged from .060 to .126, Table 5. Income correlated with education at .269 and with current occupation at .258, Table 5. Relatively speaking, the strength of relationship between the various predictor variables in the proposition and income was fairly weak.

All in all, the regression analyses were not too successful, thus conforming to most previous income attainment research. For the metropolitan sample, four equations were used to analyze the process of income attainment. Not a single theoretical predictor in any of the equations produced a statistically significant effect on income, Table 6. Taken together, the full-form equation (nine variables) accounted for only 22% of the variation in the dependent variable.\(^{54}\)

With a couple of notable exceptions, the analysis of income attainment for the national sample was also largely unsuccessful. Three equations were estimated for this sample. In the first equation, including only the origin socioeconomic variables, father's education was found to produce a significant effect on income (Beta= .191), Table 7. In the second equation, this influence was reduced and rendered non-significant by the inclusion of educational attainment. Again, this suggests the mediating role of educational attainment. In this equation, educational attainment produced the only significant direct effect on the dependent variable (Beta= .275), Table 7. This effect was slightly reduced by including occupational attainment in the third equation. In this equation, only educational attainment produced a significant effect on income attainment (Beta= .205), Table 7. Correspondingly, only 11% of

\(^{54}\)In preliminary analyses, several scattergrams and nonlinear equations were analyzed to determine if the relationship between the predictor variables and income was nonlinear. All relationships did not significantly deviate from a linear relationship.
the variation in income attainment was accounted for in the full-form equation. Consequently, with one or two exceptions, most of the hypothesized relationships in the fourth proposition were not empirically supported. Income appears to be largely independent of most variables currently considered in socioeconomic models. Income attainment presents a challenge to future socioeconomic attainment research.

To briefly summarize, the first three propositions in the socioeconomic model received full or partial empirical support. Up to current occupational attainment, a system of significant, positive effects was uncovered. Support was found for both ascriptive and meritocratic assumptions in the socioeconomic model. Although the attained multiple dimensions of social inequality were not the exclusive direct consequence of ascribed origin dimensions, the two were far from being independent. Occupational attainment was found to be heavily influenced by educational attainment, but educational attainment was significantly influenced by origin socioeconomic status. Moreover, educational attainment substantially mediated the influence of the origin variables on the attained socioeconomic variables. Possessing an advantageous origin socioeconomic position is not sufficient, in general, to acquire an advantageous attained position. As mentioned earlier, socioeconomic attainment models have been shown to "work better" for male than female money-winners.

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55 In addition, subject's income, instead of family income, was regressed on the various predictor variables for the national sample. The resulting coefficient of determination was .207. Educational attainment (Beta=.158), age (Beta=.261), and occupational prestige (.262) produced statistically significant influences on the dependent variable. These variables also produced significant effects on family income.
Therefore, in the next section, the socioeconomic model was statistically evaluated for males.56

Analysis of the Male Samples

In addition to the above analysis, the four theoretical propositions in the socioeconomic model were empirically evaluated for the male money-winners in the two samples. The results of this analysis are presented in this section. One of the basic issues in this section is whether the socioeconomic model "works better" for the male samples than for the total samples.

The first proposition stated that origin socioeconomic status will produce a significant positive influence on educational attainment. The correlations of the three origin socioeconomic variables and educational attainment are presented in Tables 8 and 9. For the metropolitan sample, the correlations ranged from .321 to .417 and were statistically significant, Table 8. Similarly, for the national sample, the correlations ranged from .282 to .442 and were also statistically significant, Table 9. The strength and significance of these correlations adds support to the first proposition. However, these correlations were slightly weaker than those observed for the total samples.

As for the relative influence of the origin socioeconomic variables on educational attainment, the pattern was generally the same as that observed for the total samples. For the metropolitan males, the most

56An exclusive concern for males does not indicate a lack of concern for female attainment processes. However, the proportion of females who were major family money-winners was too small to conduct a meaningful statistical analysis.
Table 8. Zero-Order Correlations, Means, and Standard Deviations of Variables in the Socioeconomic Model - Metropolitan Sample Males (N=163)

<table>
<thead>
<tr>
<th>Variables</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
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</tr>
<tr>
<td>B</td>
<td>.463**</td>
<td>-----</td>
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<td>-----</td>
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</tr>
<tr>
<td>C</td>
<td>.374**</td>
<td>.645**</td>
<td>-----</td>
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<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>D</td>
<td>.054</td>
<td>-.123*</td>
<td>-.084</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>E</td>
<td>.265**</td>
<td>.225**</td>
<td>.190**</td>
<td>.087</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
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</tr>
<tr>
<td>F</td>
<td>.089</td>
<td>-.038</td>
<td>-.044</td>
<td>.659**</td>
<td>.009</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>G</td>
<td>.417**</td>
<td>.341**</td>
<td>.321**</td>
<td>-.084</td>
<td>.353**</td>
<td>-.098</td>
<td>-----</td>
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<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>H</td>
<td>.349**</td>
<td>.326**</td>
<td>.265**</td>
<td>-.049</td>
<td>.430**</td>
<td>.018</td>
<td>.509**</td>
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</tr>
<tr>
<td>I</td>
<td>.330**</td>
<td>.238**</td>
<td>.229**</td>
<td>.067</td>
<td>.106</td>
<td>-.002</td>
<td>.619**</td>
<td>.377**</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>J</td>
<td>.369**</td>
<td>.335**</td>
<td>.260**</td>
<td>.130*</td>
<td>.316**</td>
<td>.112</td>
<td>.332**</td>
<td>.302**</td>
<td>.258**</td>
<td>-----</td>
</tr>
</tbody>
</table>

Mean       40.976 4.023 4.047 47.492 19.46 17.311 6.651 40.193 55.834 33.948

The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=age of money-winner at first job, F=years experience at current job, G=education of money-winner, H=first occupation of money-winner, I=current occupation of money-winner, J=family taxable income.

**p<.01
*p<.05
Table 9. Zero-Order Correlations, Means, and Standard Deviations of Variables in the Socioeconomic Model - National Sample Males (N=301)

<table>
<thead>
<tr>
<th>Variables</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
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<tbody>
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<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B</td>
<td>.535**</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>C</td>
<td>.309**</td>
<td>.676**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>-.013</td>
<td>-.325**</td>
<td>-.397**</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>E</td>
<td>.282**</td>
<td>.442**</td>
<td>.368**</td>
<td>-.109**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>.188**</td>
<td>.183**</td>
<td>.197*</td>
<td>.157**</td>
<td>.594**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>.049</td>
<td>.040</td>
<td>-.027</td>
<td>.237**</td>
<td>.755**</td>
<td>.267*</td>
<td></td>
</tr>
</tbody>
</table>

Mean: 40.723  9.672  10.142  39.288  13.053  42.232  11.497


The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=education of money-winner, F=current occupation of money-winner, G=family taxable income.

**p≤.01
*p≤.05
notable predictor of educational attainment was father's occupational status (Beta=.329), Table 10. This effect was significant and considerably larger than the influence of the two parental education variables. Approximately 22% of the variation in educational attainment was accounted for by the independent variables. However, this coefficient of determination was slightly smaller than that observed for the total sample.

For the national males, the effect of father's occupation was virtually zero, but the influence of father's education on educational attainment was rather sizable (Beta=.324), Table 11. Unlike the total sample, mother's educational attainment failed to produce a significant effect on the dependent variable. Slightly over 21% of the variation in educational attainment was accounted for by the predictor variables. This compares to 22% for the total sample. Overall, empirical support was found for the proposition; however, compared to the total samples, the male models were less successful in accounting for variation in educational attainment. This suggests that perhaps educational attainment is more closely related to origin socioeconomic position for females than for males.

The second proposition asserted that origin socioeconomic status and educational attainment will produce significant positive effects on initial occupational attainment with educational attainment mediating a substantial proportion of the effect of origin socioeconomic status. As before, only the metropolitan sample was used to evaluate this proposition. The correlations between the three origin socioeconomic status variables and initial occupation were all statistically significant ranging from .265 to .349, Table 8. In addition, educational attainment correlated with initial occupational attainment at .509, Table 8.
Table 10. Standardized Regression Coefficients and Coefficients of Determination for Variables in the Model of Socioeconomic Attainment - Metropolitan Samples

<table>
<thead>
<tr>
<th>Predetermined Variables&lt;sup&gt;a&lt;/sup&gt;</th>
<th>G</th>
<th>H</th>
<th>H</th>
<th>I</th>
<th>I</th>
<th>I</th>
<th>I</th>
<th>J</th>
<th>J</th>
<th>J</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.329**</td>
<td>0.187*</td>
<td>0.009</td>
<td>0.269**</td>
<td>0.009</td>
<td>0.008</td>
<td>0.208*</td>
<td>0.163</td>
<td>0.158</td>
<td>0.154</td>
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<tr>
<td>B</td>
<td>0.010</td>
<td>0.125</td>
<td>0.103</td>
<td>0.007</td>
<td>0.002</td>
<td>0.001</td>
<td>0.184</td>
<td>0.173</td>
<td>0.167</td>
<td>0.167</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.129</td>
<td>0.004</td>
<td>0.000</td>
<td>0.009</td>
<td>0.002</td>
<td>0.002</td>
<td>0.004</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>-0.008</td>
<td>-0.007</td>
<td>-0.004</td>
<td>0.127</td>
<td>0.154</td>
<td>0.171</td>
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<td>0.114</td>
<td>0.122</td>
<td>0.111</td>
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<tr>
<td>E</td>
<td>0.350**</td>
<td>0.265**</td>
<td>-0.001</td>
<td>-0.162*</td>
<td>-0.201**</td>
<td>0.202*</td>
<td>0.165</td>
<td>0.148</td>
<td>0.160</td>
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</tr>
<tr>
<td>F</td>
<td>-0.103</td>
<td>-0.005</td>
<td>-0.906</td>
<td>0.003</td>
<td>0.004</td>
<td>0.004</td>
<td>0.004</td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>0.338**</td>
<td>0.634**</td>
<td>0.583**</td>
<td>0.155</td>
<td>0.133</td>
<td>0.010</td>
<td>0.141</td>
<td>0.006</td>
<td>0.005</td>
<td></td>
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<td></td>
<td></td>
<td>0.006</td>
</tr>
<tr>
<td>I</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.218</td>
<td>0.271</td>
<td>0.354</td>
<td>0.133</td>
<td>0.422</td>
<td>0.435</td>
<td>0.229</td>
<td>0.246</td>
<td>0.248</td>
<td>0.250</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=age of money-winner at first job, F=years experience at current job; G=education of money-winner, H=first occupation of money-winner, I=current occupation of money-winner, J=family taxable income.

**p ≤ 0.01
*p ≤ 0.05
Table 11. Standardized Regression Coefficients and Coefficients of Determination for Variables in the Model of Socioeconomic Attainment - National Sample Males

<table>
<thead>
<tr>
<th>Predetermined Variables&lt;sup&gt;a&lt;/sup&gt;</th>
<th>E</th>
<th>F</th>
<th>F</th>
<th>G</th>
<th>G</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>.006</td>
<td>.008</td>
<td>.004</td>
<td>-.003</td>
<td>-.004</td>
<td>-.005</td>
</tr>
<tr>
<td>B</td>
<td>.324**</td>
<td>.183</td>
<td>-.002</td>
<td>.151</td>
<td>-.006</td>
<td>-.006</td>
</tr>
<tr>
<td>C</td>
<td>.153</td>
<td>.005</td>
<td>-.004</td>
<td>-.001</td>
<td>-.005</td>
<td>-.005</td>
</tr>
<tr>
<td>D</td>
<td>.006</td>
<td>.239**</td>
<td>.203**</td>
<td>.282**</td>
<td>.265**</td>
<td>.253**</td>
</tr>
<tr>
<td>E</td>
<td>.631**</td>
<td>.290**</td>
<td>.252**</td>
<td>.252**</td>
<td>.252**</td>
<td>.252**</td>
</tr>
<tr>
<td>R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>.211</td>
<td>.091</td>
<td>.405</td>
<td>.072</td>
<td>.138</td>
<td>.141</td>
</tr>
</tbody>
</table>

<sup>a</sup>The variables are: A=occupation of money-winner's father, B=education of money-winner's father, C=education of money-winner's mother, D=age of money-winner, E=education of money-winner, F=current occupation of money-winner, G=family taxable income.

** p ≤ .01
*p ≤ .05
Thus, fairly strong linear associations were uncovered between the predictors and the dependent variable. This provides initial support for the proposition.

To determine the relative influence of the independent variables on initial occupational status, two regression equations were estimated. The first equation included only the three origin socioeconomic status variables. In this equation, of the three, only father's occupation produced a significant effect (Beta = .187), Table 10. The influence of the other two independent variables was not statistically different than zero. Educational attainment was added to the origin socioeconomic variables in the second equation. With educational attainment in the equation, the effect of father's occupation was reduced to almost zero. This indicates that most of the effect of this origin socioeconomic variable on initial occupation was indirect (over 93%), mediated by educational attainment. In terms of direct influences, only educational attainment produced a significant effect (Beta = .338), Table 10. Over 35% of the variation in the dependent variable was accounted for by the full-form equation. This coefficient of determination was virtually the same size as that found for the total sample. In general, some support was uncovered for the proposition. Significant direct and indirect effects were found; however, the model was not more successful for the male sample.

It was stated in the third proposition that origin socioeconomic status, educational attainment, and initial occupational status will significantly and positively influence current occupational status. In addition, it was proposed that the effect of origin socioeconomic status will be largely indirect, mediated by educational attainment, and that the effect of educational attainment will be substantially
mediated by initial occupation. For the metropolitan sample, the zero-order correlations between the origin socioeconomic variables and current occupational status ranged from .229 to .330, Table 8. The coefficients for the national sample were somewhat smaller in magnitude ranging from .107 to .188, Table 9. The linear association between educational attainment and current occupation was .619 for the metropolitan sample and .594 for the national sample indicating a strong relationship between the two variables. Lastly, the correlation between initial occupational status and current occupational status was .377. All of the aforementioned correlations were statistically significant and supportive of the proposition. Moreover, with a couple of exceptions, the correlations were larger for the male samples.

For the metropolitan sample, to ascertain the relative effect of the various predictor variables on occupational status, three regression equations were estimated. Only the three origin socioeconomic measures were included in the first equation. Of these, father's occupational status was the only one to produce a significant influence on the dependent variable (Beta=.269), Table 10. The effect of both father's and mother's education approached zero. In the second equation, educational attainment was added to the origin socioeconomic variables to determine its role in mediating the effect of the origin socioeconomic status variables. Adding educational attainment almost entirely removed the direct effect of father's occupation (Beta=.009), Table 10. It was found that over 95% of the influence of father's occupation on current occupation was indirect. In this equation, educational attainment displayed a very strong direct effect on occupational attainment (Beta=.634), Table 10. In the third and final equation, initial occupational
status was added to the origin socioeconomic variables and educational attainment. The influence of the origin variables in this equation was virtually nil with path coefficients ranging from .001 to .008, Table 10. In addition, only about 8% of the total effect of educational attainment was mediated by initial occupation, leaving a strong direct effect (Beta=.585) on the dependent variable, Table 10. The direct effect of initial occupational status on current occupational status was .141 which was not significant, Table 10. Taken together, the various predictor variables accounted for over 43% of the variation in occupational attainment. This coefficient of determination was about 6% higher than that for the total metropolitan sample, pointing to the superior explanatory power of occupational attainment for males.

For the national males, two equations were estimated for this proposition. Like before, only the origin socioeconomic variables were included in the first equation. None of the path coefficients in this equation were statistically significant, although father's education approached significance (Beta=.183), Table 11. In the second equation, educational attainment was added to the origin socioeconomic variables. With educational attainment in the equation, the effect of all of the origin socioeconomic variables approached zero, again pointing to the mediating role of educational attainment in the process of occupational attainment, Table 11. As was the case for the metropolitan males, educational attainment produced a sizable direct effect on the dependent variable (Beta=.631), Table 11. Including the control variables, the predictor variables accounted for over 40% of the variation in occupational attainment. As was the case for the metropolitan samples, the coefficient of determination for the national males was larger than that for the total national sample. Overall, some support for the third
proposition was uncovered by the analysis. In general, the male models were more successful than the total models in accounting for occupational attainment. Occupational attainment was found to be the result of a moderate indirect effect from origin socioeconomic status and a very strong direct effect from educational attainment.

The fourth and final proposition in the socioeconomic model noted the significant positive effects of origin socioeconomic status, educational attainment, initial occupational status, and current occupational status on income attainment. Moreover, it was argued that the effects of origin socioeconomic status, educational attainment, and initial occupational attainment will be largely indirect. For the metropolitan male sample, the correlations between the three origin socioeconomic status variables and income were moderately strong and statistically significant. They ranged from .260 to .369, Table 8. The correlations between income and educational attainment, initial occupation and current occupation were .332, .302, and .258 respectively, Table 8. These correlations were also statistically significant. For the national sample, the correlations were considerably weaker. The linear association between the three origin socioeconomic variables and income ranged from -.027 to .049 indicating virtually no association between these variables. However, the correlation between educational attainment and income was statistically significant ($r = .255$), Table 8. Lastly, the association between occupational status and income was moderately-sized and statistically significant ($r = .247$), Table 8.

Generally speaking, the regression analysis was unsuccessful in supporting the fourth proposition. Four equations were estimated for the metropolitan sample. Only the origin socioeconomic variables were included in the first equation. Of the three, only father's occupation
produced a significant effect on income (Beta=.208), Table 10. Although father's education approached significance, neither it nor mother's education produced a statistically meaningful effect on the dependent variable. Educational attainment was added to the origin socioeconomic variables in the second equation. By including educational attainment, the effect of father's occupation was slightly reduced, losing its statistical significance (Beta=.163), Table 10. This suggests that a significant proportion of the effect of father's occupation was indirect, mediated through educational attainment. In this and subsequent equations, not a single predictor variable produced a significant effect on the dependent variable, Table 10. Considering all independent variables, only 25% of the variation in income attainment was accounted for. However, this coefficient of determination was slightly larger than that found for the total sample.

This overall lack of success was also found for the national sample. Three income equations were estimated. Of the three origin socioeconomic variables considered in the first equation, father's education produced the largest effect on income (Beta=.151), but it was not statistically significant, Table 11. Educational attainment was added to the origin socioeconomic status measures in the second equation. With its inclusion, the direct effect of all three origin socioeconomic status variables approached zero. However, educational attainment produced a highly significant direct effect on the dependent variable in this equation (Beta=.290), Table 11. This effect was reduced slightly in the third equation. In this equation, occupational status was added to the origin socioeconomic variables and educational attainment. A significant income return for educational attainment was found in this equation (Beta=.252), Table 11. All of the other predictor variables produced trivial effects.
on the dependent variable. Only 14% of the variation in income attainment was accounted for in this equation; however, this percentage was larger than that found for the total sample. Overall, very little support was uncovered for the fourth proposition. Like most income attainment studies, this research failed to empirically account for a substantial proportion of the variation in income.

With the exception of educational attainment, the empirical analysis was at least as successful for males as it was for the total samples. More of the variation in initial occupational status, current occupational status, and income was accounted for considering only male subjects. This finding is consistent with previous socioeconomic attainment research.

In this chapter, the socioeconomic model of attainment was statistically evaluated in order to ascertain the degree to which the multiple dimensions of attained socioeconomic status were dependent upon the various dimensions of origin socioeconomic status. It was found that educational attainment, initial occupational attainment, and especially current occupational attainment were significantly influenced, either directly or indirectly, by origin socioeconomic status. However, it was also uncovered that the mere possession of an advantageous set of origin socioeconomic statuses was not sufficient in determining occupational attainments because of the strong influence of educational attainment. In other words, socioeconomic attainments appear to be a blend of both ascription and achievement. In addition, the various dimensions of attainment appear differentially related to origin factors. Although the analysis was fairly successful in accounting for occupational attainment, it was largely unsuccessful in explaining income attainment. Lastly, with the exception of educational attainment, it
was found that the model of socioeconomic attainment works as good or better for males as it does for mixed-sex samples. In the next chapter, the second model of attainment, the Marxist class model, is evaluated.
CHAPTER VII

ANALYSIS OF THE CLASS MODEL OF ATTAINMENT

Introduction

Like the socioeconomic model, the Marxist model of class attainment was statistically evaluated for the two samples. Drawing from the three major propositions presented at the end of the third chapter, specific variable relationships were hypothesized and empirically analyzed. In this chapter, the results of the statistical analysis are presented. The class model was first evaluated for all major family money-winners in each of the two samples. In addition to the total samples, the class model was also evaluated for male money-winners in order to maintain comparability with the analysis of the socioeconomic model. The basic issues in this chapter are the extent to which an attained class position is dependent upon an origin class position and the mediating and direct effects of educational attainment and initial class position on this process.

Analysis of the Total Samples

As discussed earlier, data from both a metropolitan and a national sample were used to evaluate the model. The first proposition in the class model stated that origin social class will produce a significant positive effect on educational attainment. Theoretical support for this proposition is based on the premise that class inequities function to provide the advantaged classes with greater opportunities for education. Consequently, education can serve to legitimate the
reproduction of class situations across generations (see Bowles, 1972; Bowles and Gintis, 1976). For the metropolitan sample, this proposition was not supported. On the basis of both a $X^2$ test and an analysis of variance (with expanded educational categories), no significant difference was found between the four origin class categories with respect to educational attainment, Table 12. In fact, of those who had graduated from college, proportionately more had working or managerial class backgrounds. Moreover, of those subjects who had professional education, a larger percentage had a managerial class background than a petty bourgeoisie or capitalist class background. All three nonparametric measures of association approached zero, ranging from .030 to .056, Table 12. Therefore, it appears that educational attainment is not significantly related to origin class.

This same lack of relationship was also uncovered for the national sample. Neither the parametric analysis of variance nor the nonparametric $X^2$ test uncovered a significant difference between the two variables, Table 13. Of those from wage-labor backgrounds, 79% had a high school diploma or less compared to 76% of those from capital-owning backgrounds. The various coefficients of association were extremely small and nonsignificant ranging from -.056 to .012, Table 13. Thus, the first proposition was not supported for either sample. Perhaps mass education coupled with an increased need for skilled labor in capitalist societies has reduced class-based inequities with respect to educational attainment (cf. Collins, 1971). Nevertheless, the two concepts appear independent of one another.

57 Several findings reported in this chapter were based on row percentages rather than the column percentages presented in the tables. Of course, row percentages can be easily derived from the frequency distributions.
Table 12. Father’s Class Position by Subject’s Educational Attainment: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Father’s Class Position</th>
<th>Less than High School Graduation</th>
<th>High School Graduation</th>
<th>Post-High School Education</th>
<th>College Graduation</th>
<th>Professional Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>38.9 (7)</td>
<td>32.6 (15)</td>
<td>25.4 (15)</td>
<td>35.9 (14)</td>
<td>21.9 (7)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>22.2 (4)</td>
<td>28.3 (11)</td>
<td>30.5 (18)</td>
<td>30.8 (12)</td>
<td>37.5 (12)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>16.7 (3)</td>
<td>15.2 (7)</td>
<td>10.2 (6)</td>
<td>5.1 (2)</td>
<td>6.3 (2)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>22.2 (4)</td>
<td>23.9 (11)</td>
<td>33.9 (20)</td>
<td>28.2 (11)</td>
<td>34.4 (11)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0 (18)</td>
<td>100.0 (46)</td>
<td>100.0 (59)</td>
<td>100.0 (39)</td>
<td>100.1</td>
</tr>
</tbody>
</table>

N= (18) (46) (59) (39) (32)

ANOVA: F=2.19; 1, 190 df; p < .100
X²=.794; 12 df; p=790
Cramer’s .056
Spearman’s rank order correlation=.030; p=.39
Somers’ d=.044 with educational attainment dependent
Table 13. Father's Class Position by Subject's Educational Attainment: Percentages and Frequencies (in parentheses) - National Sample

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Subject's Educational Attainment</th>
<th>Less than High School Graduation</th>
<th>High School Graduation</th>
<th>Post-High School Education</th>
<th>College Graduation</th>
<th>Professional Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Labor Classes(^a)</td>
<td></td>
<td>57.6 (95)</td>
<td>69.6 (261)</td>
<td>64.7 (11)</td>
<td>58.3 (49)</td>
<td>65.4 (34)</td>
</tr>
<tr>
<td>Capital-Owned Classes(^b)</td>
<td></td>
<td>42.4 (70)</td>
<td>30.4 (114)</td>
<td>35.3 (6)</td>
<td>41.7 (35)</td>
<td>34.6 (18)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^a\)=includes working and managerial classes
\(^b\)=includes petty bourgeoisie and capitalist class

ANOVA: F = 2.18; 1 d.f.; p < .141
\(X^2 = 9.12; 4\ d.f.; p = .056\)
Gama = -.056
Spearman's rank order correlation = .012; p<.375
Somers' d = -.036 with educational attainment dependent
The second proposition asserted that origin class position and educational attainment will produce significant positive effects on initial class position. It was also noted that the effect of origin class position on initial class position will be substantially mediated by educational attainment. Due to data limitations, this relationship was only analyzed for the metropolitan sample. The relationship between origin class and initial class is presented in Table 14. It was found that 75% of all major money-winners occupied an initial position in the working class and less than 6% occupied a capital-owning class position, Table 14. With this highly skewed distribution, the $X^2$ test was inadequate. The gamma, rho, and Somers' d coefficients were .055, .012, and .021 respectively, indicating virtually no relationship between the two variables, Table 14. Although not of much importance, the Somers' d statistic dropped in magnitude when educational attainment was controlled, Table 14.

The relationship between educational attainment and initial class position was somewhat ambiguous. Like before, the initial class distribution was quite skewed towards the working class and this rendered the $X^2$ test inadequate, Table 15. The ambiguity in this relationship appeared in the measures of association. The nonparametric correlations varied quite substantially. The gamma statistic indicated the strongest association between the two variables (.422); however, gamma does not consider tied pairs of observations which were quite prevalent given the skewed distribution. Spearman's rho was considerably smaller at .243, but was highly significant. Lastly, Somers' d, which does consider tied pairs, was .161, indicating a still weaker relationship. Overall, the main conclusion which can be drawn with respect to the second proposition was that there was virtually no variation in initial class
Table 14. Father's Class Position by Subject's Initial Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>30.7 (43)</td>
<td>20.6 (7)</td>
<td>50.0 (2)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>28.6 (40)</td>
<td>50.0 (17)</td>
<td>0.0 (0)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>12.1 (17)</td>
<td>2.9 (1)</td>
<td>25.0 (1)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>28.6 (40)</td>
<td>26.5 (9)</td>
<td>25.0 (1)</td>
<td>50.0 (3)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.1</td>
</tr>
<tr>
<td>N</td>
<td>(140)</td>
<td>(34)</td>
<td>(4)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

$X^2=11.98$; 9 d.f.; $p<.214$ (note: insufficient cell frequencies for adequate $X^2$ test)

$\Gamma=.055$

Spearman's rank order correlation $=.012$; $p>.436$

Somers' $d=.021$ with initial class dependent

Partial Somers' $d=.014$ controlling for subject's education
Table 15. Subject's Educational Attainment by Subject's Initial Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Subject's Education</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation</td>
<td>11.0 (17)</td>
<td>2.8 (1)</td>
<td>25.0 (1)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>High School Graduation</td>
<td>26.6 (41)</td>
<td>8.3 (3)</td>
<td>25.0 (1)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Post-High School Education</td>
<td>33.1 (51)</td>
<td>33.3 (12)</td>
<td>25.0 (1)</td>
<td>50.0 (3)</td>
</tr>
<tr>
<td>College Graduation</td>
<td>18.8 (29)</td>
<td>27.8 (10)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Professional Education</td>
<td>10.4 (16)</td>
<td>27.8 (10)</td>
<td>25.0 (1)</td>
<td>50.0 (3)</td>
</tr>
</tbody>
</table>

Total | 99.9 | 100.0 | 100.0 | 100.0 |

N= 154 (36) (4) (6)

a,b,c,d-collapsed for $X^2$ analysis

$X^2$ (corrected for continuity) = .001; 1 d.f.; $p < .940$

(note: insufficient cell frequencies for adequate $X^2$ analysis)

Gamma = .422

Spearman's rank order correlation = .243; $p < .001$

Somers' d = .161 with initial class dependent

Partial Somers' d = .160 controlling for father's class
position. Since there was so little variation, the vast majority of subjects were not affected by either origin social class or educational attainment. However, to the extent that variation does exist, initial class position appears to be slightly to moderately related to educational attainment, but independent of origin social class.

The third, final, and most important proposition stated that origin social class, educational attainment, and initial class position will produce significant positive effects on current class position. Moreover, it was proposed that controlling for educational attainment and initial class position will substantially reduce the relationship between origin and current class position. Lastly, it was proposed that controlling for initial class position will lessen the effect of educational attainment on current class position. This is the most significant proposition in the class attainment model because it addresses the issue of achievement and ascription with respect to current class position.

For the metropolitan sample, the empirical relationship between origin and attained class position is presented in Table 16. A highly significant dependence between the two variables was observed using a $X^2$ test. About 50% of those subjects currently occupying a working class position had fathers who occupied the same class position, Table 16. In all, approximately 75% of those currently in wage-labor class positions had fathers who were wage-laborers, Table 16. On the other hand, over 55% of those currently occupying capital-owning class positions had fathers who were in the same class positions, Table 16. The nonparametric measures of association also pointed to this significant relationship. The gamma statistic was .443, the rho statistic was .375, and the Somers' d statistic was .315 indicating a fairly strong
Table 16. Father's Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>47.6 (20)</td>
<td>38.3 (23)</td>
<td>23.1 (3)</td>
<td>13.3 (10)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>28.6 (12)</td>
<td>33.3 (20)</td>
<td>30.8 (4)</td>
<td>29.3 (22)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>11.9 (5)</td>
<td>13.3 (8)</td>
<td>0.0 (0)</td>
<td>9.3 (7)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>11.9 (5)</td>
<td>15.0 (9)</td>
<td>46.2 (6)</td>
<td>48.0 (36)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>99.9</td>
<td>100.1</td>
<td>99.9</td>
</tr>
<tr>
<td>N</td>
<td>(42)</td>
<td>(60)</td>
<td>(13)</td>
<td>(75)</td>
</tr>
</tbody>
</table>

a=collapsed for $X^2$ analysis

$X^2=23.89; 6 d.f.; p<.001$

Gamma=.443

Spearman's rank order correlation=.375; p<.001

Somers' d=.315 with current class dependent

Partial Somers' d=.310 controlling for educational attainment

Partial Somers' d=.312 controlling for initial class position
relationship between the two variables, Table 16.

To ascertain the degree to which this relationship was mediated by the two intervening variables, two partial Somers' d's were calculated.\(^{58}\) Controlling for educational attainment reduced the statistical relationship between the two variables by only .005 suggesting virtually no indirect effect, Table 16. This finding is directly opposed to the analogous empirical relationship for the socioeconomic model. Likewise, initial class position also failed to lessen the strength of relationship between father's class position and attained class position, Table 16. Consequently, the significant association appears to be a direct relationship, unmediated by educational attainment or initial class position.

A second part of this proposition asserted the significant, positive relationship between educational attainment and current class position. This relationship is displayed in Table 17. The \(X^2\) statistic was significant at the .051 level. Over 20% of those individuals occupying a working class position had an educational attainment of less than high school as compared to only 3% of those in managerial class positions, Table 17. This suggests that education may bear a notable relationship to supervisory responsibility among wage-laborers. Also worthy of note was the finding that of those in the wage-labor classes, only 28% attained a college degree or professional education compared to 42% of

\(^{58}\)In addition to these partials, several other partials were calculated in preliminary analyses. In particular, the mediating effect of several control variables was analyzed; however, partialling out the effect of these variables did not significantly alter the relationships of importance in this proposition. It was found that the most important mediating variable was the money-winner's age. Controlling for age reduced the Somers' d coefficient from .315 to .260.
Table 17. Subject's Educational Attainment by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Subject's Current Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie (^a)</th>
<th>Capitalist Class (^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation</td>
<td>20.8 (10)</td>
<td>3.3 (2)</td>
<td>6.7 (1)</td>
<td>8.4 (7)</td>
</tr>
<tr>
<td>High School Graduation</td>
<td>25.0 (12)</td>
<td>26.2 (16)</td>
<td>26.7 (4)</td>
<td>18.1 (15)</td>
</tr>
<tr>
<td>Post-High School Education</td>
<td>31.2 (15)</td>
<td>37.7 (23)</td>
<td>13.3 (2)</td>
<td>33.7 (28)</td>
</tr>
<tr>
<td>College Graduation</td>
<td>16.7 (8)</td>
<td>19.7 (12)</td>
<td>26.7 (4)</td>
<td>20.5 (17)</td>
</tr>
<tr>
<td>Professional Education</td>
<td>6.3 (3)</td>
<td>13.1 (8)</td>
<td>26.7 (4)</td>
<td>19.3 (16)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.1</td>
<td>100.0</td>
</tr>
<tr>
<td>N=</td>
<td>(48)</td>
<td>(61)</td>
<td>(15)</td>
<td>(83)</td>
</tr>
</tbody>
</table>

\(a=\) collapsed for \(X^2\) analysis

\(X^2=15.42;8d.f.;p<.051\)

Gamma = .206

Spearman's rank order correlation = .180; \(p<.005\)

Somers' \(d=.144\) with current class dependent

Partial Somers' \(d=.128\) controlling for initial class position

Partial Somers' \(d=.130\) controlling for father's class position

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those in the capital-owning classes. The nonparametric measures of association ranged from .144 to .206 indicating a slight to moderate relationship between the two variables, Table 17. Controlling for initial class position reduced the Somers' d from .144 to .128, hinting at a very small mediating effect of initial class position, Table 17.

For the metropolitan sample, the last relationship of interest in this proposition is that between initial class position and current class position. This relationship is presented in Table 18. As noted before, the distribution of initial class position was highly skewed towards the working class. This skewness resulted in a questionable $X^2$ statistic which was nonsignificant. Like before, over 80% of the subjects occupied initial working class positions. The nonparametric correlations varied quite significantly from .044 to .208 leaving this empirical relationship somewhat muddled, Table 18. However, to the extent that variation exists, the relationship between initial class and current class appears fairly weak.

Overall, for the metropolitan sample, the third proposition received only partial support. Although a sizable relationship was observed between origin and current class position, this relationship was not mediated by educational attainment or initial class position. Moreover, the effects of educational attainment and initial class position on current class position were weak to moderate. Of the variables in the class model, current class was found to depend largely on origin class position. This points to the ascriptive nature of class attainment.

For the national sample, somewhat weaker relationships were uncovered for the third proposition. In Table 19, the cross-tabulation of father's class position and current class position is presented. Since the national sample is a representative one, the relative frequency
Table 18. Subject's Initial Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample

<table>
<thead>
<tr>
<th>Subject's Initial Class Position</th>
<th>Working Class ( ^a )</th>
<th>Managerial Class ( ^a )</th>
<th>Petty Bourgeoisie ( ^b )</th>
<th>Capitalist Class ( ^b )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class ( ^c )</td>
<td>88.4 (38)</td>
<td>78.0 (46)</td>
<td>69.2 (9)</td>
<td>76.3 (61)</td>
</tr>
<tr>
<td>Managerial Class ( ^c )</td>
<td>11.6 (5)</td>
<td>18.6 (11)</td>
<td>23.1 (3)</td>
<td>17.5 (14)</td>
</tr>
<tr>
<td>Petty Bourgeoisie ( ^d )</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>7.7 (1)</td>
<td>1.3 (1)</td>
</tr>
<tr>
<td>Capitalist Class ( ^d )</td>
<td>0.0 (0)</td>
<td>3.4 (2)</td>
<td>0.0 (0)</td>
<td>5.0 (4)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.1</td>
</tr>
<tr>
<td>( N = )</td>
<td>(43)</td>
<td>(59)</td>
<td>(13)</td>
<td>(80)</td>
</tr>
</tbody>
</table>

\( a,b,c,d = \text{collapsed for } X^2 \text{ analysis} \)

\( X^2 \) (corrected for continuity)\( = 1.48 ; \text{d.f.} ; p \geq 0.223 \)

(Note: insufficient cell frequencies for adequate \( X^2 \) analysis)

\( \Gamma = 0.208 \)

Spearman's rank order correlation\( = 0.044 ; p \geq 0.262 \)

Somers' \( d = 0.144 \) with current class dependent

Partial Somers' \( d = 0.128 \) controlling for subject's educational attainment

Partial Somers' \( d = 0.014 \) controlling for father's class position
Table 19. Father's Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - National Sample

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Laborer Classes(^a)</td>
<td>69.4 (250)</td>
<td>63.4 (142)</td>
<td>40.0 (10)</td>
<td>51.2 (21)</td>
</tr>
<tr>
<td>Capital-Owning Classes(^b)</td>
<td>30.6 (110)</td>
<td>36.6 (82)</td>
<td>60.0 (15)</td>
<td>48.8 (20)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>(360)</td>
<td>(224)</td>
<td>(25)</td>
<td>(41)</td>
</tr>
</tbody>
</table>

\(^a\)=includes working and managerial classes
\(^b\)=includes petty bourgeoisie and capitalist class

\(X^2=13.68; \text{3 d.f.}; p<.003\)

\(\text{Gamma}=.223\)

\(\text{Spearman's rank order of correlation}=.089; p<.006\)

\(\text{Somers' } d=.131\) with current class dependent

\(\text{Partial Somers' } d=.136\) controlling for educational attainment
of the various classes can be ascertained. Almost 90% of the subjects in the national sample fell into one of the wage-labor classes, Table 19. However, among fathers, only 65% fell in the wage-labor classes. This points to a rather sizable downward class mobility between the generations. 59

For the national sample, a highly significant $X^2$ statistic was found for the cross-tabulation of father's class position and attained class position, Table 19. Of those subjects from capital-owning backgrounds, around 16% subsequently occupied capital-owning class positions. This compares to about 7% of those coming from wage-labor backgrounds, Table 19. In addition, proportionately more of those from capital-owning backgrounds occupied managerial as opposed to working class positions than was the case for those from wage-labor backgrounds. The gamma coefficient was .223, compared to a rho of .089, and a Somers' d of .131, Table 19. The relationship between the two class variables was found to be weaker for this sample than for the metropolitan sample. However, similar to the finding of the metropolitan sample, educational attainment failed to mediate this relationship; in fact, controlling for educational attainment slightly increased the Somers' d, Table 19.

59 Given the probability sample for this data set, it was possible to calculate several measures of social mobility. By combining the wage-labor classes together and the capital-owning classes together, to form a 2 X 2 mobility table, the following mobility statistics were obtained: Index of dissimilarity=24.7%, total percent mobile 34.3; exchange mobility percent 9.6. Since the index of dissimilarity measures structural mobility, it was found that the vast majority of mobility was of a structural and not exchange nature. Additionally, between the two generations, 4.8% were upwardly mobile, 29.5% were downwardly mobile and 65.7% were immobile.
The last relationship pertaining to this proposition is that between educational attainment and current class position. This relationship is presented in Table 20. The significant $X^2$ statistic suggests that current class position is dependent upon educational attainment. Similar to the case for the metropolitan sample, almost 31% of those occupying working class positions possessed less than a high school diploma compared to only 13% of those with a managerial class position, Table 20. Like before, this finding supports the contention that educational attainment is related to supervisory responsibility among wage-laborers. The percentage with a college degree or professional education increased from about 14% to 26% to 33% for the working, managerial, and capitalist classes respectively, Table 20. The nonparametric measures of association ranged from .147 to .255 indicating a slight to moderate direct relationship between educational attainment and current class position, Table 20.

In sum, the third proposition and the entire class model were partially supported by the empirical analysis. Perhaps, the model is in need of modification in light of the findings. Attained class position appears to be most heavily associated with origin class position, especially for the metropolitan sample. This suggests the ascriptive nature of class attainment. It was found that this relationship was not mediated by educational attainment or initial class position, although both produced small to moderate direct influences on the dependent variable. Despite a substantial amount of unexplained variation, the findings suggest that the possession of an advantageous background class may be sufficient, without education, to acquire an advantageous class position. This is one of the most fundamental differences between socioeconomic and class attainments. In the next section, the class model is reanalyzed to ascertain the degree to which the model is more
Table 20. Subject's Educational Attainment by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - National Sample

<table>
<thead>
<tr>
<th>Subject's Current Class Position</th>
<th>Working Class Education</th>
<th>Managerial Class Education</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation</td>
<td>30.6 (125)</td>
<td>13.3 (34)</td>
<td>51.9 (14)</td>
<td>13.0 (6)</td>
</tr>
<tr>
<td>High School Graduation</td>
<td>53.1 (217)</td>
<td>57.3 (146)</td>
<td>48.1 (13)</td>
<td>37.8 (22)</td>
</tr>
<tr>
<td>Post-High School Education</td>
<td>2.2 (9)</td>
<td>3.1 (8)</td>
<td>0.0 (0)</td>
<td>6.5 (3)</td>
</tr>
<tr>
<td>College Graduation</td>
<td>9.1 (37)</td>
<td>17.3 (44)</td>
<td>0.0 (0)</td>
<td>19.6 (9)</td>
</tr>
<tr>
<td>Professional Education</td>
<td>5.1 (21)</td>
<td>9.0 (23)</td>
<td>0.0 (0)</td>
<td>13.0 (6)</td>
</tr>
<tr>
<td>Total</td>
<td>100.1</td>
<td>100.0</td>
<td>100.0</td>
<td>99.9</td>
</tr>
<tr>
<td>N</td>
<td>(409)</td>
<td>(255)</td>
<td>(27)</td>
<td>(46)</td>
</tr>
</tbody>
</table>

\[ X^2 = 56.90; 12 \text{ d.f.}; p < .000 \]
\[ \text{Gamma} = .255 \]
\[ \text{Spearman's rank order correlation} = .159; p < .001 \]
\[ \text{Somers' } d = .147 \text{ with current class dependent} \]
\[ \text{Partial Somers' } d = .152 \text{ controlling for father's class} \]
or less applicable for males as compared to mixed-sex samples.

Analysis of the Male Samples

The same variable relationships which were looked at for the total samples were also examined and empirically analyzed for the male sample. The results of the analysis are presented in this section. The central issue is whether the empirical relationships in the class model are stronger for the male samples or for the total samples. Of course, since the total and male samples were not independent, a certain degree of similarity was found. However, certain differences were also uncovered and deserve mention.

The first proposition asserted that origin class position will exert a significant positive effect on educational attainment. For the metropolitan males, this relationship is displayed in Table 21. Neither the analysis of variance (using expanded educational categories) nor the $X^2$ test (using collapsed categories) uncovered a significant difference. Except for those subjects whose father was a member of the petty bourgeoisie, the percentages from each background class did not differ with respect to the various educational categories by more than 9%, Table 21. The corresponding measures of association were all fairly small ranging from -.008 to .046 indicating a virtual independence between the two variables.

A somewhat anomalous relationship between father's class position and educational attainment was uncovered for the national sample males, Table 22. Both the analysis of variance and the $X^2$ test uncovered a significant difference between the two variables. However, the relationship appears inverse. Approximately 11% more of the subjects from capital-owning backgrounds, as compared to wage-labor backgrounds,
<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Subject's Educational Attainment</th>
<th>Percentages</th>
<th>Frequencies (in parentheses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than High School Graduation</td>
<td>High School Graduation</td>
<td>Post-High School Education</td>
</tr>
<tr>
<td>Working Class</td>
<td>23.1 (3)</td>
<td>25.6 (10)</td>
<td>20.9 (10)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>30.8 (4)</td>
<td>28.2 (11)</td>
<td>31.3 (15)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>23.1 (3)</td>
<td>17.9 (7)</td>
<td>12.5 (6)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>23.1 (3)</td>
<td>28.2 (11)</td>
<td>35.4 (17)</td>
</tr>
<tr>
<td>Total</td>
<td>100.1</td>
<td>99.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

N= (13) (39) (48) (33) (31)

*collapsed for X² analysis

ANOVA: F=2.06; 3, 160 d.f.; p ≤ .117
X²=6.32; 9 d.f.; p=.707

Spearman's rank order correlation=.046; p=.246
Somers' d=.006 with educational attainment dependent.
Table 22. Father's Class Position by Subject's Educational Attainment: Percentages and Frequencies (in parentheses) - National Sample Males

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Subject's Educational Attainment</th>
<th>Less than High School Graduation</th>
<th>High School Graduation</th>
<th>Post-High School Graduation</th>
<th>College Graduation</th>
<th>Professional Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Labor Classes (^a)</td>
<td>Total</td>
<td>54.1 (51)</td>
<td>39.6 (135)</td>
<td>53.9 (7)</td>
<td>59.6 (31)</td>
<td>76.5 (26)</td>
</tr>
<tr>
<td>Capital-Owning Classes (^b)</td>
<td>Total</td>
<td>45.7 (43)</td>
<td>30.4 (59)</td>
<td>40.1 (6)</td>
<td>40.4 (21)</td>
<td>23.5 (8)</td>
</tr>
</tbody>
</table>

\(^a\) = includes working and managerial classes

\(^b\) = includes petty bourgeois and capitalist class

ANOVA: $F=5.21; 1, 385$ d.f.; $p < .013$

$X^2=9.83; 4$ d.f.; $p=0.043$

Gamma = -.140

Spearman's rank order correlation = .061; $p=.106$

Somers' $d=-.095$ with educational attainment dependent
acquired less than a high school education, Table 22. In addition, 11% more from wage-labor backgrounds, as compared to capital-owning backgrounds, graduated from high school. The remaining educational categories were virtually the same with respect to the percentage from each background class, Table 22. This higher educational attainment for those with wage-labor backgrounds was also evident in the nonparametric correlations. The correlations ranged from -.140 to -.061. Although the correlations were fairly small, the two variables appear to be significantly related in an inverse fashion. Whereas for the total sample, the two measures were largely independent; for the male sample, they were negatively related. In sum, the first proposition was not supported by either sample. The relationship between origin class and educational attainment, if it exists at all, appears inverse.

The second proposition maintained that father's class position and educational attainment will significantly and positively influence initial class position and that most of the effect of father's class will be indirect, mediated by educational attainment. As before, because of data limitations, this relationship was only examined for the metropolitan sample. The cross-tabulation results for this proposition are presented in Tables 23 and 24. As was the case for the total samples, the most striking observation in this analysis was the lack of variation in initial class position. Over 75% of all subjects occupied an initial position in the working class and over 95% were wage-laborers.

Due to the skewed distribution, the \( X^2 \) test was largely insufficient. The nonparametric measures of association were all less than .100 ranging from .004 to .086, Table 23. As was the case for the total sample, the two variables were largely independent suggesting that father's class does not produce a notable effect on initial class. Controlling for
Table 23. Father's Class Position by Subject's Initial Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample Males

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class</td>
<td>25.6 (30)</td>
<td>20.0 (6)</td>
<td>0.0 (0)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Managerial Class</td>
<td>29.9 (35)</td>
<td>46.7 (14)</td>
<td>0.0 (0)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Petty Bourgeoisie</td>
<td>14.5 (17)</td>
<td>3.3 (1)</td>
<td>50.0 (1)</td>
<td>16.7 (1)</td>
</tr>
<tr>
<td>Capitalist Class</td>
<td>29.9 (35)</td>
<td>30.0 (9)</td>
<td>50.0 (1)</td>
<td>50.0 (3)</td>
</tr>
<tr>
<td>Total</td>
<td>99.9</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>(117)</td>
<td>(30)</td>
<td>(2)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

a,b,c,d = collapsed for $X^2$ analysis

$X^2$ (corrected for continuity) = 2.12; 1 d.f.; $p = .145$

(Note: Insufficient cell frequencies for adequate $X^2$ analysis)

Gamma = .086

Spearman's rank order correlation = .004; $p = .79$

Somers' $d = .034$ with initial class dependent

Partial Somers' $d = .035$ controlling for subject's education
Table 24. Subject's Educational Attainment by Subject's Initial Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample Males

<table>
<thead>
<tr>
<th>Subject's Initial Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie(^a)</th>
<th>Capitalist Class(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation(^b)</td>
<td>9.2 (12)</td>
<td>3.1 (1)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>High School Graduation(^b)</td>
<td>26.1 (34)</td>
<td>9.4 (3)</td>
<td>50.0 (1)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Post-High School Education(^b)</td>
<td>33.1 (43)</td>
<td>31.3 (10)</td>
<td>0.0 (0)</td>
<td>50.0 (3)</td>
</tr>
<tr>
<td>College Graduation(^c)</td>
<td>19.2 (25)</td>
<td>28.1 (9)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>Professional Education(^c)</td>
<td>12.3 (16)</td>
<td>28.1 (9)</td>
<td>50.0 (1)</td>
<td>50.0 (3)</td>
</tr>
<tr>
<td>Total</td>
<td>99.9</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N=</td>
<td>(130)</td>
<td>(32)</td>
<td>(2)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

\(a, b, c = \text{collapsed for } X^2 \text{ analysis} \)

\(X^2=7.326; 2 \text{ d.f.}; p \leq 0.026 \)

\(\text{Gamma} = .429 \)

\(\text{Spearman's rank order correlation} = .208; p \leq 0.002 \)

\(\text{Somers' } d = .165 \text{ with initial class dependent} \)

\(\text{Partial Somers' } d = .164 \text{ controlling for father's class position} \)
educational attainment left the Somers' $d$ statistic virtually unchanged, Table 23.

The second aspect of the proposition concerned the relationship between educational attainment and initial class position. Again, the skewed initial class distribution was significant. By collapsing categories, it was possible to conduct a meaningful statistical test of independence; however, the test was theoretically weak. Nevertheless, the $X^2$ statistic was significant, Table 24. As was the case for the total sample, a wide range of variation was found among the three nonparametric correlations. The gamma statistic was .429, the rho coefficient was .206, and the Somers' $d$ statistic was .165, over two and a half times smaller than the gamma, Table 24. It appears that to the extent that variation does exist, a significant relationship exists. Overall, some support was uncovered for the proposition. Although father's class position was not significantly related to initial class position, educational attainment was. Of course, the most salient comment to be made about the proposition is the lack of variation in initial class. Upon entering the labor force, virtually all subjects occupied a working class position. With only one or two minor exceptions, the male analysis of initial class attainment was no more successful than was the total analysis.

The third and last proposition noted the significant, positive effects of origin social class, educational attainment, and initial class position on current class position. Moreover, it was proposed that a substantial proportion of the effects of origin class and educational attainment on the dependent variable will be indirect.

The first and most important relationship in this proposition was that between father's class position and current class position. For the
metropolitan males, a significant relationship was observed between the variables, Table 25. After collapsing the capital-owning classes together, a significant $X^2$ statistic was found indicating a dependence between the two class measures. Of those subjects currently occupying a working-class position, about 67% came from wage-labor backgrounds, Table 25. This contrasts with around 43% of those currently occupying a capitalist class position. At the other extreme, approximately 17% of those currently occupying a working class position had a capitalist class background as compared to 45% of those occupying a capitalist class position, Table 25. For the working, managerial, and capitalist classes, the modal category for each current class was the same as the respective origin class.

The nonparametric correlations ranged from .237 to .340 indicating a moderate and significant relationship between father's class position and attained class position. Compared to the total sample, these relationships were somewhat smaller. Although not presented in tabular form because of the relatively small sample size, the gamma statistic for females indicating the degree of relationship between father's and attained class positions was .768. In addition, the Somers' d was .553, indicating an extremely strong relationship between the two variables for females.  

Contrary to the proposed relationship, the effect of father's class on attained class was largely direct. Controlling for educational attainment left the relationship virtually unaltered and controlling for initial class position reduced the coefficient only .003, Table 25.

---

60For the national sample, the relationship between these two variables for females was virtually nonexistent.
Table 25. Father's Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample Males

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Subject's Current Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Working Class</td>
<td>16.7 (11)</td>
<td>34.0 (17)</td>
<td>23.1 (3)</td>
<td>14.3 (10)</td>
</tr>
<tr>
<td></td>
<td>Managerial Class</td>
<td>30.0 (9)</td>
<td>34.0 (17)</td>
<td>30.8 (4)</td>
<td>30.0 (21)</td>
</tr>
<tr>
<td></td>
<td>Petty Bourgeoisie</td>
<td>16.7 (5)</td>
<td>16.0 (8)</td>
<td>0.0 (0)</td>
<td>10.0 (7)</td>
</tr>
<tr>
<td></td>
<td>Capitalist Class</td>
<td>16.7 (5)</td>
<td>16.0 (8)</td>
<td>46.1 (6)</td>
<td>45.7 (32)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100.1</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>50</td>
<td>13</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

a, b = collapsed for X² analysis.

\[ X^2 = 10.70; 4 \text{ d.f.}; p \leq 0.030 \]

Gamma = .340

Spearman's rank order correlation = .287; p \leq .001

Somers' d = .237 with current class dependent

Partial Somers' d = .238 controlling for educational attainment

Partial Somers' d = .234 controlling for initial class position.
The second aspect of this proposition noted a significant positive relationship between educational attainment and current class position. It was proposed that this relationship will be substantially mediated by initial class position. The relationship between educational attainment and current class position is presented in Table 26. A significant difference was not found between the two variables using a \( X^2 \) test. However, notable frequency differences were uncovered. For instance, over 19% of the working class males attained less than a high school diploma compared to only 6.5% of those in the capitalist class. In addition, approximately 42% of the male subjects in the capitalist class were college graduates compared to only 25% of those occupying working class positions, Table 26.

The measures of association pointed to a significant positive relationship between educational attainment and current class position. However, the correlations were fairly small ranging from .130 to .186, Table 26. This finding suggests a slight, but notable, effect of educational attainment on current class position. The partial Somers' d, controlling for initial class, reduced the association between the two variables, but not to any appreciable extent. Again, the associations between these two variables were slightly smaller than those found for the total sample.

For the metropolitan males, the final relationship of interest in the third proposition is the one between initial class position and current class position. This relationship is presented in Table 27. Like before, the distribution of initial class position was highly skewed towards the working class. This rendered the \( X^2 \) test somewhat suspect. Of those with an initial working class position, almost 80%
<table>
<thead>
<tr>
<th>Subject's Education</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation</td>
<td>19.4 (7)</td>
<td>3.9 (2)</td>
<td>6.7 (1)</td>
<td>6.5 (5)</td>
</tr>
<tr>
<td>High School Graduation</td>
<td>25.0 (9)</td>
<td>23.5 (12)</td>
<td>26.7 (4)</td>
<td>19.5 (15)</td>
</tr>
<tr>
<td>Post-High School Education</td>
<td>30.6 (11)</td>
<td>39.2 (20)</td>
<td>13.3 (2)</td>
<td>32.5 (25)</td>
</tr>
<tr>
<td>College Graduation</td>
<td>16.7 (6)</td>
<td>17.7 (9)</td>
<td>26.7 (4)</td>
<td>20.8 (16)</td>
</tr>
<tr>
<td>Professional Education</td>
<td>8.3 (3)</td>
<td>15.7 (8)</td>
<td>26.7 (4)</td>
<td>20.8 (16)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.1</td>
<td>100.1</td>
</tr>
<tr>
<td>N=</td>
<td>(36)</td>
<td>(51)</td>
<td>(15)</td>
<td>(77)</td>
</tr>
</tbody>
</table>

a=collapsed for \(\chi^2\) analysis

\[\chi^2 = 11.41; 8 \text{ d.f.; } p \leq .179\]
Gamma = .188
Spearman's rank order correlations = .163; \(p \leq .015\)
Somers' \(d = .130\) with current class dependent
Partial Somers' \(d = .118\) controlling for initial class position
Partial Somers' \(d = .131\) controlling for father's class position
Table 27. Subject's Initial Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - Metropolitan Sample Males

<table>
<thead>
<tr>
<th>Subject's Initial Class Position</th>
<th>Working Class&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Managerial Class&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Petty Bourgeoisie&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Capitalist Class&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Class&lt;sup&gt;c&lt;/sup&gt;</td>
<td>87.1 (27)</td>
<td>76.0 (38)</td>
<td>69.2 (9)</td>
<td>75.7 (56)</td>
</tr>
<tr>
<td>Managerial Class&lt;sup&gt;c&lt;/sup&gt;</td>
<td>12.9 (4)</td>
<td>20.0 (10)</td>
<td>23.1 (3)</td>
<td>17.6 (13)</td>
</tr>
<tr>
<td>Petty Bourgeoisie&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>7.7 (1)</td>
<td>1.3 (1)</td>
</tr>
<tr>
<td>Capitalist Class&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.0 (0)</td>
<td>4.0 (2)</td>
<td>0.0 (0)</td>
<td>5.4 (4)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

N= (31) (50) (13) (74)

<sup>a</sup>,<sup>b</sup>,<sup>c</sup>,<sup>d</sup>=collapsed for $\chi^2$ analysis

$\chi^2$ (corrected for continuity) = .97; ld.f.; p < .325 (note: insufficient cell frequencies for adequate $\chi^2$ analysis)

Gamma = .161

Spearman's rank order correlation = .036; p < .316

Somers' $d$ = .108 with current class dependent

Partial Somers' $d$ = .069 controlling for educational attainment

Partial Somers' $d$ = .094 controlling for father's class position
had moved into a higher class. However, given the lack of subjects with an initial position in the capital-owning classes, the relationship between the two variables was fairly weak. The nonparametric correlations varied quite substantially from .036 to .161, Table 27. Again, the magnitude of these coefficients was smaller for the male sample than for the total sample.

The third proposition was also analyzed for the national sample males. Generally speaking, the results of this analysis were similar to those found for the metropolitan males. The first part of the third proposition stated that father's class position will be significantly and positively related to current class and that this relationship will be largely mediated by educational attainment. The relationship is presented in Table 28. Given the representative sample, the relative distribution of the four classes can be ascertained in this table. Over 51% of the males held working class positions, around 35% held managerial class positions, about 5% held petty bourgeoisie positions, and only 8% held capitalist class positions, Table 28. This breakdown parallels the class distribution found by Wright and Perrone (1977).

Using a $\chi^2$ test, a highly significant dependence was uncovered with respect to the frequency distributions of the two variables. Of those male subjects from working class backgrounds, over 92% occupied wage-labor positions, Table 28. Over 20% more of the subjects whose fathers held wage-labor class positions, as opposed to capital-owning class positions, also occupied wage-labor positions. On the other hand, compared to the subjects with a wage-labor background, those from capital-owning backgrounds, proportionately speaking, were over three times as likely to attain a capital-owning class position, Table 28.
Table 28. Father's Class Position by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - National Sample Males

<table>
<thead>
<tr>
<th>Father's Class Position</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie</th>
<th>Capitalist Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Labor Classes&lt;sup&gt;a&lt;/sup&gt;</td>
<td>74.5 (137)</td>
<td>62.2 (79)</td>
<td>17.7 (3)</td>
<td>50.0 (15)</td>
</tr>
<tr>
<td>Capital-Owning Classes&lt;sup&gt;b&lt;/sup&gt;</td>
<td>25.5 (47)</td>
<td>37.8 (48)</td>
<td>82.3 (14)</td>
<td>50.0 (15)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

n= includes working and managerial classes
b= includes petty bourgeoisie and capitalist class

X² = 27.50; 3 d.f.; p < .000
Gamma = .392
Spearman's rank order correlation = .088; p < .036
Somers' d = .250 with current class dependent
Partial Somers' d = .262 controlling for educational attainment
For this relationship, the nonparametric measures of association were very similar to those obtained for the metropolitan males. The gamma statistic was .392; the rho coefficient was considerably smaller at .088 (although statistically significant); and lastly, the Somers' d statistic was .250, Table 28. In general, these correlations suggest a moderately strong effect of father's class on current class. Opposite to that found for the metropolitan subjects, this relationship was stronger for males than for the total sample. Moreover, the relationship between father's class and attained class was not mediated by educational attainment. In fact, controlling for educational attainment increased the Somers' d coefficient, Table 28.

For the national sample males, the last relationship of importance with respect to the third proposition was that between educational attainment and current class position. This association is displayed in Table 29. A nonsignificant $X^2$ statistic was uncovered for this relationship. Nevertheless, certain interesting percentage differences can be highlighted. Over 27% of those in the working class attained less than a high school diploma compared to around 12% of those in the capitalist class. Additionally, around 16% of those in the working class acquired a college degree or professional education compared to about 38% of those in the capitalist class, Table 29.

The monotonic correlations between the two variables ranged from .111 to .181 and the Spearman's rho was statistically significant. These correlations were similar to those obtained for the metropolitan males, but were somewhat smaller than those found for the total national sample. They suggest a small, but significant, direct effect of educational attainment on current class.
Table 29. Subject's Educational Attainment by Subject's Current Class Position: Percentages and Frequencies (in parentheses) - National Sample Males

<table>
<thead>
<tr>
<th>Subject's Education</th>
<th>Working Class</th>
<th>Managerial Class</th>
<th>Petty Bourgeoisie&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Capitalist Class&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Graduation</td>
<td>27.3 (54)</td>
<td>16.6 (24)</td>
<td>61.1 (11)</td>
<td>11.7 (4)</td>
</tr>
<tr>
<td>High School Graduation</td>
<td>54.0 (107)</td>
<td>51.7 (75)</td>
<td>38.9 (7)</td>
<td>41.2 (14)</td>
</tr>
<tr>
<td>Post-High School Graduation</td>
<td>2.5 (5)</td>
<td>4.1 (6)</td>
<td>0.0 (0)</td>
<td>8.8 (3)</td>
</tr>
<tr>
<td>College Graduation</td>
<td>10.6 (21)</td>
<td>17.9 (26)</td>
<td>0.0 (0)</td>
<td>23.5 (8)</td>
</tr>
<tr>
<td>Professional Education</td>
<td>5.6 (11)</td>
<td>9.7 (14)</td>
<td>0.0 (0)</td>
<td>14.7 (5)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>99.9</td>
</tr>
<tr>
<td>N=</td>
<td>(198)</td>
<td>(145)</td>
<td>(18)</td>
<td>(34)</td>
</tr>
</tbody>
</table>

a=collapsed for \( X^2 \) analysis

\[ X^2 = 13.24; 8 \text{ d.f.}; p \leq 0.104 \]

Gamma = 0.181

Spearman's rank order correlation = 0.111; \( p \leq 0.011 \)

Somers' \( d = 0.112 \) with current class dependent

Partial Somers' \( d = 0.129 \) controlling for father's class position
For the two male samples, the third proposition received only partial support. The largest effect on class attainment for males appears to be from father's class position. Although educational attainment and initial class position seem to produce small direct effects on the dependent variable, they do not seem to significantly mediate the effect of father's class on attained class. Most importantly, no evidence was found which suggests that the class model is more successful for males. With one or two exceptions, the opposite appears true. This finding runs counter to what was found for the socioeconomic model.

From the analyses, it was demonstrated that certain processual differences exist between socioeconomic and class attainments. Whereas education played a decisive role in both mediating the effects of origin socioeconomic status on occupational attainment as well as producing a strong direct influence on occupational status, it was found to be totally inconsequential as a mediating variable and only of moderate importance as a direct influence on class attainment. This finding held for all samples. In addition, both educational attainment and initial class position appear independent of origin class position. The direct and indirect effect of these two variables on current class position seems slight. It appears that class attainment is more the result of ascriptive mechanisms than are socioeconomic attainments, particularly occupational attainment. Other conclusions, along with suggestions for future research and limitations of the current study are presented in the next chapter.
CHAPTER VIII

SUMMARY AND CONCLUSIONS

Introduction

Social inequality can take many forms, some more pronounced and visible than others. The number of socially produced inequities is extremely large and as a society becomes more complex, the number becomes even larger. The issue for theory and research becomes not so much the cataloguing of these forms as the identification of the common causes; that is, the basic structure of social inequality from which inequities spring. After this, a second issue for theory and research becomes the identification of factors which result in an individual attaining a specific position in a given stratification system. In this study, two differing theories of the structure of social inequality were presented. These two perspectives, the socioeconomic and the Marxist class theories, were first discussed with respect to their differing images of the structure of social inequality. From these perspectives, two differing models of attainment were developed. These models served as a guide to empirically address the issue of how individuals attain a position in each of these systems.

In this final chapter, the two theories of social inequality are highlighted, the models of attainment are reviewed, and the results from the empirical analyses are summarized. In addition, an effort is made to integrate the two models of attainment. The attempt in this section is not to integrate the two theoretical perspectives, but rather to combine the two models of attainment. In the last sections
of this chapter, implications of this study as well as limitations and suggestions for future research are presented and discussed.

A Summary of the Socioeconomic Perspective: Theory and Research

The first theoretical perspective on social inequality which was discussed was the socioeconomic theory. Although not specifically formulated by any single theorist, the socioeconomic perspective combines insights from several theorists (see Coser, 1975; Horan, 1978). From the writings of Max Weber, an emphasis on multiple dimensions of social inequality originated. In addition, a stress on status or prestige as a fundamental aspect of inequality was also the result of Weber's work.

In the United States, several of Weber's contributions reappeared in a different form in the writings of Pitirim Sorokin. Like Weber, Sorokin argued that social inequality is manifested in multiple dimensions, although he disagreed with Weber over the content of the dimensions. Most importantly, Sorokin was one of the first theorists to address the issue of how individuals attain a position in each dimension. For Sorokin, the social institutions were the major channels through which individuals could become socially mobile. However, both Weber's and Sorokin's perspectives on social stratification were incomplete. Their views were fragmented and not tied into any macro-level theory of social structure.

More recently, the writings of the functionalists, Parsons and Davis and Moore, contributed to the socioeconomic theory. These authors integrated several of the ideas of Weber and Sorokin into a macro-level theory of social inequality. This theory hinged on the necessity or functionality of social inequality for the survival and stability of a social system. From Talcott Parsons came two contributions. First, he
argued that as a society evolves, corresponding changes occur in the major value orientations in order maximize its survival potential (i.e., to meet the functional imperatives). Most importantly, achievement replaces ascription as the dominant value orientation with respect to attaining positions in a society. Secondly, Parsons noted that the common value system gives rise to the differential evaluation of occupations. Differential rewards follow as a consequence of this. A functionally necessary stratification system occurs as a result and the structure of this system is basically continuous.

Following Parsons, Davis and Moore contributed to the socioeconomic theory by developing another functionalist explanation of structured social inequality. They maintained that in order to induce or motivate the talented members of a society to undergo the sacrifices to acquire the training necessary to fill the functionally more important positions in a society, these future positions must insure the potential occupant a proportionately larger share of the societal rewards. Therefore, social inequality is positively functional and inevitable for a society in that it guarantees that the functionally more important positions are filled by the more talented and skilled members of a society.

Drawing from these ideas, a socioeconomic explanation of social inequality was developed. This explanation conforms to the massive amount of research on socioeconomic inequality and attainment processes. It was argued that as societies evolve, they become more complex with an expanding division of labor. Along with this expansion comes an increase in task or occupational specialization such that the acquisition of skills which are necessary for adequate performance in the highly skilled or functionally more important positions involves extensive and detailed training. Given the importance of these positions to the
society, they are differentially rewarded with socially desired goods. However, the acquisition of skills and resources may be significantly related to an existing system of socioeconomic inequality, such that it is an advantage, with respect to training, to come from an upper socioeconomic background. Strong familial bonds promote this. Yet regardless of this ascriptive mechanism, the consequences for the society remain the same; highly trained members still occupy the functionally more important positions.

Social classes, according to this theory, do not exist because the highly specialized structure of the division of labor in these societies removes a common basis for class emergence and alliance. In addition, a high rate of social mobility also works counter to the existence of a stable class structure. As positions become more differentiated, social mobility increases.

Many of these theoretical ideas have been integrated into research procedures. The most notable examples of this are the socioeconomic measurement scales. It was pointed out that inequality in socioeconomic research has been treated as a multi-dimensional concept typically embracing such variables as education, occupation, and income. Following Parsons, several of the occupational scales have measured occupational position using prestige scores derived from the (value) consensus of some sample. Other scales, while "more objective" in their construction have either used the prestige scales as a criterion or else utilized some other aspect of the socioeconomic perspective.

Given the socioeconomic structure of inequality, it follows that a corresponding model of socioeconomic attainment should include:

1) multiple socioeconomic attainments, 2) a continuous view of each attainment, 3) a highly significant positive relationship between
training (e.g., education) and subsequent attainments, 4) a significant positive relationship between the various dimensions of origin socio-economic status and training (e.g., education), 5) the usage of several socioeconomic scales constructed in accordance with the socioeconomic theory for evaluation purposes and 6) an emphasis on achievement with respect to the attainment of occupational positions. These features have been included in most extant models of socioeconomic attainment as well as in the model analyzed in this study.

Following the socioeconomic theory and previous research, a five-stage model of attainment was developed. The model related the multiple dimensions of origin social inequality to educational attainment, initial occupational attainment, current occupational attainment, and lastly, income attainment. Moreover, it was proposed that the effects of the origin socioeconomic status factors would be direct with respect to educational attainment, but indirect with respect to subsequent attainments. Other direct and indirect effects were noted in four major propositions. These propositions were used to guide the empirical analysis of the model.

Using data from a metropolitan and a national sample, the socioeconomic model was statistically evaluated. Support was found for most of the proposed relationships. Several significant influences on educational attainment were produced by the origin socioeconomic variables. This finding supports the premise that the acquisition of training (i.e., education) depends significantly on origin social inequalities. Another empirical generalization which was derived from the analysis was that education produces a strong unmediated effect on initial occupational status. This finding supports the notion that the greater the amount of training, the greater the prestige reward associated with an initial
occupation. Additionally, as proposed, a notable indirect influence from father's occupation on initial occupational status was also uncovered.

Given the theoretical perspective, it was stated that a strong significant effect on current occupation would be produced by educational attainment. Such was the case. As predicted, the strongest influence on occupational status was generated by educational attainment. This finding can be generalized to both the metropolitan and the national populations. The total effect of several origin socioeconomic variables on occupational attainment was also significant, but as proposed, the influence was overwhelmingly indirect, mediated by educational attainment.

The only instance in which at least partial support was not uncovered was in the case of income attainment. Generally speaking, income was largely independent of the variables in the socioeconomic model. For the metropolitan sample, not a single predictor of income produced a statistically significant effect. In addition, only a weak indirect effect from father's education and a small direct influence from educational attainment were significant for the national sample. In general, income was not significantly affected by other social rewards or positions. This generalization is detrimental to the socioeconomic theory of inequality.

In general, with the exception of education attainment, the socioeconomic model appears to work somewhat better for males than for the total population. This generalization is especially true for occupational attainment. In fact, for all samples, more variation in occupational attainment was accounted for than for any other attainment. Thus, with the exception of income attainment, empirical support was
found for the socioeconomic model and thus for the socioeconomic theory of inequality. However, the lack of success in accounting for income variation raises some questions. Barring methodological problems, the socioeconomic model does an inadequate job of identifying the determinants of income attainment. If income is not significantly affected by educational training (or experience), this suggests that either the socioeconomic explanation is inadequate or else income is not a societal reward, which is not likely. In sum, an individual's position in a socioeconomic structure is attained by relying on both ascription and achievement. A summary diagram of the various effects on socioeconomic attainments is presented in Figure 5.

A Summary of the Marxist Class Perspective Theory and Research

The second theoretical perspective on social inequality which was discussed was the Marxist class theory. According to this theory, the structure of social inequality changes with major shifts in the economic mode of production. In the capitalist mode, the fundamental class boundary hinges on the legal, private ownership of the means of commodity production. Consequently, there are two basic social classes. The first class is identified by the ownership of capital which is invested in the production of commodities. In order to produce commodities, the capitalist must advance capital towards the purchase of the materials necessary for production, including the labor power of others. The owners of capital and the employers of wage-labor are the bourgeoisie or capitalist class.

Those members of a society who sell their labor power to a capitalist in return for a wage constitute the second fundamental class
Figure 5. Path Coefficients for the Socioeconomic Model of Attainment (Total Sample)

Father's Occupation

Educational Attainment

Father's Education

Mother's Education

Initial Occupation

Income

( ) = national sample coefficients
in the capitalist mode of production. Since for Marx and Engels, value can only be created through the expenditure of human labor, the true value of any commodity equals the amount of labor embodied in it. In other words, the value of any commodity equals the "old value" or spent labor which has already been embodied in the raw materials and tools of productions plus any "new value" which has been added by the workers in the process of production. The capitalist does not pay the worker the true worth of the new labor, but rather appropriates or exploits a certain proportion of it. This is surplus value or profit which has a two-fold purpose. It is either used to satisfy the needs of the capitalist and his/her family or else it is utilized to expand the initial capital investment in a future circuit of commodity production.

In advanced capitalist societies, in addition to the two fundamental classes, there are two major "intermediate" classes or strata which are significant in the social relations of production. These are the petty bourgeoisie and the managerial class. Members of the petty bourgeoisie, like the larger capitalists, are legal owners of capital. However, unlike the capitalists, members of this class do not exploit wage-laborers either because their productive capital is too small or else because the labor of others is not necessary. In order to contribute "new" labor to "old" in the production of commodities, members of the petty bourgeoisie utilize their own labor and perhaps the labor of immediate family members. Independent craftsmen, artisans, and the like are notable examples of members of this class.

The managerial class, like the working class, is a wage-labor class in that its members sell their labor power to capitalists for wages.
However, unlike members of the working class, managers supervise the labor of others. They function in the true interest of the capitalists by maximizing productive efficiency. For most capitalist enterprises, they are as necessary as workers in the production of commodities. Finally, it was noted that managers typically do not possess ultimate control over production, but rather supervise or oversee some fragmentary aspect of it. In capitalist societies, the capital-owner always possesses ultimate control and authority over the production process. Legal, juridical, and political institutions insure this authority.

Given this class-based structure of social inequality, the next issue which was discussed was the intergenerational attainment of a class position. Given legal rights, it was noted that capital could be inherited or taken over by members of a family, thus perpetuating the capitalist class. On the other hand, a lack of capital could also be inherited. Marx and Engels constantly criticized the inheritance of capital for this very reason. However, if origin class positions were simply transmitted from one generation to the next, explaining attainment would be relatively simple. Yet for several reasons, it was argued that this ascriptive process was not perfect. Individuals do not always acquire the class position of their parents. Structural mobility resulting from competition among capitalists works against the strict ascription of class positions. Additionally, certain individual characteristics might also work against ascription. For instance, Marx noted that the most capable and qualified members of the working class are often assimilated into the capital-owning classes. Moreover, the existence of interest-bearing capital enables certain "capable" non-capitalists to acquire a sufficient capital investment to enter into commodity production, to exploit the labor of others, and to compete against other capitalists.
What are the individual characteristics of these capable, qualified non-capitalists? It was argued that skill, training, and experience are the qualities which are required. Consequently, it was proposed that educational attainment would be positively related to class attainment. In other words, a class position could be achieved as well as ascribed. Along these lines, it was also proposed that origin class position would positively affect educational attainment. This is a fairly common argument among Marxist educational researchers. The theoretical basis for this argument is that educational attainment is often used as an ideological justification for the existence and perpetuation of a class structure. Other proposed relationships were also noted.

From the theoretical perspective, three fundamental propositions were stated. Following the outline of the socioeconomic model, a class attainment model was developed. In it, significant positive direct and indirect effects of origin class position on educational attainment, initial class position, and current class position were noted. It was also proposed that educational attainment would significantly influence initial class position and current class position. Lastly, initial class position was specified as producing a significant positive effect on current class position. These proposed relationships were used to guide the empirical analysis of class attainment.

Data from two samples were used to statistically evaluate the class model. In general, educational attainment was not significantly affected by origin class position. This finding can be generalized to both the metropolitan and national populations. Additionally, this finding runs counter to the proposed relationship. Excluding methodological errors, this finding means that differential educational attainment could not be validly used to justify the advantageous position of the capitalist
class. Perhaps mass education and an emphasis on equality of educational opportunity can account for this finding. However, following the tenets of Marxism, another reason for this finding might be an increased need for highly skilled workers in advanced capitalist production. Skill equates with efficiency and efficiency equates with a successful capitalist enterprise. Perhaps, this is one of the most important modifications which should be made with respect to the class theory.

A second empirical generalization derived from the analysis was that an overwhelming majority of individuals, upon entering the labor force, occupied wage-labor class positions. Initial class position was not significantly affected by origin class, but was moderately influenced by educational attainment. The lack of an empirical relationship between origin class and initial class ran counter to that which was proposed. This negative finding may be the result of the fact that members of the origin class (i.e., fathers) were still active in the labor force at the time their children entered and had not yet passed capital (or lack of) to their offspring. However, given the minimum amount of variation in initial class position, more research needs to be conducted in this area.

A significant effect of origin class on attained class was uncovered for all samples. Although the magnitude of effect varied somewhat; nevertheless, a notable effect was observed for both samples, males as well as totals. This finding supports the Marxist class model. In addition, this influence was not mediated by educational attainment or initial class position. This suggests that an important mechanism of class attainment is ascription. In general, rather modest effects on current class were produced by educational attainment and initial class. These effects also support the class model. In sum, class attainment appears primarily to be the result of ascriptive mechanisms and
secondarily, the result of educational attainment. A summary diagram of the effects on class attainment is presented in Figure 6.

Towards a Class-Socioeconomic Model of Attainment

Both the socioeconomic and class models were at least partially supported by the analysis. This finding was anticipated. Of course, the issue of which model is "right" or "correct" is beyond the scope of empirical research because the theories from which these models were derived are based on opposing metatheoretical assumptions. These opposing assumptions are as basic as the "order versus conflict" debate (cf., Gunder Frank, 1973). Consequently, the divergent arguments and explanations are somewhat irreconcilable. Certain fundamental differences are worthy of note. First, the two models differ with respect to the proper unit for stratification and attainment analysis. The socioeconomic model adopts a continuous view of the structure of inequality which focuses on occupational positions and corresponding rewards, while the Marxist class model opts for a categorical view of social classes.

Secondly, the socioeconomic model assumes a relatively harmonious interdependence among occupational positions and rewards which results in the functional indispensability of social inequality. On the other hand, the Marxist class model assumes latent contradictions between social classes which can manifest themselves in overt class antagonism. Social inequality based on the private ownership of the means of production is neither inevitable nor positively functional for the total society.

Third and lastly, according to the socioeconomic model, achievement is necessary to fill the functionally more important positions with qualified members of a society, despite the fact that training may be related to prior inequities. Thus, socioeconomic attainments are largely
Figure 6. Somers' d Coefficients for the Class Model of Attainment (Total Sample)

( ) = national sample coefficients
achieved through training, performance, and merit. For the class model, positions are mainly ascribed through the intergenerational transmission of ownership or nonownership of capital. In addition, from a Marxist viewpoint, all productive occupational positions are necessary and thus functionally important for a capitalist society.

As noted earlier, the empirical attempts to reach closure on whether the "true" structure of social inequality was categorical (class-based) or continuous (socioeconomic-based) were largely inadequate. The studies of Lenski, Kenkel, and Hetzler were discussed and rejected because of questionable a priori assumptions or methodological inadequacies. Additionally, the comments and criticisms of Crowder, Coser, and Kerchoff were reviewed. These critics argued that status attainment research was either atheoretical or conceptually incomplete.

However, there are a couple of similarities in the two models. First, both models address the same issue, namely, the intergenerational perpetuation of structured social inequality. Additionally, both models acknowledge the potential significance of both ascription and achievement on the attainment of a position in a stratification system. Lastly, both models stress the role of education or training in the attainment of a position.

Although it is impossible to integrate the two theoretical perspectives, it is reasonable to combine the two models in order to empirically account for certain attainments. Most notably, it is possible to combine the two models in order to account for income attainment. Although the two theories differ with respect to why income variation exists, they both can be used to explain it. The socioeconomic theory maintains that income is a social reward which is differentially attached to positions
depending upon their functional importance for the society. Higher income attaches to the functionally more important positions in order to motivate individuals to acquire the training necessary to fill them. Income variation according to Marxist class theory, results from class differentials in the control over wages and profits and from the differential possession of productive skills.

For the total metropolitan sample, adding father’s class position and current class position to the full-time socioeconomic equation predicting family income increased the coefficient of determination from .23 to .28. The main effect of current class on income attainment was

\[ Y_i = B_0 + B_1 x_{11} + \ldots + B_9 x_{19} + B_{10} x_{110} + B_{11} x_{111} + B_{12} x_{112} + B_{13} x_{113} + B_{14} x_{114} + B_{15} x_{115} + E_i \]

where:
- \( Y_i \) = income of the ith subject
- \( B_0 \) = constant
- \( x_{11} \) to \( x_{19} \) = covariate values for the ith subject
- \( x_{110} \) = 1 if capitalist origin class, 0 otherwise for ith subject
- \( x_{111} \) = 1 if petty bourgeoisie origin class, 0 otherwise for the ith subject
- \( x_{112} \) = 1 if managerial origin class, 0 otherwise for ith subject
- \( x_{113} \) = 1 if capitalist current class, 0 otherwise for ith subject
- \( x_{114} \) = 1 if petty bourgeoisie current class, 0 otherwise for ith subject
- \( x_{115} \) = 1 if managerial current class, 0 otherwise for ith subject
- \( B_1 \) to \( B_{15} \) = regression coefficients
- \( E_i \) = random error term for ith subject.

Terms for origin working class and current working class were not included because it would have created a singular X'X matrix from which unique regression coefficients could not have been estimated. Interaction terms were not included in the equation because preliminary analyses had not uncovered a significant interaction effect.
highly significant. The adjusted estimated means for family income were: $39,651 for the capitalist class, $19,131 for the petty bourgeoisie, $29,986 for the managerial class, and $22,986 for the working class. As expected, the capitalist class members had the highest family income. Interestingly, members of the petty bourgeoisie possessed a smaller family income than did members of the working class. This finding may reflect the tenuous class position of the petty bourgeoisie. For Marx and Engels, a growing concentration of capital and vicious competition among capitalists would ultimately drive the vast majority of smaller capitalists, including the petty bourgeoisie, into the ranks of the wage-laborers. In terms of income, it appears that it would be in the best interests of the petty bourgeoisie to become wage-laborers. Lastly, as anticipated, managers reported a higher family income than did workers. The main effect of father's class and the father's class by current class interaction effect were both nonsignificant.

Similar findings were uncovered for the national sample. Adding the two class variables to the socioeconomic predictors in the full-form income equation increased the coefficient of determination from .10 to .17. As was the case for the metropolitan sample, a highly

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62 A multiple classification procedure (MCA) was used to estimate the adjusted means for the various classes. However, the computer package only allowed five covariates to be included in the analysis. Consequently, the five continuous variables with the highest correlation with income were included. There was one exception. Only one control variable was included, the other four were substantive variables. This procedure was used for the national sample analysis as well (see Nie et al., 1975:409-410).

63 For subject's income, instead of family income, the coefficient of determination increased from .21 to .28.
significant main effect of current class was uncovered. The adjusted
family income means for the class categories were: 13.198 for the
capitalist class, 10.821 for the petty bourgeoisie, 11.751 for the
managerial class, and 10.569 for the working class. Similar to the
case for the metropolitan sample, the mean for the petty bourgeoisie
was substantially less than that of the managerial class and only
slightly larger than that for the working class. Again, this supports
the notion of a growing concentration of capital against which the
petty bourgeoisie cannot compete. The main effect of father's class
on income was nonsignificant; however, the origin class by current
class interaction effect was.

Thus, it appears that additional variation in income attainment
can be accounted for by considering class position, particularly
current class position. However, this kind of analysis should be
interpreted with a good deal of caution because of the differing
theoretical explanations for income attainment. Although perhaps
empirically more successful, substantively speaking, combined class-
socioeconomic models are difficult to explain.

Implications of the Study

There are a number of implications which can be derived from this

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64 The reported means are for income categories rather than raw
dollars.

65 To explore this interaction, a set of interaction indicator
variables was included in the regression analysis. It was found
that the interaction of a capital-owning background class with a
petty bourgeoisie current class produced a significant effect on
income. The other possible interaction combinations were nonsignifi-
cant.
study. These complications can be divided into those pertaining to sociology and those concerning political policy. For sociology, several implications are worthy of note. First, it was demonstrated in this study that research on attainment processes can and should be extended beyond socioeconomic interpretations. This can easily be accomplished by considering other theories of structured social inequality. Although only the socioeconomic and Marxist class theories were considered in this study, depending upon theoretical persuasions, additional attainment models could be developed and evaluated. For instance, drawing from the theoretical works of Lenski (1966), Warner (1960), Centers (1949, the Human Capital Theorists (e.g., Becker, 1964), and others, several different attainment models could be formulated. The development and evaluation of additional attainment models would greatly contribute to the understanding of stratification, mobility, and attainment.

A second implication for sociology which can be derived from this investigation is the potentially valuable usage of mobility and attainment studies of class categories in order to document the development of capitalism as an economic mode of production. It was argued that as capitalism develops, the extent of mobility and achievement-based class attainment will diminish. Several reasons for this trend were discussed in earlier chapters. A longitudinal analysis of mobility and attainment patterns of several generations could provide evidence to support or refute this aspect of Marxism. Somewhat tentative support for this argument was provided by the national sample analysis in this study. It was noted that the percentage of fathers with a capital-owning class position when the subjects were growing up was considerably greater than the percentage
of subjects with a current capital-owning class position. This suggests that over a short period of time, capitalism has substantially advanced because capital is concentrating into the hands of fewer and fewer.

Another sociological implication of this study relates to the role of education as a mechanism for ideologically justifying the advantageous position of the capitalist class. The analysis in this study revealed that educational attainment was almost totally independent of origin class position and only weakly related to current class position. Workers and managers generally received as much education as did capitalists. The assertion that education is merely a mechanism for reproducing and then justifying a class structure was not supported by the empirical findings in this study. Of course, this conclusion refutes the views of the Marxist educational theorists (e.g., Bowles, 1972; Bowles and Gintis, 1976:Ch. IV).

Although educational attainment was extremely influential in occupational attainment, it was only modestly related to class attainment. This notion that education is the "great equalizer" only appears to hold for occupational attainment. Increasing equality of educational opportunity would most likely only minimally affect class or even income inequality.

Lastly, this study sheds new light on the achievement-ascription debate in mobility and attainment theory. As noted earlier, the socioeconomic theory postulates that as societies become more complex, positions in its stratification system become increasingly filled on the basis of merit and achievement. Since the work of Sorokin, this generalization has been empirically documented time and again in socioeconomic research. However, according to Marxist theory, as societies become more complex (i.e., as capitalism progresses), positions
in its class structure are increasingly filled on the basis of ascription. Thus depending on one's conceptualization of social inequality, it can be argued and empirically documented that either ascriptive or achieved mechanisms operate to locate individuals in a stratification system. This relates back to Coser's (1975) argument. Coser (1975) pointed out that there has been such an emphasis on methodology in attainment research that many investigators have lost sight of a major underlying theme in their studies, namely, the structure of social inequality. Thus, it behooves sociologists to firmly couch attainment models in stratification theory.

Pragmatically speaking, political policy implications concerning social inequality and its perpetuation over time should also consider theoretical underpinnings. Policy-makers concerned with alleviating inequality need to comprehend the implications of their actions on the entire stratification system. However, in order to do this, a theoretical perspective is required. For example, given the strong empirical relationship between educational attainment and other attainments, it might be argued that equalizing education or the opportunity for education might reduce social inequality. But following the socioeconomic theory, such a policy might result in an overabundance of trained, qualified individuals capable of occupying the functionally more important positions in the society (and thus receiving a disproportionate share of the social rewards). Since not everyone could occupy the limited number of positions, either social disorganization would result because of blocked aspirations or else the training requirements for the positions would be substantially and continually increased to reduce the pool of qualified individuals.

Considered from a different theoretical perspective, equalizing
education would probably do little to equalize class inequality because of the ascriptive nature of class attainment. As Jencks and his associates (1972) noted, the only way to equalize class (or socio-economic) inequalities would be to equalize origin inequalities and that would involve the abolition of private ownership of means of production. Correspondingly, the only way to equalize the opportunity to attain a specific class would be to abolish the inheritance of capital. Needless to say, neither option would receive much support in capitalist societies. Thus, the theoretical implications of attainment research need to be considered by both sociologists and policy-makers.

Limitations of the Study and Suggestions for Future Research

Like most research, this study has certain theoretical and potential methodological limitations. Obviously, the theories and models of attainment need to consider other factors in order to account for more of the variation in attainments. This is especially the case for income attainment. Most notably, the consideration of education needs to be expanded. Quality as well as quantity of education, type of education, other modes of training, and so on need to be integrated into the theories and models. This is a task for future research.

In addition, a further consideration of social psychological factors might be added to the theoretical explanations of attainments. Factors such as socialization experiences, aspirations, and differential values need to be explored. To a large extent, this has already been done for socioeconomic attainments, but a consideration of such factors might also add to the explanation of class attainments. Again, this is a potential avenue for future research.
Most importantly, a consideration of history is necessary for the explanation of class attainment. This is the major theoretical limitation of the class attainment model. At different stages in capitalism, class attainment processes should change. As Marx noted, during the early formative period of capitalism, there is a good deal of mobility among and between the social classes. Consequently, attainments might be based more on achievement. However, in advanced stages of capitalism, a growing concentration of capital leads to a growing polarization of the classes. During this period, class attainment should largely be the result of ascription. Thus, a consideration of history would be quite illuminating in explaining class attainment. Other potential areas for theoretical concern and future research with regards to class and socioeconomic attainments include differential labor markets; racial/ethnic/sexual inequities versus class and socioeconomic inequities; factors in the acquisition of interest-bearing capital; and cross-national studies, particularly involving different modes of economic production.

Methodologically, there were several potential problem areas in this study. The first was sampling bias. Large nonresponse rates for both the metropolitan and national samples may have produced significant differences between respondents and nonrespondents with respect to the variables in question. Certain tests were conducted to address this potential problem area and no serious biases were uncovered; but, the potential still exists. However, given the fairly strong comparability of the findings for the two data sets, it is unlikely that the sampling bias was so extreme as to completely invalidate the general conclusions.

The second area of concern is measurement error. The measurement of Marxist class categories is very new in empirical research and is
not without limitations. Issues such as multiple class positions, ambiguous class positions, and the like may have produced methodological problems. In particular, the measure of father's class for the national sample was not as precise as the other class measures which were used. This might account, at least in part, for the slightly weaker relationships between father's class and the other variables in the national sample attainment model. Question ambiguity was another potential problem area. As noted earlier, the supervision questions may have been misinterpreted by a few subjects. Additionally, potential measurement error may have resulted from the measures of origin socioeconomic status and origin class. These variables relied on the recall ability of the subjects. Although in some instances the recall period was fairly short, in others it was fairly long.

A third potential problem area was missing data. Although the missing data problem in this study was not as pronounced as in others, a certain amount of missing data was uncovered. It was particularly a problem for income. For perhaps justifiable reasons, subjects were more reluctant to divulge income information than other information. In addition, there is the related problem of subject bias with respect to the accuracy of the income data.

However, despite the theoretical limitations and the potential methodological problems, it is felt that this study makes a substantial contribution to the explanation and understanding of the intergenerational perpetuation of social inequality. It is also hoped that similar studies will be conducted in order to further the understanding of attainment processes.
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Smith, M.  

Somers, R.  


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Warren, B.

Weber, M.

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Woelfel, J. and A. Haller

Wright, E.


Wright, E. and L. Perrone

Wrong, D.

Zeitlin, I.

Zeitlin, M.
APPENDIX A

METROPOLITAN QUESTIONNAIRE

This appendix contains a copy of the questionnaire which was used to collect data from the metropolitan subjects. In addition, a copy of the follow-up postcard which was used to encourage nonrespondents to complete and return their questionnaire is also included.
INTRODUCTION

You have been randomly selected to participate in a study of occupational changes between generations. This study is being conducted as part of a research project at Memphis State University concerned with the current occupational structure in Memphis and its changes over time.

The success of this project is dependent upon your voluntary cooperation. You do not have to answer any or all of the questions. However, your help is earnestly solicited. Information supplied by you will be kept strictly confidential. No information will be released in such a manner that individual respondents could be identified.

Please read carefully and complete all the questions on the form to the best of your ability. If you have any comments which might help clarify your answers, please feel free to write them in the left-hand margin of the questionnaire. Please take a few moments now, before you forget, to complete the questionnaire. Return it as soon as possible in the postage-paid envelope which you will find enclosed. Thank you for your help.

YOUR NAME: __________________________________________________________________________________
Last name First name Middle initial

Sincerely,

Kevin Smith
Project Director
STUDY OF LABOR FORCE PARTICIPANTS IN MEMPHIS

BACKGROUND INFORMATION

1. What is your sex? (Check One): Male_____ Female_____.

2. What is your race? (Check One): White_____ Black_____ Other_____.

3. What is your age? _____ years at last birthday.

4. What is your marital status (Check One): Married_____ Single_____.
   Divorced_____ Separated_____ Widowed_____.

PARENTAL INFORMATION

We would like to find out some information concerning your father's (or main money-winner's) job when you were about 16 years old. If not appropriate, skip to Question 9.

5. What kind of work was your father doing? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer)

   ____________________________________________________________
   ____________________________________________________________

6. Concerning the above job, did your father (or main money-winner) work for himself (self-employed) or someone else? (Check One):
   Himself _____ Someone else_____.

7. If he was self-employed, did he have people who worked for him and were paid by him? (Check One): Yes_____ No________. If yes, approximately how many? _____

8. Did he supervise anyone as part of his job? (Check One): Yes_____ No_____.

-1-
9. What was the highest school level completed by your parents?

<table>
<thead>
<tr>
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<th>Father</th>
<th>Mother</th>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>7th to 9th grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school but did not</td>
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<tr>
<td>graduate (completed 10th to</td>
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<tr>
<td>11th grade)</td>
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<tr>
<td>Vocational training but did</td>
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<td>not graduate from high school</td>
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<td>High school graduate or</td>
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<td>high school equivalent</td>
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<td>(e.g., GED)</td>
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<tr>
<td>Technical training after</td>
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<td></td>
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<tr>
<td>high school graduation</td>
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<td>Some college but did not</td>
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<td>College graduate (Bachelor's</td>
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<td>degree)</td>
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<td>Graduate or professional</td>
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<td>degree</td>
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</tbody>
</table>

IF MARRIED, PLEASE ANSWER QUESTIONS 10-29. IF NOT, PLEASE SKIP TO QUESTION 30.

INFORMATION CONCERNING YOUR SPOUSE AND HIS/HER FAMILY

10. Who is the major money-winner in your family? (Check One):
    You____ Your spouse ____ Someone else____

We would like to find out some information concerning your spouse's father (or main money-winner) when your spouse was about 16 years old. Consult with your spouse if necessary. If not appropriate, skip to Question 15.

11. What kind of work was your spouse's father (or main money-winner) doing? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer)

12. Concerning the above job, did your spouse's father (or main money-winner) work for himself/herself (self-employed) or someone else? (Check One): Himself ____ Someone else____
13. If he was self-employed, did he have people who worked for him and were paid by him? (Check One): Yes_____ No_____. If "yes", approximately how many?_____

14. Did he supervise anyone as part of his job? (Check One): Yes_____ No_____

15. What was the highest school level completed by your spouse's parents?

<table>
<thead>
<tr>
<th>School Level</th>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 7th grade</td>
<td>______</td>
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<tr>
<td>7th to 9th grade</td>
<td>______</td>
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<tr>
<td>Some high school but did not graduate (completed 10th or 11th grade)</td>
<td>______</td>
<td>______</td>
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<tr>
<td>Vocational training but did not graduate from high school</td>
<td>______</td>
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<tr>
<td>High school graduate or high school equivalent (e.g., GED)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Technical training after high school graduation</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Some College but did not graduate (at least 1 full year)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>College graduate (Bachelor's degree)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>

16. What is your spouse's age?______ years at last birthday.

17. Is your spouse employed? (Check One): Full-time_____ Part-time_____ Not employed_____ Retired_____. If "not employed" or "retired", skip to Question 23.

18. What kind of work is your spouse presently doing? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer)

__________________________________________________________________________
__________________________________________________________________________

19. Concerning the above job, does your spouse work for himself/herself (self-employed) or someone else? (Check One): Himself/herself_____ Someone else_____
20. If your spouse is self-employed, does he/she have people who work for him/her and who are paid by him/her? (Check One): Yes_____ No_____. If "yes", approximately how many?_____

21. Does your spouse supervise anyone as part of his/her job? (Check One): Yes_____ No_____

22. How many years has your spouse worked at this job? ____ years.

23. What was the highest school level completed by your spouse?

- Less than 7th grade ................................................................. __________
- 7th to 9th grade ................................................................................. ______
- Some high school but did not graduate (completed 10th or 11th grade) ................................................................. __________
- Vocational training but did not graduate from high school ______
- High school graduate or high school equivalent (e.g., GED)_______
- Technical training after high school graduation ....................... ______
- Some college but did not graduate (at least 1 full year). ______
- College graduate (bachelor's degree) ................................. ______
- Graduate or professional degree ................................................ ______

24. If your spouse attended college, what was his/her major area of study?

________________________________________________________________________

We would like to find out some information concerning your spouse's first full-time job (exclude Summer or part-time job). Consult with your spouse if necessary.

25. What was your spouse's first full-time job? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer)

________________________________________________________________________

- 4 -
26. Approximately how old was your spouse when he/she began this job? _____ years.

27. Did your spouse work for himself/herself (self-employed) or someone else? (Check One): Himself/herself_____ Someone else_____.

28. If your spouse was self-employed, did he/she have people who worked for him/her and were paid by him/her? (Check One): Yes____ No____. If "yes", approximately how many?_____.

29. Did your spouse supervise anyone as part of his/her first job? (Check One): Yes____ No____.

OCCUPATIONAL AND EDUCATIONAL INFORMATION

30. Are you employed? (Check One): Full-time_____ Part-time_____ Not employed_____ Retired_____. If "not employed" or "retired", skip to Question 37.

31. What kind of work are you presently doing? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer).

32. Concerning the above occupation, do you work for yourself (self-employed) or someone else? (Check One): Yourself_____ Someone else_____.

33. If you are self-employed, do you have people who work for you and are paid by you? (Check One): Yes____ No____. If "yes", approximately how many?_____.

34. Do you supervise anyone as part of your job? (Check One): Yes____ No____.

35. As part of your job, are you engaged in the actual production of goods or products? (Check One): Yes____ No____.
36. How many years have you worked at this job? ___ years.

37. What is the highest school level that you have completed?

- Less than 7th grade .................................................. ___
- 7th to 9th grade ........................................................... ___
- Some high school but did not graduate (completed 10th or 11th grade) ........................................... ___
- Vocational training but did not graduate from high school .................................................. ___
- High school graduate or high school equivalent (e.g., GED) .................................................. ___
- Technical training after high school graduation .......................................................... ___
- Some college but did not graduate (at least 1 full year) ................................................. ___
- College graduate (Bachelor's degree) ........................................................................... ___
- Graduate or professional degree ................................................................................... ___

38. If you attended college, what was your major area of study?

_________________________________________________________________________________

We would like to find out some information concerning your first full-time job (exclude Summer and part-time jobs).

39. What was your first full-time job? Please be specific and detailed. (For example: electrical engineer, stock clerk, farmer)

_________________________________________________________________________________

_________________________________________________________________________________

40. How old were you when you began this job? ___ years.

41. Did you work for yourself (self-employed) or someone else? (Check One): Yourself____ Someone else____
42. If you were self-employed, did you have people who worked for you and were paid by you? (Check One): Yes____ No____. If "yes", approximately how many? _____

43. Did you supervise anyone as part of your first job? (Check One): Yes____ No____

44. As part of your first job, were you engaged in the actual production of goods or products? (Check One): Yes____ No____

45. What was your family's total taxable (before taxes) income for last year? Round to the nearest thousand. (For example: $5,000, $10,000, $21,000)

46. Which of the following do you feel best describes your family's social class position? (Check One): Upper Class _____ Upper Middle Class_____ Middle Class_____ Lower Middle Class_____ Lower Class_____

THANK YOU FOR YOUR COOPERATION
Dear Memphian:

A few days ago, you were mailed a questionnaire concerning the occupational structure in Memphis and its changes over time. If you have already filled out and returned your questionnaire, we would like to thank you for your cooperation and help in making this a worthwhile project. If you have not returned your questionnaire, we would like to urge you to do so. In order for us to accurately estimate occupational changes, we need your assistance. The success of this study depends upon your voluntary cooperation. Thank you for your help.

Kevin B. Smith
Project Director
VITA

The author was born May 3, 1952, in Houston, Texas, and attended public schools in the Houston Independent School District, graduating from Westbury Senior High School in May, 1970. Upon graduation from high school, he entered Texas A&M University. He received a Bachelor of Science Degree, having majored in Sociology, in May, 1974. In the Summer of 1974, he enrolled at Louisiana State University and received a Master of Arts Degree in Sociology in May, 1976. Since the Masters Degree, the author has been pursuing additional graduate work in Sociology, minor ing in Psychology and Experimental Statistics. The author is married to the former Chanda Lynn Farnsworth and they have one child. At present, the author is a candidate for the Doctor of Philosophy Degree.
EXAMINATION AND THESIS REPORT

Candidate: Kevin Burt Smith

Major Field: Sociology

Title of Thesis: Class Versus Socioeconomic Attainment Processes: An Analysis of Alternative Models of Intergenerational Attainment

Approved:

George V. Ohlendorf
Major Professor and Chairman

James B. Hargis
Dean of the Graduate School

EXAMINING COMMITTEE:

Alvin L. Bertrand

Raymond W. Merritt

William B. Finke

Ruth J. Perkins

Prather E. Schilling

May 14, 1979