CLASS STRUCTURE, PROPERTY OWNERSHIP, AND INCOME DETERMINATION: A STUDY OF FARM LAND OWNERS IN THE UNITED STATES

By

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ABSTRACT

CLASS STRUCTURE, PROPERTY OWNERSHIP, AND INCOME DETERMINATION: A STUDY OF FARM LAND OWNERS IN THE UNITED STATES

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This work has two aims: to develop a theoretical model of the class structure of farm land ownership and to use it in an empirical analysis of income determination. I examine property ownership from the viewpoints of institutional economics as well as Weberian social theory. The class structure model elaborated derives mainly from the Marxist tradition, where class is defined in terms of the social relations of production. This is in sharp contrast to the dominant sociological account of social stratification, status attainment, which sees occupation as the chief explanatory variable. Other researchers have compared the class versus occupational perspectives on income determination; what I add to the literature is a focus on land owners. My model includes two basic classes (capitalist farmers and family farmers) and four "contradictory class locations" (pure landlords, farmer-landlords, farmer-tenants, and part-time farmers).

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I assess two sets of hypotheses: those at the individual level that compare the statistical explanations of the class structure and status attainment paradigms in predicting income differences, and structural hypotheses that examine how the income determination process varies by class. My data base is the U. S. Department of Agriculture's 1978 Land Ownership Survey. I operationalize six class positions as well as gender, four measures of land size, and the attainment variables of age, education, and occupational status. Using regression analysis, I investigate positive net farm income, negative net farm income, and non-farm household income.

The individual-level results provide strong evidence for the class structure approach. Class outperforms occupational status for all types of income. Class structure also compares favorably to the full status attainment model for both net farm incomes and almost equals it for non-farm income. At the structural level, classes have quite different income determination processes. The monetary impacts of the land-size variables and the standard status measures vary significantly by class. However, men and women in the same class still have different "returns" to the independent variables--contrary to my hypothesis. On the whole, though, the class structure model is supported.

DEDICATION

To Kathy, David, and Katie

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INTRODUCTION

In this work, I attempt to bring together three different areas of social-scientific inquiry: the class structure theory of capitalist society; the quantitative study of social stratification; and the analysis of private property ownership, farm land in particular. These three domains of investigation occupy distinct places in the social sciences. The first, the class structure view of modern society, has been most fully articulated by students in the Marxist tradition. Sociologists following Max Weber also use class categories. Both Marxists and Weberians are interested primarily in the class structure of capitalism. Statistical studies of income inequality, on the other hand, are of much more recent origin. Over the past fifteen years, "human capital" theorists in economics and status attainment reseachers in sociology have developed dominant paradigms in their disciplines. While divergent in several respects, both highlight individual income differences as one of the important problems in social stratification. I concentrate here on the sociological version.

Until lately, proponents of the two social-scientific

literatures--class theory and status attainment--rarely interacted. The mid-1970s, however, witnessed the emergence of what Bell and Newby (1981:12) call "multivariate Marxism"--statistical research using the concepts of historical materialism. My work may be seen as part of this effort at sub-disciplinary cross-fertilization.

In contrast to their attention to certain forms of social inequality, sociologists have largely ignored the role of private property in modern society. Marxists, of course, emphasize the importance of productive property, but their analysis is often at a high level of abstraction. They, too, have downplayed the significance of land ownership per se. The main group of scholars interested in understanding the uniqueness of land ownership, especially farm land, has been institutional economists. In the 1920s, they began dealing with problems of property rights, farm tenancy, and land tenure in general. I draw from their analyses of farm land ownership. Thus, I seek to bring a substantive focus on land into play with quantitative research methods as well as Marxist (and, to a lesser extent, Weberian) theories of capitalist society.

My work can also be characteristized as contributing to the "new," or "critical," sociology of agriculture, also termed the "political economy" of agriculture (see Buttel, 1982). These phrases connote that their referent

is generally informed by Marxist (or Weberian) theory. This orientation is a recent development, dating from the late 1970s. One substantial source of this growing literature is the work of non-rural sociologists. In fact, much of the best political-economic research is by sociologists with no formal connection to the discipline of rural sociology (e.g., Friedmann, 1978, 1980, 1981; Ehrensaft, 1980; Friedland, 1981; Friedland et al., 1981). They simply study agriculture in the advanced capitalist societies.

However, in large measure the new sociology of agriculture arose from within rural sociology, the American specialty that traditionally studied farming. During the fifties and sixties, though, rural sociologists seemed to loss interest in farmers. The focus re-emerged in the 1970s, largely through the work of young rural sociologists such as Richard Rodefeld in the United States and Howard Newby in Great Britain. By the end of the decade, Newby (1980:49) could speak of a "self-conscious attempt to create a new 'sociology of agriculture' which BEGINS from an analysis of landholding and the class structure." And Newby and Buttel (1980:15) could outline the research components of a critical rural sociology: "the structure of agriculture in advanced capitalism, state agricultural policy, agricultural labor, regional inequality, and agricultural ecology" (cf. Goss et al., 1980; Buttel, 1982; Gilbert, 1982). My work, then, is

part of this new rural sociology of agriculture.

The objectives of the dissertation are to develop a theoretical model of the class structure of farm land ownership and to use it in an empirical study of income determination. Chapter One first clarifies the meaning of "land ownership," then elaborates several conceptual analyses of property in general and farm land in particular, including its relationship to income. My whole project is based essentially on Wright's CLASS STRUCTURE AND INCOME DETERMINATION (1979), which offers a Marxist challenge to more standard academic views of social stratification. My empirical task is thus to compare the class approach with the status attainment view of income differences. Chapters Two and Three summarize the two positions. Chapter Four reviews previous efforts to delineate the class structure of agriculture and then presents my own theoretical model of farm land owners. It also lays out the hypotheses that I shall assess, including a comparison of the two accounts of stratification as well as some propositions that derive solely from the class structure perspective. Chapter Five details the matters of my data source, operationalization of the variables, and the different samples, statistical techniques, and regression equations employed in the analysis. Chapter Six presents the research results and Chapter Seven concludes the work.

CHAPTER ONE: TOWARD A SOCIOLOGY OF PROPERTY-- LAND OWNERSHIP AND INCOME RIGHTS

The principal focus of this research is land ownership. We should be as clear as possible, therefore, about the meaning of the subject matter. What is land? What is ownership? These two questions will occupy us for the next several pages. To begin with, I rely upon a rather neglected field of economics, institutionalism, which traditionally has been concerned with issues of property rights in land. I later draw from both Weberian and Marxist theory in working toward a sociology of property relations.

I. Land

It may appear that answering the first query--the nature of land--is quite easy. Land is simply the ground that we stand on, the "surface of the earth" (Bertrand and Corty, 1962:187). However, such a definition is rather limited for purposes of social-scientific investigation. Students of land, chiefly institutional economists, offer various conceptions of "land." Barlowe (1958:8-9), for instance, begins to clarify the meaning of land by delineating seven different, if overlapping, conceptualizations:

1) Space--room and surface for life.

2) Nature--the natural environment of soil, vegetation, and climate.

3) Situation--location with respect to geographic features, human settlements, and other resources.

4) Consumption good--a site for residential and recreational facilities.

5) Factor of production--the source of raw materials for use in production (along with labor and capital).

6) Property--legal rights to an area, with the implication of a sovereign social institution.

7) Capital--a commodity to be invested (cf. Upton, 1976; Bose, 1980:69).

Obviously, this list combines natural, legal, and economic views of land (cf. Neufville, 1981:253). Although my interest is ultimately social, let me dwell for a moment on the physical characteristics of land that hold sociological import (Ely and Wehrwein, 1940; Renne, 1947:182-86; Gaffney, 1962:144-47; Breimyer, 1977:10-11):

1) As part of nature, land is not created by human labor. It is a "free gift." As such, land is non-reproducible, relatively limited, and fixed in supply. This aspect of land is reflected in the popular adage: "They're not making any more of it."

2) Land is spatially immobile, both physically extended and locationally situated. It cannot be moved about at will; hence the distinction between real and

personal (moveable) property.

3) Land is durable. Indeed, certain physical dimensions of it are relatively permanent and indestructible (e.g., extension and location).

4) Land is not homogeneous but rather quite variable in quality, particularly with regard to fertility and situation.

5) Land is necessary for life. People and things must occupy certain spaces and locations. Land is not a single resource but instead constitutes a finite resource base that sustains human and non-human activities (Harvey, 1973:157-59; Andrews, 1979:27-28).

However, these characteristic aspects of land are still insufficient for social-scientific purposes. They remain merely physical elements that influence social structures and processes. Consequently, Barlowe (1958:8) defines land as the "sum total of the natural and man-made resources over which possession of the earth's surface gives control" (cf. Ely and Wehrwein, 1940:59). This definition emphasizes the economic ("resources") and legal ("possession") senses of land, based on its physical materiality ("natural," "earth's surface"). Barlowe also points to the social ("control") dimension of property. In fact, this definition is similar to Marx's (1967:615, 634) view of landed property as the "monopoly by certain persons over definite portions of the globe...," and the "ownership of certain portions of our planet by certain

individuals" (cf. Murray, 1977:113). This substantial agreement on land itself between institional economics and Marxist political economy, then, leads us to a more detailed consideration of the second word in the term, "land ownership."

II. Ownership

In common usage, "ownership" has a vague meaning. We generally know, for example, who owns the house we live in, but what exactly does ownership entail? Instead of ownership per se, social scientists often prefer to speak of property or, better yet, different rights in property. Ownership may thus be defined as a claim to certain property rights. Wunderlich and Bierman (1958:288-89) state that "ownership is a rather loose aggregation of human relationships that provides maximum, though limited, use and possession of property objects." Technically, they say, it is more precise not to discuss "ownership" at all, but rather various forms of "estates"--the rights and interests that people hold in property (cf. Wunderlich and Chryst, 1958:295; Wunderlich, 1978:9; Lewis, 1979:11; U.S. Department of Agriculture, 1959:7; Currie, 1981:169). What, then, is property?

In its sociological as well as legal sense, "property" is a right not a thing. It is a socially enforceable claim. Property does not refer to an external object as such but to rights over that object (good or

service). Property may be classified into three types according to who, or what, has primary claims to the "thing" in question, and, more importantly, who is excluded by such claims. (1) Common property is the right of those in the society not to be excluded; (2) public property, the right of sovereign governments (the state) to exclude others; and (3) private property, the right of an individual or other "legal person" (e.g., a corporate body) to exclude all others (Macpherson, 1973:124, 1978:4-5).

It was with the rise of capitalism that the popular conception of property gradually became narrowed to encompass only one of the basic types, private property. This change in meaning led to the popular confusion of property as a thing rather than a right, as, for example, in the saying, "This land is my property." Feudal property rights in land, on the contrary, clearly meant claims to particular uses of the land. But with the dominance of market exchange in the emerging capitalist societies, land became to be treated like a commodity, something to be bought and sold. Property was transformed into "increasingly saleable absolute rights to things," rather than "in" them, thus blurring the distinction between the right and the object (Macpherson, 1978:8). And the claims to these "things" became predominantly private, no longer either communal or public (cf. Andrews, 1979).

The state, however, as guarantor of all property, reserves for itself certain rights over even private property. In particular, the sovereign holds powers of escheat (reversion to the state when a person dies intestate and without heirs), taxation, eminent domain, and police (laws and regulations). In addition, the state exercises its more general spending power (public expenditures). All of these have significant impacts on private property (Barlowe, 1958). Nevertheless, modern property rights, while not absolute, are practically absolute in comparison with feudal rights. Specifically, unlike earlier forms, modern private property can be alienated (disposed), and it is not necessarily contingent upon the performance of any specific social role or personal obligation (Newby et al., 1978:336; Macpherson, 1973:126, 1978:10). Property taxes, however, may be seen as fulfilling a broad social function (Breimyer, 1977:16).

Private property, then, involves the right of persons or legal entities to exclude others from the property-object. But what positive rights inhere in modern private property? A great many; private property in capitalist societies is associated with by far the most extensive set of rights and privileges in world history. That is to say, there are fewer restrictions or limitations on modern private property than on previous widespread forms of property. One classification (Hutter, 1982:139) includes the rights of:

1) use or consumption--possession, occupancy, abandonment, destruction, non-use;

2) free contracts--exchange, sale, rent, lease, granting usufruct, mortgage, credit;

3) transference as a gift;

4) succession; and

5) accumulation (assuming free trade).

In elaboration of the above, Harris (1958:280) includes the private property rights to hold, subdivide, consolidate, abuse, waste, exploit, conserve, improve, and bequeath. Macpherson (1973, 1978) simplifies these lengthy lists by presenting the chief rights in modern private property as three: use or control, benefit or reward, and disposal or alienation (cf. Rose et al., 1976:703).

Until this point, the discussion of property has been rather formalist, legalistic, almost asocial (Newby, 1980:40). Now I consider property ownership from more sociological and political-economic points-of-view. The sociologist Max Weber and institutional economist Frederic Pryor provide a useful transition between the formal definitions above, and the Marxist treatment to follow.

III. The Social Relations of Property

1. Institutional-Economic and Weberian Views

Barlowe (1958:339) and most other land economists discuss property as a "bundle of rights." But to talk of property in this way is insufficent to capture the broader sociological and economic aspects of property ownership, especially dimensions of power and control. It also confuses two quite different forms of modern private property. These two types may be labeled "property of personal appropriation" (Lafargue, 1901:5), or simply "personal possessions" (Parkin, 1979:48), versus property-as-capital. The crucial distinction between them may be outlined according to the three main characteristics of modern property (Newby et al., 1978:335-38; Rose et al., 1976:705): (1) control: user versus manager; (2) benefit: use versus profit; and (3) disposal: consumption versus production. The first regards the difference in control between an owner-user and an owner-exproriator; the second, a difference in use between personal and market return; the third, between the functions of subsistence and accumulation.

In none of these ways do the two forms hold the same sociological significance. Since almost everyone owns at least some personal possessions (clothes, books, cars, even houses), they are of less relevance to stratification systems (Rose et al., 1976:710). "To speak of property in

the context of class analysis is, then, to speak of capital only, and not possessions" (Parkin, 1979:53). Unlike consumption goods, productive property can be held in quantities much larger than any single individual can use. It entails social relations to the extent that most people are excluded from such ownership, and because it creates the basis for certain unequal relationships (e.g., employer-worker). Property-as-capital depends fundamentally on a class-divided society; it is a class relation (Macpherson, 1977:11). Class relations are discussed at length in Chapters Three and Four.

The use versus production distinction is entirely appropriate yet incomplete. What Weberians such as Parkin and Newby miss is precisely what Weber captures by locating classes in the market instead of in production: the intermediate possibility of amassing income from property that is used neither in the production of commodities nor for one's own consumption. The classic case is the rent that a landlord receives for housing property. Another example is working-class homeownership that, especially in inflationary times, amounts to an accumulation of wealth outside of production (Saunders, 1978, 1979). By differentiating various kinds of "property that is usable for returns," Weber (1946:182) highlights the unique monetary benefits of the rentier as opposed to the entrepreneur. "Positively privileged property classes typically live from property income"

(Weber, 1947:425). Thus Weber (1947:241, 267, 322) distinguishes between property as utilities (for consumption), commodities (for market exchange), and capital (for the creation of additional value in the process of production).

Weber (1947:424-27) goes on to distinguish property classes from acquisition or commercial classes, those that offer services on the market. Since in a market society the distribution of material property creates specific life-chances, owners are systematically benefitted in the competition: "'Property' and 'lack of property' are therefore the basic categories of all class situations" (Weber, 1946:182). Weber, then, saw property ownership primarily as a means of gaining income, and thus of improving one's chances of living well (Saunders, 1978, 1979).

For his part, Pryor (1973:2) defines property as a set of relations between people with regard to some good, service, or "thing." In addition, the relations, or rights to the property-object, must be economically valuable and socially enforceable. This conceptualization has the advantage of emphasizing the social relational aspect of property. Specifically, he stresses that property involves economic power and inequality. Pryor (1973:6-8) focuses on two particularly important types of property rights. The first is income rights--to use a thing in order to obtain money by means other than self

labor. This power derives from either levies (e.g., rent) or use to produce commodities sold on the market for profit. Pryor identifies this special right in property as the essence of "ownership." The second is control rights--to use or dispose of a thing in economic production or exchange. Pryor equates this form of property with effective decision-making or economic power. It derives from ownership, or delegation by the owner. "Control" in this sense implies an asymmetric power relationship among people (cf. Vogt, 1979, 1981).

In summary, both the Weberian tradition in sociology and some brands of institutional economics see "ownership" essentially as a right to, or claim on, property income. Without employing the term, this is what Newby et al. (1978:335) mean by the modern private property right of benefit or reward: the legal claim to income. Indeed, Macpherson (1973:127-33, 1978:7-8, 206-07) argues that this view of property is consistent with both pre-capitalist conceptions as well as emerging forms in late capitalist societies (e.g., the right not to be excluded from an income, whether via the means of labor or the welfare state). The ownership of property, then, is widely interpreted to be fundamentally a claim on income (cf. Mandel, 1968:283).

Yet Pryor, especially, notes that property entails more. It is not simply, or perhaps even mainly, a legal right to income. For property includes what he calls use

or control rights, too. These in turn involve economic power and domination, thus unequal social relationships. Newby and Macpherson also address this profoundly sociological aspect of property, but they fail to develop the point. Even Pryor stops short of laying out a full theoretical treatment of the social relations of property rights. Nonetheless, it seems to me that Pryor's stance contains an implicit criticism of Weber. Weber tends to view property as just another "market capacity," underplaying its role as capital, as the employer of wage-labor. Property is not merely an enhancer of life-chances but rather is a prime basis for social inequality. Recent Marxist discussions make this criticism of Weber more explicit (Westergaard and Resler, 1975:344; Crompton and Gubbay, 1978:145; cf. Saunders, 1978, 1979:66). Other Marxist scholars have gone beyond Pryor in elaborating the constituent aspects of ownership and control.

2. A Marxist View

Following Balibar (1970), Bettelheim (1975), and Poulantzas (1975), Vroey (1975), Wright (1976, 1979), and Clegg and Dunkerly (1980) have distinguished three "levels" or "dimensions" of property ownership. These discussions occur in the context of the class structure of capitalism (see Chapter Three), so all are related in particular to the ownership of capital. The three levels are as follows: (1) Legal ownership--the formal,

juridical claim to property income, as discussed above; (2) Real economic ownership, or ownership as a relation of production--the power to assign the means of production to specific uses and to dispose of the product; and (3) Possession--the capacity to put the means of production into operation, or "actual control over the physical operation of production" (Vroey, 1975:3; Wright, 1976:11). The latter two sociological dimensions of property ownership are the ones emphasized in recent Marxist writings, for they concern the process of production rather than merely legal claims. Hazelrigg (1972) speaks of them as relations of factual control over production or "effective private property," in contrast to mere legal title or ownership. They also represent a further analytical refinement of Pryor's (1973) general "control rights."

Wright (1976:29-33, 1979:23-37) presents a detailed discussion of economic ownership and possession under capitalism. These two "processes" of ownership actually constitute the substance of (capitalist) social relations of production. As Pryor (1973) indicates and Wright stresses, they involve social relations of control. That is, though in the context of a property-object (Pryor's thing), the crucial relationship is not person-to-object but person-to-person--a social relation. "Control" here carries with it a decision-making capacity, the ability to dispose of a productive resource. This power is

positional or structural, not individual (Wright, 1979:24).

"Economic ownership" is ownership as a relation of production. It involves control over the investment and accumulation process, or the "social relations of control over money capital" (Wright, 1979:24). It determines the flow of resources into production, but stops at the factory (or farm) gate. "Possession," on the other hand, is the ability to put the means of production to work. This is the management function, the direction of production itself, of the immediate labor process (Wright, 1979:29). Wright breaks possession down into two aspects (not "types"): the social relations of control over physical capital, i.e., over the use of the physical means of production; and the social relations of control over labor, or authority in the workplace, involving the supervision and discipline of wage-labor in the process of production.

Wright and others hold that, although they are both necessary, of these two basic processes of capitalist production, economic ownership is clearly the prior dimension. It determines, or sets limits upon, the actual production process.

> A rentier capitalist, therefore, who is not directly involved in control over physical capital or labor, nevertheless falls within the capitalist class because of the social relations of control over money capital ("real economic ownership" of the means of production) (Wright,

1980b:329, 1979:25).

The supervision of labor, on the other hand, does not directly affect investment decisions. Together, then, real economic ownership and possession are the very stuff of (capitalist) social relations of production (cf. Dahrendorf, 1959:44-47; Vroey, 1975).

In the classic capitalist enterprise of the nineteenth century, all three levels of property ownership were lodged in one class location, the individual capitalist. But capitalist development in the twentieth century has progressively dissociated the latter two dimensions of property, economic ownership and possession. Marx (1967:375, 388) was aware of the analytical difference between the money-capitalist, who owned property used in production, and the industrial capitalist, who was the actual user (employer, manager, operator) of capital in the process of production. This differentiation of functions may be described as capital-as-property and working capital. The first arises prior to production and remains outside the process per se; it yield interest and rent. The second occurs only in production and yields profits, or at least self-earned surplus. Again, the first constitutes real economic ownership and the second, possession (Wright, 1979:33-34; Vroey, 1975).

In Chapter Three, I shall develop these points with regard to a more specific class analysis, which in Chapter

Four will be applied to farm land ownership. The remainder of this chapter will be limited to the implications of property rights in farm land itself.

IV. Farm Land and Income Rights

With respect to property in land, the notion of "tenure" has received considerable attention from institutional land economists. Tenure means the holding of rights to use land (Wunderlich and Chryst, 1958:295; Miller et al., 1958:562). Others speak of it as the "division of property rights in land" (Renne, 1947:429), or the social relationships established among people that govern their various rights to use, control, and occupy landed property (Barlowe, 1958:373). The two main "tenures," or types of estates (rights and interests) in land, are freehold and leasehold, or ownership and tenancy (Wunderlich and Chryst, 1958:295).

Moyer et al. (1969:3) highlight two attributes of tenure rights in land--claims and access.

> Claims refer to the demand on income derived from land, a demand arising out of ownership of the resources. Access refers to the decision-making prerogatives over land, prerogatives arising out of the right to occupy the land and control its use.

These two aspects of tenure are the agricultural version of Pryor's more general set of income rights and control rights. Tenure, or property rights in land, breaks down into ownership claims on income and decision-making

authority over the land (which itself, of course, can generate income).

Hurlburt (1958:176) specifies two sorts of farm land income: the earnings of land as a factor of production and the payment received as a reward for the use of the land in production (contract rent). The two are not necessarily the same; the contribution of the land input may not equal the amount paid for its use. As Hurlburt observes, the monetary rewards to land ownership, or "cost" to the user, often exceeds the earnings ability of the land. How can this be? Because of its unique natural and social characteristics, land constitutes a "specific and peculiar category of the ownership of the means of production in general" (Newby, 1980:41, 36; cf. Goss et al., 1980:89-92). Land represents both wealth as a source of income as well as a necessary input to (agricultural) production (Boyer, 1981:111). That is, land "contains" two different types of property relations: income rights from land ownership itself and control rights over the returns to the use of the land (Murray, 1978:12).

How, then, is income derived from land ownership? The ownership of farm land leads to income in two main ways: through control of its actual use in production (possession) and through control of it as an essential element for production (legal-economic ownership). The first concerns an income surplus, whether earned by one's self (or household) or produced by wage-labor ("profit");

the second refers to rent. The first is generated by a farm operator whereas the second is appropriated by a landlord. Thus, the two types of income are of different origins and deserve separate analysis.

The manner in which land leads to income is fairly easy to see in the case of the farm operator. In agriculture, land is a necessary factor of production. The operation, or "possession," of the farm land means that the land is utilized in the process of production. Whether the eventual product is food or fiber or animals, the input of land is essential to farming. Farm operators generally have overall direction and control of this entire process (cf. Harris, 1974). That is, they have the decision-making authority over all factors of production: labor, whether household or hired; and other inputs such as machinery, fertilizer, feed, and seeds. Thus, the operator or "possessor" of farm land functions as manager of the farm enterprise.

The returns or profits generated in production through the combination of land, labor, and capital redound to farm operators as a gross income. From this, they must deduct taxes, rent (if any), wages, loans, interest, and other costs of enterprise. The amount left over, gross minus expenses, is net farm income. The central point here is that the farm operator derives income from actual use or possession of the farm land in the process of production (cf. Vogeler, 1981).

The category of rent comes about in a quite different manner. Even though land is a necessary factor in agricultural production, the ownership of farm land itself requires no operation whatsoever. Pure ownership does not imply actual possession of the land (Massey and Catalano, 1978:25). The role of rent is analagous to the place of money-capital that finances a functioning capitalist (Mandel, 1981:64). The role here is one of economic ownership, of ownership as a relation of production. This is capital-as-property (Vroey, 1975; Crompton and Gubbay, 1978:92). This dimension of control is the most basic since it determines investment and resource allocation. It involves the prior flow of resources into production as opposed to their use once in production. The money-capitalist thus has a claim on the product; interest must be paid before industrial profits can be pocketed. So it is with land rent. Landlords my be seen as a relatively passive decision-makers in the farm operation (Harris, 1974). Still, they demand a return on their investment in land, which is called rent.

Capitalist agriculture in nineteenth century England provides a perfect illustration. The class structure typically consisted of landlord, capitalist tenant farmer, and hired farm workers. While mere ownership gives owners no necessary rights over production, they are entitled by law to a rental payment if their land is used by someone else (a tenant) in production. The rental agreement or

contract involves a temporary transfer of property rights in the land from the landlord to the tenant. The former retains ultimate ownership rights while the latter gains most of the rights of use and possession for a prescribed period of time, for which rent is paid (Barlowe, 1972:448; Tribe, 1977:81).

Marxist political economists recognize two main types of land rent, differential and absolute. Ricardo argued that rent arises from differential soil fertility (or favorable market location). Farmers operating highly fertile land will derive an excess or a surplus return beyond that from land of average fertility. However, since the land owner will demand payment for the use of the land, they will siphon off the above-average surplus as differential rent. But even if land is not highly productive, land owners will still require payment for its use. This Marx called absolute rent. It arises from private (exclusionary) property rights in land, a monopoly of control over a necessary input into agriculture (Mandel, 1968; Newby, 1980:42; Kautsky, 1980; Massey and Catalano, 1978:42; Goss et al., 1980). Obviously, rent is the payment that land owners receive for the use of their land. It is thus the economic realization of private property in land (Marx, 1967:618).

The classic political economists saw rent as one of the three basic forms of income corresponding to the three great classes of modern society: profits accrue to

capitalists, wages to workers, and rent to landlords. Ricardo even declared that the purpose of political economy was to explain the varied distribution of income among these social classes (cf. Marx, 1967:618, 885). Following the lead of classical political economy in attempting to comprehend capitalist society, I shall not continue elaborating conceptual distinctions of rent.

Although there has been much recent theoretical debate over rent, one significant conclusion is that more empirical analysis should be done (see, e.g., Scott, 1976; Tribe, 1977; Murray, 1977, 1978; Ball, 1977, 1980; Fine, 1979, 1980, 1982; Newby, 1980; Hussain and Tribe, 1981a, 1981b). In particular, Massey and Catalano (1978:48, 53) conclude that argument over abstract formal categories such as rent is futile in the absence of concrete investigations of the role of rent in the class structure and its effect on social relationships in capitalist societies (cf. Ball, 1977). After reviewing two different theories of income determination, I proceed to such an empirical examination of farm land ownership in the United States.

CHAPTER TWO: THE STATUS ATTAINMENT APPROACH TO INCOME DETERMINATION

In industrial capitalist societies such as the United States, income derives largely from two sources, the performance of work, or earnings, and the ownership of property, or wealth (Dalton, 1925; Atkinson, 1975). In this and the next chapter, I shall review two of the most prominent sociological models of income determination. The first is based mainly on occupation, or technical work role; the other, on class, or social relationship to the means of production.

I. An Overview

The tradition of "status attainment" research, the dominant approach to social stratification in the United States, is understandably very attractive to many American sociologists. In less than two decades, it has become widely recognized as one of the few areas of social scientific investigation that is consistently and systematically cumulative. The titles of the major books themselves are instructive: THE AMERICAN OCCUPATIONAL STRUCTURE (Blau and Duncan, 1967), SOCIOECONOMIC BACKGROUND AND ACHIEVEMENT (Duncan et al., 1972), INEQUALITY (Jencks et al., 1972), EDUCATION, OCCUPATION, AND EARNINGS (Sewell and Hauser, 1975), THE PROCESS OF

STRATIFICATION (Hauser and Featherman, 1977), OPPORTUNITY AND CHANGE (Featherman and Hauser, 1978), and WHO GETS AHEAD? (Jencks et al., 1979). Each builds directly on the ones before. The next-to-last mentioned, for instance, is a precise replication of the first--a rare feat in sociology. Moreover, the statistical techniques employed in these studies of social mobility have become increasingly sophisticated. Status attainment researchers have led the way in advancing the use of quantitative methods of data analysis. Indeed, many sociologists, including a leading achievement analyst (Featherman, 1981), acknowledge that their most visible impact on the larger discipline has been methodological. Such features as its cumulative nature and technical advances insure status attainment work a preeminent place in the field of sociology for some time to come (Hurst, 1979:286).

Yet, almost as soon as it appeared, a number of sociologists expressed their doubts about the overall paradigm (Colcough and Horan, 1983). While status attainment studies virtually took over the field of stratification in the late 1960s and early 1970s, skepticism also grew. By the mid-1970s, several serious critiques were leveled at mobility research, and by 1980 sociologists were offering bona fide alternative conceptualizations of social stratification, including the income determination process.

I begin this chapter with a review of status

attainment research. Extensive treatment is unnecessary here since this literature is one of the best-known in all of sociology and since several recent publications provide excellent overviews of the relevant work (Hurst, 1979:269-90; Kalleberg and Sorensen, 1979; Matras, 1980; Bielby, 1981; Featherman, 1981; Granovetter, 1981; Colcough and Horan, 1983; and Campbell, 1983). I then explicate the central concept of occupation and its operationalization as occupational status. Lastly, I summarize the major criticisms that have been brought against the status attainment approach. This final point will be expanded in the following chapter, which elaborates one particular alternative approach.

The status attainment paradigm did not appear full-blown with Blau and Duncan's publication in 1967. Their research question, however, stood in considerable contrast to earlier American studies of stratification, which usually examined societal rates and trends in the intergenerational mobility of broad occupational categories. The new orientation centered on the relative impact of socioeconomic background on an individual's staus attainment (Blau and Duncan, 1967:8-10). Shortly thereafter, Duncan (1968:695) compared the two approaches in this way:

> In a society where most of the statuses that entitle a person to socially valued and distributed rewards are, in fact, achieved (rather than ascribed) statuses, the crucial question is what factors determine the level of

> achievement, not whether achievement involves a person in "mobility" from the status level of his social origins.

What exactly is meant by "status," "achievement," and the other operative terms? Haller and Portes (1973:51) provide the best explication. "Statuses are inequalities among social units, such as persons or families, which are more or less institutionalized with the larger social system." The three main status dimensions are wealth, prestige, and power (implicitly following Weber's types of stratification: class, status, and party). Earlier American sociologists, Haller and Portes (1973:52-53) continue, gave descriptive accounts of the overall amount of mobility in the system instead of identifying the factors which "explained" the achievement level of an individual. The language of "mobility," describing changes between status levels, was replaced in the late 1960s by that of "achievement" or of "the process of stratification." However, Haller and Portes (1973:54) argue that the "achievement" label smacks too purely of a pyschological model while "stratification" is overly broad to reflect their approach. They thus propose the phrase, "status attainment processes" to refer to "those sets of events by which individuals come to occupy their positions in the social hierarchies of wealth, power, and prestige." Although the mobility/achievement terminology is still used, and such researchers often seem to believe that

their preferred topics exhaust the field of stratification, most sociologists follow Haller and Portes in characterizing this work as the study of status attainment (cf. Featherman, 1981:97).

II. Occupation and Occupational Status

Blau and Duncan's "basic model" was designed to account for an individual's occupational status, or, more specifically, to measure the relative impacts of a person's socioeconomic origins on his subsequent occupational attainment. "The prototypical question we ask is how the various ascribed statuses that a man brings to his career affect his achieved status in the occupational structure" (Blau and Duncan, 1967:115). Their empirical answer was equally straightforward: a son's current occupation depends on his father's education and occupation, his own education, and his first job (Blau and Duncan, 1967:170). This five-variable "causal model" constitutes the underlying explanation of subsequent status attainment research. The method used to make these determinations is a rather sophisticated statistical technique called path analysis, first introduced to sociology by Duncan (1966). It estimates the relative (direct and indirect) effects of one variable on another in a multivariate model (Hurst, 1979:271-73). In this manner, Blau and Duncan introduced not only a "rudimentary conceptual framework--the socioeconmic life cycle--" but

also the methodological procedure to be followed in later status attainment studies (Featherman, 1981:81).

But why this conceptual emphasis on occupation, and occupational status in particular? Addressing these questions takes us to the theoretical heart of the status attainment approach, such as it is. Analysts in this tradition actually have little to say about their theoretical dependence on occupation; indeed, they often explicitly disavow any systematic effort at theoretical development (e.g., Blau and Duncan, 1967:1-4; Duncan, Featherman, and Duncan, 1972:17, 255; Featherman and Hauser, 1973:240, 1978:9-16; Hauser and Featherman, 1977:52). Understandably, then, the rationale for their stress upon occupation is not very well developed. Nevertheless, a definite view of modern society, and the central place of occupation within it, emerges from various statements in the status attainment literature.

Following the major American approach to stratification (e.g., Warner et al., 1949; see Pease et al., 1970), Blau and Duncan (1967:vii) maintain that occupation is the chief basis of social stratification in contemporary industrial society: "In the absence of hereditary castes or feudal estates, class differences come to rest primarily on occupational positions and the economic advantages and powers associated with them." Stratification is best understood, therefore, by studying the processes of social mobility in the occupational

structure. This is because occupational position is related to all three of Weber's three dimensions of inequality: economic class, political power, and prestige status. Indeed, occupation is "probably the best single indicator" of overall class position (Blau and Duncan, 1967:1-7). In short, occupation is the concept that best taps into the underlying dimension common to all aspects of stratification.

> A knowledge of the occupational structure and of the conditions that govern men's chances of achieving economic success by moving up in the occupational hierarchy is, therefore, essential for understanding modern society and, particularly, its stratified character (Blau and Duncan, 1967:vii-viii).

Duncan (1968:689) states explicitly:

> Indeed, it is the assumption that occupation is the source of many of the most important kinds of rewards that allows some sociologists to fix upon occupation as the key variable in the American stratification system.

Other major proponents of the status attainment approach elaborate this position. Haller and Portes (1973:54) assert that in societies where statuses are largely achieved rather than ascribed, occupation is strategically located in the various status hierarchies; "it appears as the most representative summary measure of a person's general social standing within the context of modern societies." In regard to other major status indicators, for example, education is crucially a determinant, and income a consequence, of occupation

(Haller and Portes, 1973:55). Featherman and Hauser (1973:240; Hauser and Featherman, 1977:51-52) add that occupations are highly salient for both the

> functioning of the society and for the allocation of scarce resources (status such as wealth, esteem, power) to persons....Suffice it to say that sociologists attribute major importance to the characteristics of occupational roles as causal antecedents of economic and social inequalities among persons in industrial societies (cf. Davis and Moore, 1945).

Elsewhere, they assert the "central place of occupational roles with the structure of industrialized societies, or the linkage of individuals to the society through such roles" (Featherman et al., 1975:330; Hauser and Featherman, 1977:4). This is especially the case, they continue, in capitalist economies, the structure of which explains their emphasis on occupations. They conclude that in such societies, "the MAJOR basis of stratification is occupational socioeconomic status..." (Featherman et al., 1975:358; Hauser and Featherman, 1977:50).

They also put the next logical question nicely: "If the structure of capitalist industrial societies justifies the focus on occupations, then what justifies the use of prestige and socioeconomic metrics to scale occupations and to measure social mobility qua occupational stratification and inequality?" (Featherman et al., 1975:330; Hauser and Featherman, 1977:4). However, they

do not address this question directly, other than to say that the hierarchy underlying occupational roles is basically socioeconomic.

There are at least two possible approaches to the study of occupations. One is to examine the occupational structure in terms of broad divisions such as white-collar and blue-collar (and, some add, farm). This breakdown seems to be along Weberian lines. Parkin (1971:18), for instance, states that such a division is the "backbone of the class structure, and indeed of the entire reward system of modern Western society...." He believes in viewing occupations thus according to the technical division of labor. Hauser and Featherman (1977:4) cite this passage from Parkin to justify their attention to occupation, and Featherman (1981:97) similarly urges a Weberian "class" interpretation of the status attainment tradition (cf. Featherman et al., 1975:330). Blau and Duncan (1967) do in fact employ this approach to occupational categories, as do Featherman and Hauser (1978). However, their preponderant use of a second approach to studying occupations would appear to undercut this theoretical rationale (Parkin, 1971:17-23).

The other view of occupations, which status attainment researchers usually follow, concerns "socioeconomic occupational status" (Blau and Duncan, 1967:5, 117-19; Duncan et al., 1972:3). Here again, there are two possible ways of ranking occupations in

hierarchical order. One is to classify them according to their social standing or prestige, as evaluated by public opinion surveys. The other is to rank occupations according to a scheme based on educational requirements and monetary returns, to give a socioeconomic index of occupational status. Both of these type of scalings are the subject of some debate, especially regarding exactly what it is that they measure. Briefly, there is disagreement over whether the "prestige" score actually captures that attribute of deference rather than an estimate of "goodness" or "desirability" (Featherman et al., 1975:331; Sorensen, 1979:364). The more important disagreement for our purposes, however, concerns the socioeconomic scales, for this is the approach chosen by Blau and Duncan and used in most subsequent status attainment research.

The particular rating they employ, one developed by Duncan (1961), was "designed to give near-optimal reproduction of a set of prestige ratings" (Blau and Duncan, 1967:119). This ambiguity concerning its objective raises the question of what precisely Duncan's Socioeconomic Index (SEI) measures. Hauser and Featherman (1977:27, 50) see a fairly distinct separation between the "objective" socioeconomic index and "subjective" prestige scales; the latter are a "fallible index of occupational status," an "error-prone proxy for socioeconomic status." Because they believe that the "hierarchical structure

underlying occupational roles is largely socioeconomic," Featherman et al. (1975:331) prefer Duncan's SEI over any prestige rating. They thus imply that Duncan's scale is not based on "popular ratings of the social standing of occupations" (Featherman et al., 1975:335; Hauser and Featherman, 1977:9). Yet the ambiguity of the SEI's original design, quoted above from Blau and Duncan (1967:119), would seem to contradict them on this point.

Haug (1977:60) agrees with the founders of the field. Of Duncan's SEI, he remarks:

> This index, in utilizing occupational incumbents' education and income to determine a work role's score, appears on its face to be a socioeconomic scheme and is so titled. However, the basis for ordering the occupations is a prestige rating, or more precisely, a mathematical surrogate for a prestige rating, which roots the entire scale in the grounds of public opinion.

Sorensen (1978:223-24) concurs: "The most commonly used measure of socioeconomic status--Duncan's SEI scores (Duncan, 1961)--in fact is derived from occupational prestige scores." So, it seems that, while the SEI does capture some substantial aspects of socioeconomic status, it is primarily a "prestige-based measure" (Haug, 1977:74). At least occasionally, Featherman and Hauser (1973:241-42; Hauser and Featherman, 1977:53) appear to admit as much: "Duncan's index of socioeconomic status (SEI), when applied as an attribute of a person, denotes the status accorded to the individual as the incumbent of

a particular occupational role."

In any case, whatever it measures, the SEI is the preferred index of occupational status among status attainment researchers. One other point about its use deserves attention. Blau and Duncan (1967:123-24) properly remind us of an important assumption:

> The use of occupational status scores carries a theoretical implication. We are assuming, in effect, that the occupation structure is more or less continuously graded in regard to status rather than being a set of discrete status classes.

This assumption results in the ability to rank occupations quantitatively along a single dimension, "status" (cf. Hauser and Featherman, 1977:6).

Figure 1 indicates the range and scale of Duncan's SEI (Featherman and Hauser, 1976:406; Hauser and Featherman, 1977:17, 27). How, though, are these numbers used in empirical studies? Let me address this question by briefly considering the status attainment model of income determination.

After Blau and Duncan's treatment of occupation, researchers extended to model to analyze other types of "acheived status," including income. Their basic model of income determination is the following (Hauser and Featherman, 1977:272; cf. Duncan, 1968:693, 1969a:90, 1969b:84; Duncan et al., 1972:39; Sewell and Hauser, 1975:49; Featherman and Hauser, 1978:290): Father's years of schooling and father's SEI determine the son's

	SEI
Professional, technical, and kindred	75
Managers, officials, proprietors	57
Clerical and kindred	45
Sales and kindred	49
Craft and kindred	31
Operatives	18
Service	17
Nonfarm labor	7
Farmers and farm managers	14
Farm laborers	9

Figure 1. Duncan's Socioeconomic Index (SEI) For Major Occupational Categories.

Source: Hauser and Featherman, 1977:17.

education, which in turn affects his own SEI, which finally influences his income. Obviously, this is but a simple extension of the occupational status model, with the addition of income as a dependent variable. It may be presented in a "path diagram" as in Figure 2. The rationale for such a model is best stated by Sewell and Hauser, 1975:2-3:

> We believe that earnings, here defined as direct monetary reward for occupational performance, are only one of a number of rewards that may accrue to a person because of his performance of social roles--in this case an occupational role. For this reason we think the distribution of earnings should be interpreted in the context of the allocation of occupational roles and their related perquisites. That is, earnings are a status achievement, just as is educational attainment or occupational achievement. Moreover, earnings are to some extent dependent on occupational attainment, just as occupational attainment is to some extent dependent on educational attainment (cf. Duncan, 1969a:89-91; Featherman, 1971; Wang and Sewell, 1980).

The above relatively coherent statement of the empirical relationships in the model is in contrast to the following admission:

> We lack a compelling theory of the relationship btween earnings and occupational status. The Duncan SEI scales occupations with regard to their educational requisites and economic rewards; therefore, the relationship between occupation and earnings indexes the degree of correspondence between personal economic reward and position in the socioeconomic structure via occupational incumbency (Featherman and Hauser, 1978:290).

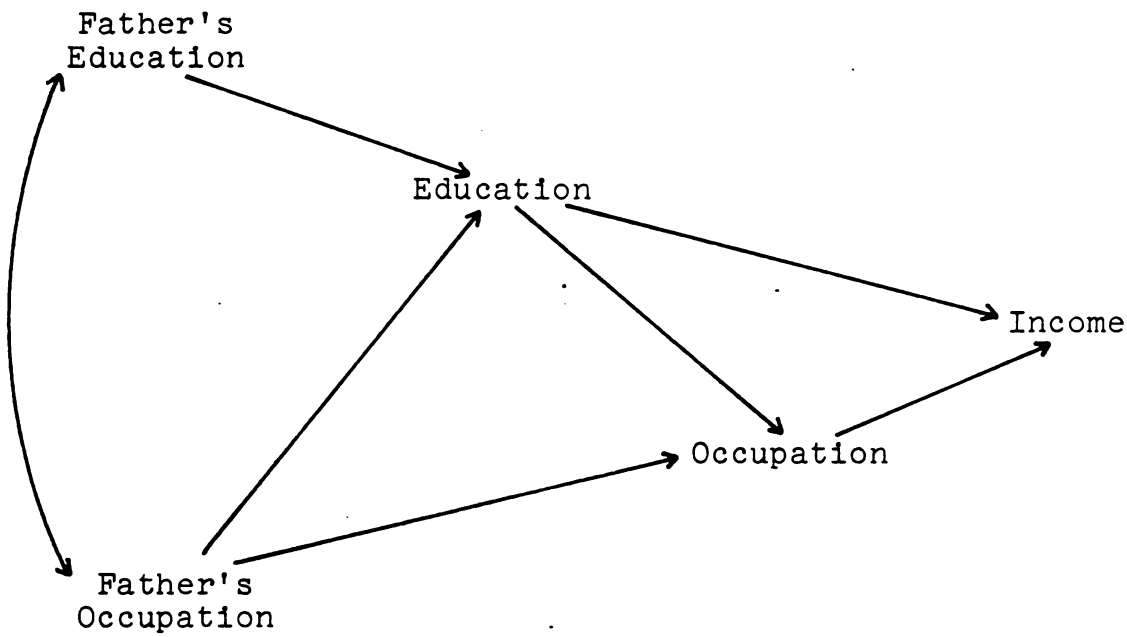


Figure 2. The Basic Status Attainment Model of Income Determination.

Source: Hauser and Featherman, 1977:272.

This, then, is the fruit of "two decades of cumulative social science" research in the status attainment tradition (Featherman, 1981).

III. Critiques

No version of social stratification goes unchallenged. As we might expect, the status attainment approach, including its analysis of income inequality, has come under severe theoretical and empirical attack. Before presenting an alternative conceptualization for comprehending income inequality, let me summarize the major criticisms of the still-dominant status attainment approach.

Other than the "review symposium" of Blau and Duncan (1967) in the AMERICAN SOCIOLOGICAL REVIEW (April 1968), there were few sustained critiques of status attainment research before 1974. Parkin (1971:17) did criticize in passing the tendency of American sociologists to reduce stratification to a multidemensional set of statistical rankings such as the SEI, which "obscures the systematic nature of inequality." Since the mid-1970s, however, at least four critical themes have been evident (Colcough and Horan, 1983).

First is a challenge to the assumption that prestige or status scores, as currently operationalized, represent the most significant aspect of occupational differentiation. Alternative conceptualizations of

occupation include authority, power, or autonomy in the workplace (Dahrendorf, 1959; Baron and Bielby, 1980; Kalleberg and Griffin, 1980; Kalleberg et al., 1981; Horan and Tolbert, 1982). Bottomore (1968) digs even deeper by inquiring into the relationship between occupation and class and raising the important issue--addressed later in this work--of the role of property ownership in social stratification (cf. Wesolowski et al., 1979:9).

Second is the relative inattention devoted to race and gender. Status attainment models do not explain black-white or male-female differences very well. In fact, they did not seek to do so initially. Still today, most mobility work deals only with white males--another tradition started by Blau and Duncan (1967). Critics charge that ignoring blacks and women, often the most oppressed groups, hardly gives an accurate portrayal of the stratification system (Crowder, 1974:38; Coser, 1975; Burawoy, 1977; Hurst, 1979:281-85). As Gintis (1980:13) comments in a related context: "A more flagrant case of 'touting your wares' would be hard to find."

Third is the relative inability to explain economic inequality, especially income determination. While status attainment models can predict occupational prestige and educational achievement moderately well, they generally fail to account for much variation in income (Jencks et al., 1971:226; Crowder, 1974:25; Wilson, 1978, 1981; Hurst, 1979:279-87; Colcough and Horan, 1983; see also

Haller, 1977, 1982; Featherman and Hauser, 1978:289). This shortcoming is of course central to the focus of my work; I later dwell on it at length.

Fourth is the theoretical underpinning of status attainment research. In his presidental address to the American Sociological Association, Coser (1975) accused path analysts, and stratification researchers in particular, of "mindless empiricism" (cf. Coser, 1976:37; Featherman, 1976; Treiman, 1976). Burawoy (1977) reiterated Coser's charge that status attainment work is atheoretical and un-sociological since it ignores the impact of social structure. He sees this at least in part as a consequence of the use of "linear statistics," including regression analysis (cf. Treiman, 1977). This last criticism, at the level of theory, deserves greater treatment. I briefly review the more significant theoretical critiques of status attainment research.

Sorensen (1976:73, 80) argues that the work devotes too little effort at specifying the causal mechanisms that it claims to have identified. That is, status attainment analysts have no "theory about how observed outcomes are produced." Although they interpret their empirical findings as being an inequality of results determined by the distribution of individual characteristics, the correlations may instead reflect the inequality of opportunity founded on the social structure as a set of "empty places," not the attributes of individuals. At

base, then, Sorensen (1976:76) maintains, status attainment research is theoretically ambigious.

Bielby (1981) defends this approach to some extent by pointing out it is essentially concerned with the sorting of individuals within a given social system. Indeed, many sociologists note that status attainment work focuses mainly at the individual level and tends to overlook social structure or "positional inequality" (Bielby and Kalleberg, 1981; Kalleberg and Griffin, 1980). Granovetter (1981:15) observes that even the term "attainment" itself reflects an individualistic bias. Halliman and Olneck (1983:1) state that status attainment analysis is "inherently incapable of explaining the institutional and interactional processes which generate the relationships the paradigm so ably documents." Campbell (1983:59) agrees: "One cannot examine the impact of social structure by holding it constant." And Hurst (1979:287) concludes that status attainment "occurs WITHIN a system of inequality" (see also Pawson, 1978:624).

Crowder (1974) develops all of these criticisms in a particularly detailed and convincing manner. He offers a thoroughgoing critique of the leading exponent of status attainment research in the United States, O. D. Duncan. "Duncan's major conceptual error, the ignoring of systemic constraint upon reward acquisition, leads directly to labelling a model which represents only a segment of the stratification system as THE model of the system"

(Crowder, 1974:40). Duncan's models do not contain structural features of the society that exist prior to and independently of any person's entry into it. Although conceptually aware of such a system (Duncan, 1968:690), his empirical work on "the process of stratification" makes no such allowance. Crowder argues that an individual's characteristics, whether ascriptive (family origins) or achieved (education), simply are not the major factors that determine income. As evidence for this claim, Crowder (1974:38) points to the fact that status attainment models rarely explain, in a statistical sense, more than 25 percent of the variance in individual income. Therefore, if the aim is to understand the system of stratification, then Blau and Duncan's original, and oft-repeated, question--the relative impacts of familial ascription and individual achievement in status attainment--is misdirected. It fails to raise, much less to answer, the central underlying causes of social inequality.

The other detailed critique of the literature is Horan's (1978). Unlike Coser (1975) and Burawoy (1977), he maintains that status attainment work is not atheoretical at all but quite "theory-laden"--and that the theory is inappropriate. Horan (1978:535) asks, "what would our basic conception of stratification have to be in order for the status attainment model to be appropriate?" He attacks the use of Duncan's SEI as an indicator of

occupation; numerical prestige scores imply a "continuum of presumably consensual popular evaluation in which differences between occupations can only be matters of degree." Occupational differentiation, and social structure in general, is thus reduced to "shared values among individuals"--and the sociological theory that supports such a view is Parsonian functionalism, which Horan views as essentially flawed (cf. Beck et al., 1978, 1980; Hauser, 1980).

So, even if status attainment work is not atheoretical, it is non-structural. The conventional models are not only individualistic, but they posit the open, competitive, and homogeneous "market process" (cf. Horan, et al., 1980). Each person is justly rewarded according to their value to society, exactly as neoclassical economic theory ordains. Why, though, is status attainment research so individualistic? Both Coser and Burawoy say that it is due to the methodological procedures of the research itself such as the use of "linear statistics." Horan (1978:538) disagrees, attributing that individualism (e.g., market homogeniety) to functionalist/neoclassical theory rather than to any particular method of analysis (cf. Featherman, 1981).

The next chapter offers an alternative to the status attainment approach that seeks to overcome many of the criticisms expressed above.

CHAPTER THREE: THE CLASS STRUCTURE APPROACH TO INCOME DETERMINATION

As we have seen, Otis Dudley Duncan pioneered the status attainment approach to social stratification. With considerable justification, we may say that the "Duncan" of the class structure perspective on income inequality is Erik Olin Wright. A major difference, of course, is that Wright works from an explicit theoretical perspective (Marxism), and a particular variant within that. Wright is one of the most influential young Marxist sociologists in the United States. His work represents a unique blend of two ostensibly disparate fields, French structuralist Marxism of a highly theoretical sort (Althusser's philosophy, Poulantzas' sociology) and quantitative empirical analysis of the kind begun by status attainment researchers. His contributions lie in both Marxist class theory and studies of income determination. This chapter reviews both these areas, the first of which establishes the framework for the second.

The class structure approach to income determination is offered as an alternative formulation to the status attainment tradition. I first introduce this perspective through a discussion of the central concept, "class," then present its analysis of income inequality. I conclude with a survey of its most recent applications and

extensions as well as the major criticisms that have been levelled against it.

I. Class

Wright defines class in terms of the social relations of production. This, of course, anyone claiming to be in the Marxist tradition would do. But what do these terms signify? What is distinctive about the Marxist approach to class? Marx himself was not exactly clear on what constituted a class (see, e.g., Marx, 1967:885-86; Ollman, 1968). As Wright (1980b:327-28) points out, his particular answers to these questions represent only one stance within a larger debate among Marxist scholars.

Wright (1979:4, 1980b:325) begins by contrasting other sociological definitions of class with each term in the phrase, "social relations of production." First, he understands class as being essentially relational rather than gradational. American stratificationists, following Parsons (1940, 1970) and Warner et al. (1949), typically adopt a gradational view. They see class hierarchically, as levels or strata that rank higher or lower along quantitative dimensions such as income or occupational status. From this angle, class is simply a descriptive, statistical aggregation--a variable on a continuum. From the relational standpoint, however, classes are categorical; they represent qualitative divisions in society. One class is not merely relative to, but in

relation with, another. The focus is not on more or less of any given attribute but rather on distinctly different positions within a system of social relations. As against many contemporary stratification theorists, both Marx and Weber take the relational view of the concept of class.

Secondly, Wright (1980a:177, 1980b:325) sees classes as fundamentally social instead of technical relations. Other sociologists identify classes as relational, but locate them in the technical organization of economic relations. Dahrendorf (1959) and Lenski (1966), for example, emphasize the authority relations derived from the technical organization of production. Alternatively, Davis and Moore (1945) and Parkin (1971) rely on the technical division of labor (e.g., white-collar and blue-collar) to ground their conceptualizations of (occupational) classes. Wright (1980b:325), on the other hand, prefers to view class relations as "irreducibly social, and thus the analysis of those relations requires a systematic analysis of the forms of social organization of economic relations." This is the task of Marx's concept of "mode of production," as elaborated below.

Finally, Wright (1979:10, 1980b:326) locates classes in the sphere of production rather than that of the market. The latter position is the focus of Weberians. Weber's (1946:181) analysis defines classes as social groups that have common causal factors determining their life-chances on commodity or labor markets. Weber thus

identifies classes only with exchange economies. Other forms of stratification--social status and political power--were historically more important, but under modern "rationalized" capitalism, the economic element of class is generally the chief basis of inequality (Weber, 1946:183-90; cf. Giddens, 1973:105-07; Parkin, 1979:46-58).

In contrast, Wright (1979:10, 1980b:326) sees classes as being basically structured by the social relations within the production process itself. Exchange relations remain important, but secondary, in a Marxist analysis. A particular concept of exploitation is crucial here. It refers to a relation in which people in one social position can appropriate the surplus labor, or the social product of that surplus labor, of people in another, subordinate position. Class analysis in this sense seeks first to determine precisely how surplus labor is extracted. This is the purpose of the theory of mode of production, which specifies the predominant manner of appropriation--e.g., rent in the feudal mode, wage-labor in the capitalist. Classes, then, are broadly conceived according to their location within such relations of exploitation (Wright, 1979:15-17, 1980a:179-80).

After thus differentiating his Marxist conceptualization from gradational, technical, and market-exchange definitions, Wright (1979:17, 1980b:326; Wright and Perrone, 1977:33) describes classes as "common

structural positions within the social organization of production." This stance follows Lenin's (1975:479) elaboration:

> Classes are large groups of people which differ from each other by the place they occupy in a historically determined system of social production, by their relation (in most cases fixed and formulated in law) to the means of production, by their role in the social organization of labour an , consequently, by the dimensions and method of acquiring the share of social wealth of which they dispose. Classes are groups of people one of which can appropriate the labour of another owing to the different places they occupy in a definite system of social economy.

It should be noted that this definition is an economic, structural approach that downplays political and cultural features necessary for a complete view of class (Ollman, 1968). The assumption here is that an analysis of class structure is prior to a full grasp of these other aspects of class (Wright, 1979:20-33, 1980b:365-70, 1980c:1438). While not an ideal solution to the problem of studying class, this is one frequently followed by social scientists (e.g., Hill, 1973:234; Braverman, 1974:27). I return to this problem at the end of the chapter.

What classes, then, can be identified in the capitalist mode of production? Traditionally, Marxists analyze the class structure of capitalism in terms of (1) ownership of the means of production, (2) the buying of labor-power, and (3) the selling of one's own labor-power. These criteria result in the delineation of two basic

classes: capitalists (1 and 2 above) and wage-laborers (3 above). Capital and labor are thus social categories, defined only in relation to one another. They compose the capitalist mode of production, based on a relatively few owners of productive property that employ the mass of workers who are "free" to enter into the social relations of production with them (Marx, 1976; Wright and Perrone, 1976:33).

This mode of production level of analysis aims to describe the fundamental, abstract determinants of social conflict and change. To study concrete, historical social formations, however, requires the identification of other classes; no mode of production exists in pure form. Capitalist society also contains, for example, a petty bourgeoisie, those who own and operate their means of production but neither hire nor sell labor-power. This class, while not strictly part of the capitalist mode of production, always appears in capitalist societies (Marx, 1976:927). It makes up the independent (petty or simple) form of production. In addition, for the investigation of contemporary capitalism, Wright (1976, 1978a, 1979, 1980a, 1980b) has developed the concept of "contradictory class locations." These positions fall between the above three basic classes according to the social relations of control over production.

The social relations of production under capitalism consist of three interdependent processes or dimensions:

social relations of control over money capital (flow of investments and the accumulation process); social relations of control over physical capital (use of the actual means of production); and social relations of control over labor (authority in the work process). "Control" here does not mean primarily a relationship of people to things (tools, buildings, land) but of people to other people. In the process of production, capitalists have the power of control, workers lack it. The social relations of production, then, are not the attribute of an individual so much as of a position within the class structure (Wright, 1979:24). If someone were to change from being a capitalist to a worker, for instance, s/he would thereby lose control over the means of production.

The three social processes of control, outlined above, are not always clear cut, giving rise to contradictory class locations that partake of some but not all of these dimensions. These structurally ambiguous class positions are in contrast to basic classes--those that exist within modes of production per se (Wright and Singelmann, 1982:S180-81; Wright et al., 1982:710). The most important contradictory classes are the following: (1) Managers and supervisors, who usually have some control over physical capital and labor, occupy the "space" between capitalists and workers. (2) Semi-autonomous workers (e.g., employed engineers, professors) maintain a significant degree of control over their own

labor process, so are located between the petty bourgeoisie and workers. (3) Small employers control investment and the means of production but hire only minimal wage-labor; they are between the petty bourgeoisie and capitalists (Wright, 1979:39-49). A first approximation of the class structure of advanced capitalist societies thus includes capitalists, wage-laborers, and the petty bourgeoisie plus managers, semi-autonomous workers, and small employers. Wright presents these class positions in a visual display reproduced here as Figure 3.

II. Class Structure and Income Determination

This, then, is the conceptual scheme that Wright (1978b, 1979, Wright and Perrone, 1977) applies to the problem of income inequality. He is not the first to use historical materialism in an anlysis of income (see, e.g., Hill, 1973; Bowles and Gintis, 1976), but he makes significant advances. Wright (1979:58-96) first "reconstructs" a Marxist theory of income determination, using social structures, classes, and individuals as units of analysis. Since he is concerned primarily with one certain type of social structure, capitalist society, he focuses on classes and individuals.

In Wright's theory, income is determined basically by location in the class structure rather than by a cluster of individual traits, as in status attainment research.

Capitalist Mode of Production	Simple Commodity Production
CAPITALISTS	
	Small Employers
Top Managers Middle Managers Technocrats	
	PETTY BOURGEOISIE
Bottom Managers Foremen Line Supervisors	
	Semi-autonomous Employees
WAGE-LABORERS	

UPPER CASE = Basic Class Positions
lower case = Contradictory Class Positions

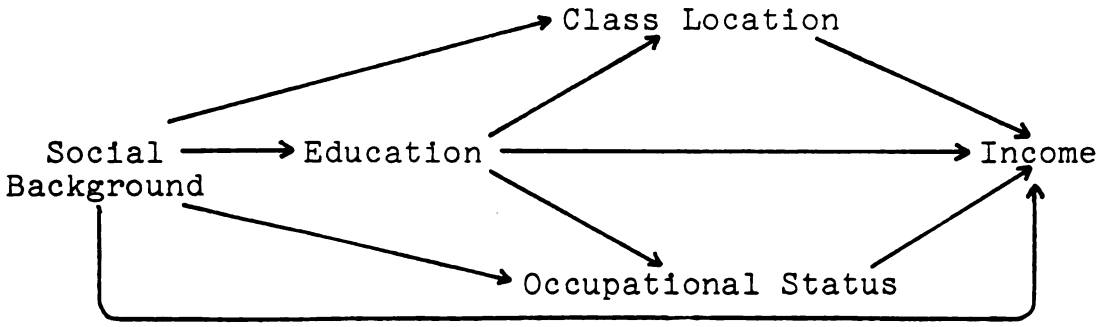
Figure 3. Wright's Model of The Class Structure of Capitalist Society.

Source: Wright, 1979:42.

Classes acquire money in fundamentally different ways. Workers, for instance, earn wages by selling their labor power to capitalists; capitalists, in turn, exploit workers to derive profits. Both are in contrast to the self-earned income of the petty bourgeoisie. And landlords receive money through the payment of rent. In addition, classes establish limits within which exchange and technical relations influence income. For example, regardless of the educational attainment of a wage-laborer, s/he cannot hope to get the monetary rewards of a large capitalist--a situation that nicely illustrates a class-level analysis as opposed to the individual level. This does not mean, however, that an individual's education and occupation are irrelevant to personal income determination, only that their effects are structured by class relations. In other words, the class structure mediates a person's income attainment. Figure 4 illustrates these conceptual models of income determination.

Based upon these suppositions, Wright develops three sets of hypotheses, which he proceeds to test empirically. First, he shows that class, understood as a common structural position in the social relations of production, influences income independently of occupation, and, in fact, offers a better statistical explanation of income level than does occupational status (Duncan's Socioeconomic Index). Second, he illustrates the claim

A. Individual-Level Model for Comparing Class and Status.



B. Basic Model for Investigating Class Mediations.

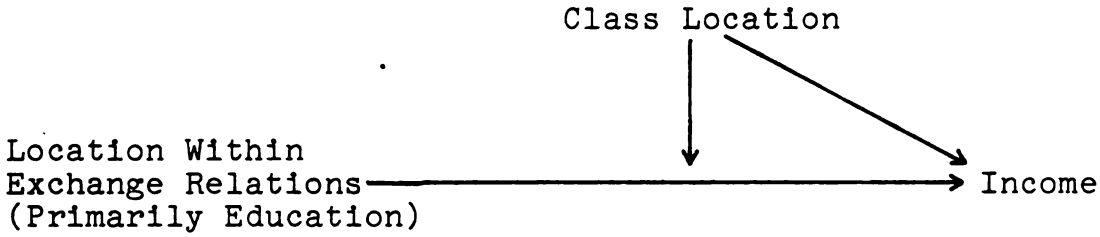


Figure 4. Wright's Basic Models of Income Determination.

Source: Wright, 1979:98-99.

that class mediates income by showing that monetary "returns" to education vary significantly across classes. Specifically, education affects managers' incomes much more positively than it does for either workers (who can't fully benefit from it) or capitalists (who don't need it). Third, Wright demonstrates that class also mediates the effects of race and gender. In particular, whites and blacks, and men and women, in the same class location have incomes more similar than if class is not taken into account. This is not to deny the negative effects of racism or sexism on income, but to suggest, again, that class structures those impacts.

One of the conclusions that Wright (1979:223-24) draws from his detailed analysis is that property ownership remains extremely consequential in advanced capitalist society. Despite decades of "post-industrialism," including Featherman and Hauser (1978), and the "managerial revolution" theorists, the ownership of the means of production is still decisive. The empirical part of the present work is centrally concerned with this point.

III. Extensions and Criticisms

Wright's innovative approach has already spawned a good deal of empirical work in sociology. Let me briefly mention the various pieces of research. Robinson and Kelly (1979) use Wright's class structure (as well as

Dahrendorf's authority) approach and report that the class models perform quite well relative to the status attainment paradigm in predicting income (cf. Attewell and Fitzgerald, 1980; Robinson and Kelly, 1980). Along similar lines, Kalleberg and Griffin (1980), following Wright, conceptually distinguish class from occupation and employ the concepts to analyze income inequality among individuals. Both operationalizations appear to exert independent effects on the outcome variable (see also Kalleberg et al., 1981). Robinson and Kelly (1979) and Kalleberg and Griffin (1980) suggest that there are two stratification systems in advanced capitalism, one occupational (based on the technical division of labor), the other class-based (the social relations of production). This empirical evidence supports Bottomore's (1968) original criticism of the Blau-Duncan (1967) model, that it ignores the relationship between occupation and class.

Several scholars have applied Wright's approach to nations other than the United States. Koo and Hong (1980) follow Wright's lead in an analysis of income stratification in Korea. They find that class and occupational status are equally determinate of individual income. They also modify Wright's framework by incorporating a Weberian white-collar--blue-collar distinction that captures the social division of labor; this considerably improves the statistical explanatory

power of their model. Winn (1982) conducts a similar analysis of Sweden and obtains similar results. Haller and Pastore (1982) report that the category of capitalist, or "self-employed employer," significantly outperforms all other variables in predicting income differences in Brazil.

Several other students of stratification have employed Wright's scheme in modified fashion. Lord and Falk (1980) compare Wright's "structural" approach, along with a segmented labor market analysis (Beck et al., 1978), with the conventional "individualistic" account of income differences. Again, both theories contribute to the explanation, with the former working better for men and the latter, for women (cf. Morrissey, 1981; Lord and Falk, 1981). In a study of capitalists' income, Aldrich and Weiss (1981) transform Wright's model by assuming a continuous rather than categorical conceptualization of class divisions. By focusing particularly on workforce size as differentiating the "owning" classes, they obliterate the distinctions between capitalist, smaller employers, and petty bougeoise. This continuous indicator of firm size predicts property-owners' incomes much better than do competing interpretations based on age, education, or job tenure.

Even though Wright's class structure approach is only a few years old, it faces a considerable number of

critiques. It is useful to divide the objections into those of conventional sociologists and those of more radical social critics, including Marxists.

Within mainstream sociology, several criticisms are levelled. One is that Wright's operationalization is base on authority relations and, thus, derives more from Dahrendorf than from Marx (Robinson and Kelly, 1979:40; Koo and Hong, 1980:617-18; Parkin, 1979:21-23; cf. Plotke, 1980:99-103). Aldrich and Weiss (1981:281) further criticize him for not differentiating the capitalist class (cf. Singer, 1982:106). Baron and Bielby (1980) lump Wright together with others (the "new structuralists") who look at the wrong level of analysis. In particular, they argue, Wright and the others are guilty of trying to explain micro processes (e.g., income determination) with macro mechanisms (class structure). Baron and Bielby suggest that the crucial missing link is firm-level analysis.

Two other critics of Wright are more harsh. In his review of Wright (1979), Keyfitz (1981a) charges that the empirical results interpreted according to the thesis of exploitation face an alternative explanation based on notions of efficiency and productivity. In response to Wright's (1981) and Burawoy's (1981) rejoinders, Keyfitz (1981b) further criticizes Wright from a neo-classical economic point-of-view. He adds that Wright's data cannot address his claims. This latter point and other

methodological concerns are the subject of the most developed critique by a non-Marxist. Clogg (1982) observes that while Wright insists on the theoretical distinction between class and occupation, their empirical overlap is considerable (cf. Wright, 1980a). He suggests that Wright's classes are simply regroupings of occupations. He also is critical of the specific regressions compared, and says that Wright fails to entertain alternative explanations of his findings.

Giddens (1981:302-05) addresses Wright's work on the problem of the "new" or white-collar middle class. This pertains to the concept of contradictory class locations. He views Wright generally as tending toward a Marxist functionalism and objectivism (cf. Connell, 1979; Appelbaum, 1979). Giddens continues that contradictory class locations fail on three counts (besides being misnamed): it downplays the importance of (1) the labor market, (2) the manual versus non-manual distinction, and (3) women in lower white-collar jobs (cf. Connell, 1979:311).

In line with Giddens' general evaluation, many critics point to a crucial shortcoming of Wright's stance. It tends to bypass the subjective interests and activities of people. Whether calling his approach formal, static, abstract, ahistorical, economistic, undialectical, or "structural schematism," all are critical of his emphasis

on structure over process (Greenberg and Mayer, 1978:169-76; Ehrenreich and Ehrenreich, 1979:325; Eyerman, 1979; Plotke, 1980:99-103; Wolff and Resnick, 1982:16). Carchedi (1981:344) summarizes the danger as that of "sliding from a structural to a structuralist approach."

The most detailed critique of Wright has to do with the three processes of the social relations of production and the resulting class structure, including the contradictory classes. Greenberg and Mayer (1978:174), for example, pick out his analysis of the petty bourgeoisie, which controls money-capital and the physical means of production but not the labor-power of others. Formally, this combination of criteria would seem to locate the petty bourgeoisie between the capitalists (who control all three dimensions) and the wage-laborers (who control none). Yet, Wright says that the petty bourgeoisie emerges from a different mode (or form) of production altogether, and thus is not part of the capitalist mode. Greenberg and Mayer (1978:174) view this argument as unconvincing "since all class locations are interrelated at the level of the social formation." Are Wright's three criteria sufficient to identify classes, or not? Falling back upon a "mode of production" analysis at this point seems, at least to some, to smack of theorizing by fiat (cf. Crompton and Gubbay, 1978:182-90; Connell, 1979; Singer, 1982:106).

These criticisms are not to be taken lightly. Some of them strike at the heart of Wright's approach. They raise questions, for instance, about what constitutes class analysis. Does it primarily, or even initially, deal with the economic structure of society? The founder of the tradition, Marx, would probably say no. Class analysis must treat the political and cultural elements of social life as well; the point is to grasp how people can make their own history. Unfortunately, the approach I have taken and the data that I use in this work do not allow for such a full class analysis. While my research thus cannot address many of the above criticisms, I shall return to discuss some of the issues in the concluding chapter. For now, however, I proceed with the research at hand. In the next chapter I modify Wright's perspective to make it applicable to farm land ownership. Then I compare this class structure approach with the status attainment model in an empirical analysis of the income determination processes of farm land owners.

CHAPTER FOUR: THE CLASS STRUCTURE AND INCOME DETERMINATION PROCESSES OF FARM LAND OWNERS IN THE UNITED STATES

I. The Class Structure of Farm Land Ownership

At first glance, it may appear that all owners of farm land in capitalist societies are in the same social class, the "landlords" of classical political economy. However, in the United States agriculture, land owners have never constituted a single class, nor do they anymore even in England (Roweis and Scott, 1981:151). Classes, as we have defined them above, are groups that occupy the same relative positions within the social organization of production. In particular, a clas is composed of those who have a similar relationship to the means of production (understood as the social relations of production, i.e., person-to-person rather than person-to-thing relationships). In agriculture, the primary means of production is land. Over three-fourths of the farm sector assets is in real estate (Cochrane, 1979:325). As elaborated in Chapter One, "land" connotes the social relationships of property rights in land. I thus delineate the class structure of farm land ownership on the basis of the various relationshipss of groups to land as a means of production.

Any discussion of the class structure of United States agriculture, or of land ownership as a part thereof, must confront the notion of the "family farm." There is no general agreement on the meaning of the term. This situation has led several students of capitalist agriculture to attempt to specify the content of "family farm" (e.g., Freidmann, 1978, 1980; Mooney, 1979, 1982; Goss et al., 1980; Buttel, 1980, 1982; Singer, 1979, 1982; Vogeler, 1981; Brewster, 1979, 1980).

Rodefeld undertook the initial effort to re-conceptualize the family farm. His full classification of farm types considers four factors of production (land, labor, capital, and management) and five associated status-roles (ownership of the first three of the factors, plus operational and organizational management (Goss et al., 1980:113; Rodefeld, 1976, 1979; cf. Lancelle and Rodefeld, 1980; Harris, 1974; Vogeler, 1981:21). Rodefeld's (1976:101, 1978:159, 1979:385) simpler typology, displayed in Figure 5, assumes that land ownership, capital ownership, and operational management reside largely in the same unit. It differentiates farm operators on two bases: land ownership and labor provision. The family farmer owns most of the land operated and provides most of the labor utilized. The three other types (tenant, industrial, and larger-than-family) deviate from this basic structure. As seen in the labels, Rodefeld preferred a somewhat less connotative

Level of Land Ownership by Farm Manager[1]	Level of Labor Provision by Farm Manager[1]	
	High Family-sized	Low Larger-than-family-sized
High: land owner managed	A Family-type	C Larger-than-family-type
Low: Non (land) owner managed	B Tenant-type	D Industrial-type

[1]High = more than 50%; low = 50% or less.

Figure 5. Rodefeld's Farm Typology.

Source: Rodefeld, 1978:159.

term than "family farmer." Buttel followed him in this preference, and with a higher degree of theoretical specificity.

Buttel (1980) makes the case that the concept of family farm is too imprecise and ahistorical for fruitful social-scientific inquiry. He recasts the general notion in terms of "independent commodity production," a more historically-specific concept. Independent (or petty or simple) commodity production is a form of production in which the direct producers and their household own the means of production, provide the labor themselves, produce commodities and enter into market exchange for money that supports the household (Kelly, 1979). Applied to agriculture, independent commodity production implies that the farm family (1) owns and controls the land and other "inputs" to production, (2) provides the labor used on the farm, (3) sells agricultural products on the commercial market, and (4) derives sufficient income from farming to meet its basic needs.

Buttel (1980) argues that thus reconceptualizing the "family farm" is essential to an understanding of contemporary United States agriculture. First of all, these attributes capture the ideal of Jefferson's independent yeomanry--the mainstay of American agrarianism. Secondly, they identify the type of agriculture that arose in Wes tern Europe and many of its colonies during the transition between feudalism and

capitalism. Finally, these four defining characteristics of independent commodity production may serve as "crucial benchmarks for gauging structural change in agriculture" (Buttel, 1980:11; see also Flinn and Buttel, 1980; Harris, 1974; Brewster, 1979). This last point is most important: As any of these aspects of "family labor farming" undergo transformation, the independent commodity producers move toward other class locations in the wider, more differentiated class structure of agriculture.

What are the other class positions in United States farming today? In the capitalist mode of production, as described by Marx, there are two essential classes, the owners of productive property and wage-laborers. Along with independent commodity producers, these constitute the central class locations in capitalist society. Buttel (1980:19) lays out a class typology of American agriculture in Figure 6. This listing is a starting point but really does not get at many of the underlying social relationships that define class positions. Buttel (1980:19) himself notes its major faults: it has no place for tenants, sharecroppers, or contract farmers; it is a rather static formulation; and it ignores the larger economy.

Mooney, however, has attempted a fuller analysis. Mooney (1979, 1982) outlines the three basic classes of capitalist farmer, farm worker, and family labor farmer. These are "basic" in the sense discussed in Chapter Three:

A. Agrarian Wage-Laborers

   1. Agricultural working class (propertyless seasonal or permanent laborers)

   2. "Semi-proletarianized" or part-time farmers

B. Agrarian Petty Bourgeoisie

   1. Petty or household commodity producers (i.e., family labor farmers or petty bourgeoisie who employ relatively little labor)

   2. (Unpaid) family laborers

C. Agrarian Capitalists

   1. Petty capitalist (or "larger-than-family") farmers who employ considerable hired labor

   2. Competitive sector capitalist farmers (farm operations owned by small nonfarm corporations)

   3. Monopoly sector capitalist farmers (farm operations owned by large nonfarm corporations such as Tenneco)

   4. Absentee landlords

Figure 6. Buttel's Outline of Agricultural Classes in the Advanced Capitalist Societies.

Source: Buttel, 1980:19.

they are completely polarized within the social relations of production. Moreover, he identifies six social relationships in agriculture that further differentiate and may eventually transform this basic class structure: tenancy, indebtedness, contract production, off-farm work, hiring wage-labor, and renting land out to others to farm. Any of these additional social conditions leads one out of simple commodity production and into the capitalist mode of production per se. In particular, the first four, Mooney claims, entail a move toward the working class, whereas the last two, toward the capitalist class. Mooney follows Wright in conceptualizing these potential social locations as "contradictory class positions" because they mix the pure criteria for class identification (the three dimensions of control over money-capital, physical capital, and others' labor-power). Among the contradictory locations that Mooney specifies are those of the farmer-landlord, who combines owner-operatorship with the appropriation of rent; the farmer-tenant, or part-owner, who may combine the renting in of land with any of the other criteria; and the part-time farmer, who actually combines two different class situations (farm and non-farm). Mooney's (1979:55) class positions are schematized in Figure 7.

Although Mooney draws extensively from Wright, he departs from him in two important ways. Wright (1979:39) states explicitly that his main concern is with structural

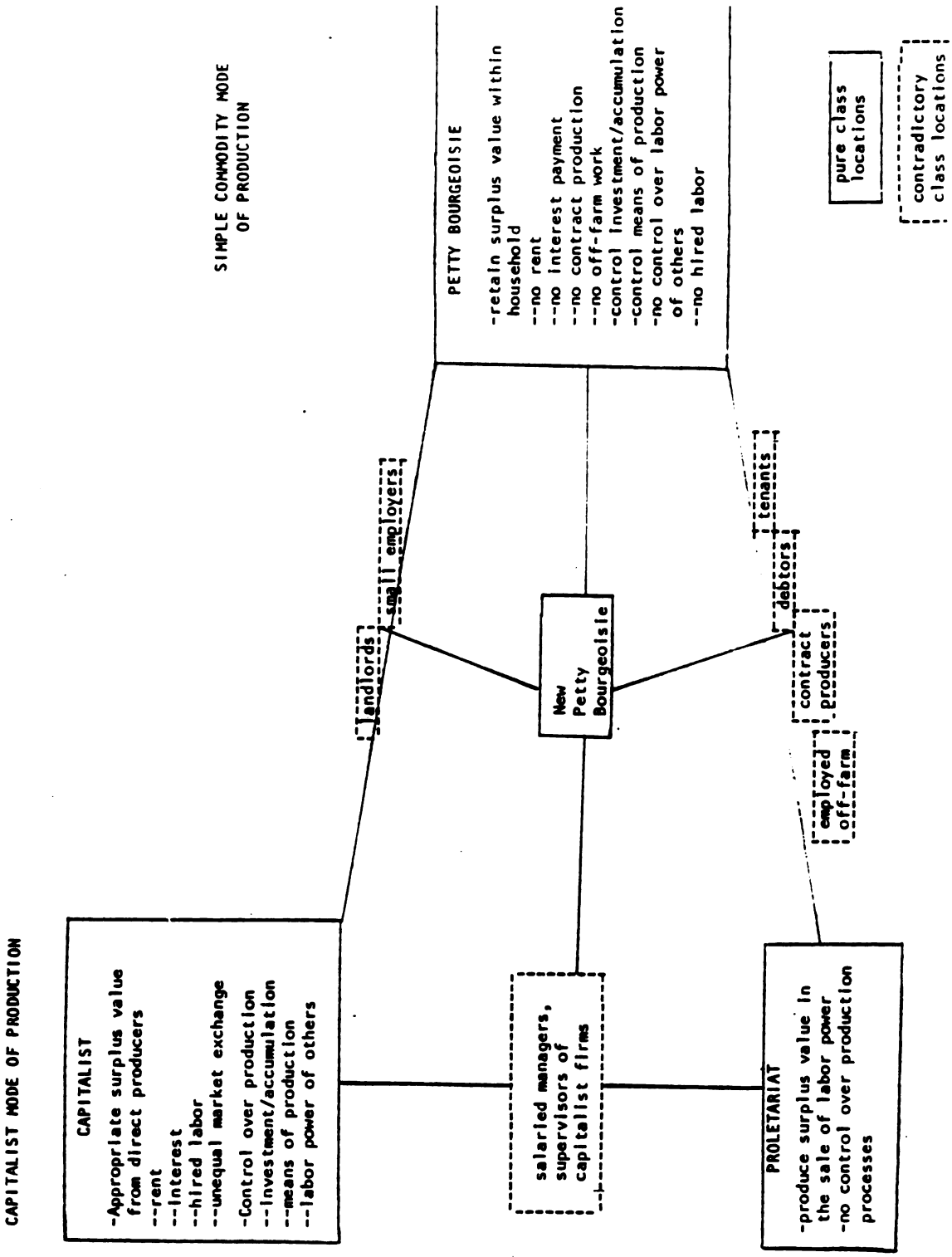


Figure 7. Mooney's Agricultural Class Typology. Source: Mooney, 1981.

positions and only secondarily with the specific persons who happen to fill those "empty places." Mooney, on the other hand, focuses on the person, who may simultaneously occupy two different class positions, as, for instance, is the case with the part-time farmer. Secondly, Mooney adds the possibility of combining two contradictory positions; the contract producer who hires wage-labor is a case in point. This modification may indicate some weaknesses of Wright's scheme. Mooney (1979:53), however, resolves it, at least for agriculture, by viewing such a contradictory class combination as entailing a move away from the family farmer and toward Wright's category of "manager."

Mooney's typology, while a definite advance over prior efforts, still has a number of serious flaws. It is not the case, for instance, that tenant farming necessarily involves the process of proletarianization. Indeed, as nineteenth-century English agriculture illustrates, one may quite easily be both a tenant and a capitalist (Marx, 1967). The typical farmer did not own the land he operated, and so had to pay rent to a landlord, but he also employed workers on the farm. The same situation can apply to the contemporary United States. In his critique of Mooney, Singer (1982) argues that the renting in of farm land has been integral to the notable increasing size of farms since World War II. "Tenancy" today hardly signifies the poverty and social relations of tenant farmers and sharecroppers in the

1930s. Similarly, neither is indebtedness necessarily a sign of dispossession. Borrowing large sums of money is standard fare for most capitalist enterprises today; there would seem to be nothing "proletarianizing" about it. As above, Singer (1982) points out that the increase in farm debt is closely associated with the growth of large commercial farms, including those that hire wage-labor.

In addition, we may question whether the structural position of part-time farmer entails exploitation or even disadvantage. Multiple job-holding in agriculture can occur in at least two ways, depending on whether the person is based in farming or not. That is, one can be primarily a farmer who works off-farm, or one can be primarily a non-farmer yet own and operate a farm on the side. The former case is more likely to be "proletarianized" since the farmer may be forced to take a job off the farm. Yet, even here, the extent of the farmer's joining the working class depends totally on what sort of job he obtains. The other case, of the farming non-"farmer," may in fact indicate the opposite of what Mooney implies: it may signal the "embourgeoisement" of heretofor propertyless wage-laborers (or the agrarianizing of white-collar professionals). The class position of part-time farmers is in much debate (e.g., Buttel and Larson, 1982; Buttel et al., 1982; Larson et al., 1983; Coughenour and Christenson, 1981).

The underlying difficulty, which gives rise to

criticisms such as the above, stems from the use of class criteria independently of one another. Other than the hiring of wage-labor, none of the six social relationships alone necessarily locate a farmer within a particular class. However, this is not to say that Mooney's criteria are useless--quite the contrary. I shall employ several of his ideas in developing my own class structure typology. The point is that the criteria need to be viewed interdependently. Class is not a unidimensional measure but rather involves a complex social process requiring detailed specifications. If the category of "pure" or non-operator landlord is added to Mooney's scheme, then his is a fruitful starting point to begin a conceptual analysis of the class structure of farm land ownership (not agriculture per se) in the United States. Let me now outline the components of such an analysis.

Recall from Chapter One the discussion of the three levels of "ownership" in capitalist society: legal, real economic, and possession, the latter of which Wright (1976, 1979) breaks down into control over the physical means of production and control over the labor-power of others. A formal typology at this point may assist us in grasping the essential relationships that are implied by the ownership of productive property, farm land in particular. It also provides another way of describing the different classes involved in the social use and control of land as a means of production.

Figure 8 has five columns, one each for the first two types of "ownership," two for "possession," and one for "direct producer." It contains all possible combinations for farm land owners, i.e., those who hold legal title to the property. Figure 8 represents more a formal exercise to display the potential types of combinations rather than a substantive effort to grasp class relations (a task that the next figure undertakes). There are sixteen possibilities. I have been unable to label six, all of which seem highly improbable. Four of them combine the role of direct producer with a lack of physical possession. Why would owners work on their own land yet have no control over the means of production? The other two unnamed positions control the physical capital but have no workers. They neither hire wage-labor nor work themselves. This appears to be a logical contradiction: control of the "actual operation of production" without any producers.

I have labeled ten of the possible combinations. The following figure elaborates upon several of these class positions, so at this point I briefly mention the others. Small employers combine characteristics of capitalists and family producers; they both employ wage-labor and work themselves. They thus occupy a contradictory position, being simultaneously in two basic classes. Owners with hired managers can either actively participate in control of the farm operation, or not. The latter would include

	Capitalist Social Relations of Production				
	Legal Ownership[1]	Economic Ownership[2]	Possession[3]		Direct Producer
			Physical Means of Production	Labor-Power of Others	
1. Small Employer	+	+	+	+	+
2. Capitalist Farmer	+	+	+	+	-
3. Family Farmer	+	+	+	-	+
4. (Improbable)	+	+	+	-	-
5. (Improbable)	+	+	-	+	+
6. Active Owner With Hired Manager	+	+	-	+	-
7. (Improbable)	+	+	-	-	+
8. Active Landlord	+	+	-	-	-
9. Small Employer/ Contract Farmer	+	-	+	+	+
10. Capitalist Contract Farmer	+	-	+	+	-
11. Contract Farmer	+	-	+	-	+
12. (Improbable)	+	-	-	+	+
13. Passive Landlord	+	-	-	-	-
14. (Improbable)	+	-	+	-	-
15. Passive Owner With Hired Manager	+	-	-	+	-
16. (Improbable)	+	-	-	-	+

+ = full control.
- = no control.

[1]Legal title to property (income rights).

[2]Control over investment and resource allocation.

[3]Control rights over actual operation of production ("physical capital" and workplace authority).

Figure 8. Possible Combinations of Dimensions of Farm Land Ownership.

absentee owners with little day-to-day interest in the farm (say, a New Yorker who inherited a ranch in Wyoming). The other major categories are contract farmers. These are owner-operators who enter into legal agreements with processing firms before planting time. They are thus assured of a market for their produce, but they often relinquish most of the control of the operation. The firm occasionally even provides capital inputs (other than land) and demands adherence to their, rather than the farmer's own, time-table. In such cases, the agribusiness corporation holds effective ownership of the farm (Pfeffer, 1982).

Let me now turn to the major class locations. Figure 9 has the same dimensions as the previous one. It identifies and situates the six different class positions that are primarily engaged in farm land ownership. As mentioned above, the basic classes in capitalism are capitalist and wage-laborer, or, in agriculture, the capitalist farmer and farm laborer. In addition, outside the capitalist mode of production as such is the agricultural version of the independent commodity producer, the family farmer. These three classes, again, are "basic" in that they have unambiguous social relations of production; it is clear whether or not they own and possess.

Capitalist farmers alone exercise control over the labor-power of others. This, of course, is central to the

	Capitalist Social Relations of Production				
	Legal Ownership[1]	Economic Ownership[2]	Possession[3]		Direct Producer
			Physical Means of Production	Labor-Power of Others	
Basic Classes:					
Capitalist Farmer	+/-	+	+	+	-
(Farm Laborer)	-	-	-	-	+
Family Farmer	+	+	+	-	+
Contradictory Class Locations (land owners):					
Landlord	+	+/-	-/+	-	-
Farmer-Landlord	+	+/-	+/-	-	+/-
Farmer-Tenant	-/+	-/+	+/-	-	+
Part-Time Farmer	+	+	+	-	+

+ = full control; +/- = major control.
- = no control; -/+ = some control.

[1]Legal title to property (income rights).

[2]Control over investment and resource allocation.

[3]Control rights over actual operation of production ("physical capital" and workplace authority).

Figure 9. Dimensions of Farm Land Ownership: Social (Class) Relations.

very definition of "capitalist." However, I shall not discuss this column further since all the other classes lack such control. Two other points about capitalists: First, while they do not necessarily have legal title to all of the farm land that they operate, they do have "real economic ownership" over the property. This illustrates the important Marxist distinction between formal juridical rights and substantive control over productive resources (Wright, 1979:33). Secondly, Figure 9 indicates that capitalist farmers are not direct producers. This is appropriate here since I am emphasizing a theoretical analysis of capitalist agriculture. But it is an oversimplification. Many large farmers, including those who hire wage-labor, are also involved as workers in the actual process of production; in this they are similar to family farmers. Still, here I am highlighting the theoretical difference between these two basic classes, which concerns the employment of wage-labor. Capitalists as capitalists do not work directly in the process of production.

The other essential class in capitalist agriculture, obviously, is the farm-laborer. Farm workers are not land owners at all. I include them here to complete the basic class typology and, especially, to "complement" the capitalist farmer. These two classes are shown to be mirror images of one another in every respect. The remainder of the class positions in Figure 9 all assume

some degree of farm land ownership.

Other than controlling labor-power, the family farmer is the only class position that is positively engaged at all dimensions of property ownership, being both an owner and a worker. This, again, is to reinforce Mooney's and Buttel's portrayal of the "family labor farmer" as fundamentally outside of the capitalist mode of production. Davis (1980) characterizes this form of independent commodity production as "propertied labor"--an apt description in line with Figure 9.

Landlords occupy the only class location (other than capitalists) that is clearly a non-producer. Yet landlords--along with the other contradictory class positions--are ambiguous on the two major dimensions of economic ownership and possession of the physical means of production. As relatively passive owners, pure landlords maintain control over only part of the investment and accumulation processes while they relinquish almost all of the control rights over the property (for the time stipulated in the rental agreement). A non-owning full tenant farmer would exhibit just the opposite relations of ownership and control.

Farmer-landlords and farmer-tenants are even more contradictory than pure landlords. Both directly operate some of their own land and so have "majority control" over the physical means of production. Farmer-landlords also rent part of their land out to tenants, thus having a

measure of economic ownership similar to full landlords, and an ambiguous place in the "direct producer" column. Farmer-tenants, on the other land, have only partial ownership (both legal and economic) since they rent in most of the land they operate, but they are clearly direct producers.

Part-time farmers are in a class by themselves. They actually are located in two class systems simultaneously--one on the farm, the other in their "off-farm" job. While formally like the family farmer in being fully engaged in all aspects of property ownership without hiring outside labor, part-time farmers are actually only partially in agriculture. This situation, for them, is what constitutes their "contradictory class location" (cf. Mooney, 1979:52; Singer, 1982:105; Buttel and Larson, 1982; Buttel et al., 1982; Coughenour and Swanson, 1983).

Figure 10 presents the class locations of contemporary American agriculture and farm land ownership in schematic form. This summarizes the end-point of my theoretical development; I shall shortly turn to empirical investigation. One thing that the classificatory schemes in Figures 9 and 10 accomplish is that they suggest the different bases for income among the various classes. Figure 11 makes this explicit. Each pure class has a unique income determination process. Capitalists acquire money in the form of profit, derived from the exploitation of wage-labor. Landlords receive rent from their tenants.

Capitalist Mode of Production

Independent Commodity Production

CAPITALIST FARMER

Landlord

Farmer-Landlord

FAMILY FARMER

Farmer-Tenant

Part-Time Farmer

(FARM LABORER)

UPPER CASE = Basic Class Positions
lower case - Contradictory Class Positions
( ) = Non Land Owner

Figure 10. The Class Structure of Farm Land Ownership.

	Land Bases of Farm Income		
	Land Owned & Operated	Land Rented In & Operated	Land Rented Out
Capitalist Farmer	Profit	Profit	(Rent)
Land-lord	--	--	Rent
Farmer-Landlord	Self-earned	--	Rent
Farmer-Tenant	Self-earned	Self-earned	--
Part-Time Farmer	Self-earned	(Self-earned)	--
Family Farmer	Self-earned	Self-earned	--

( ) = Minimal engagement
-- = Not applicable

Figure 11. Land Ownership Classes and Farm Income.

Family farmers, as with any independent commodity producer, generates self (or family) earned income. Farm laborers, of course, collect wages for their livelihood. These are the primary ways of receiving income from farm land. The remaining classes, then, combine income in various ways from these sources. The empirical part of this study inquires into exactly how the different classes of farm land owners acquire money in the various ways. The guiding purpose of this chapter so far has been to develop a typology of the class structure of farm land ownership to that end. Now I shall present the specific hypotheses that the remainder of this study will address.

II. Hypotheses Relating the Class Structure of Farm Land Ownership and the Incomes of Farm Land Owners

To claim that the class structure of farm land ownership significantly affects the income determination process is not to say that class alone accounts for the incomes of farm land owners. As Chapter Two discussed, there are many other factors that influence income, including age, education, gender, and occupation. In addition, farm income has its own subset of determinants. These include tenure (ownership and/or rental), the market value of land, size of farm (both acres and total value of products sold), part-time farming status, type of farm (commodities grown/raised), equity status (debt and net

worth), prices (input and product), and biological elements such as pests, diseases, and the weather (Larson, 1974, 1975; Larson and Carlin, 1974; General Accounting Office, 1978; Congressional Budget Office, 1978; Congressional Research Service, 1979; Penn, 1979; Schertz, 1979; Boxley, 1979; Boxley and Walker, 1979; Hottel and Harrington, 1979; Carlin and Ghelfi, 1979; Crecink, 1979; Banks and Kalbacher, 1981; Jensen et al., 1981; U.S. Department of Agriculture, 1981; Lyson and Horan, n.d.). The first four of these determinants (except total sales) are effectively incorporated into my subsequent analysis of the incomes of farm land owners (see Chapter Five).

Based on the above theoretical elaboration and development, I now propose a series of hypotheses linking the class structure of farm land ownership to the income determination process of farm land owners. The specific hypotheses are broken down into two different levels of analysis, individual and structural (or class). The first group is useful for comparisons with the status attainment approach to income differences. The second addresses questions that only Marxist theory has reason to ask. That is, the status attainment perspective does not recognize the existence of categorical classes as discussed in Chapter Three. Since they do not see classes themselves as interesting units of analysis, status attainment researchers would not pursue a structural approach such as I undertake below. The second type of

analysis, then, makes sense only if classes are viewed in their own right. Figure 12 portrays the general models for the two sets of hypotheses.

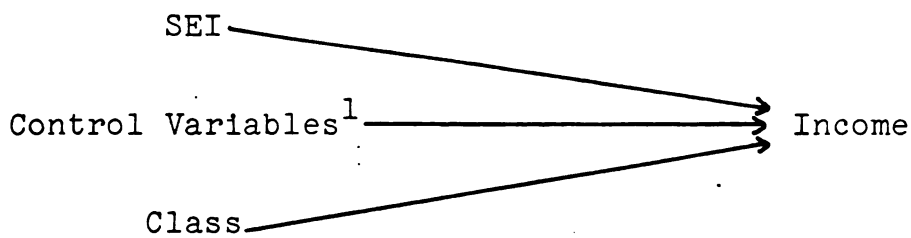
1. Individual-Level Hypotheses

The individual level of analsis furnishes a basis for comparing the two paradigms of income inequality employed in this study. Specifically, the following set of hypotheses offers progressively more rigorous "tests" of the class structure explanation of income determination.

HYPOTHESIS 1: Class will influence income independently of occupational status. Non-Marxist sociologists tend to confuse class and occupation. A prominent Weberian, for instance, argues that, in modern Western societies, the occupational order is "the backbone of the class structure" (Parkin, 1971:18). As discussed in Chapter Two above, status attainment analysts base their focus on occupation on such an argument. Blau and Duncan (1967:vii) say that "class differences come to rest primarily on occupational positions...." If indeed the class structure is essentially subsumed by the occupational structure, then class should exert very little independent effect on income when occupation is held constant. Hypothesis 1 provides a test of this proposition.

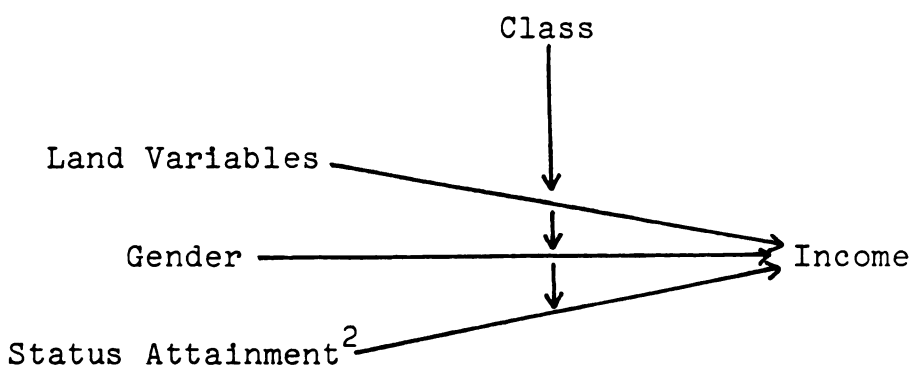
HYPOTHESIS 2: Class will have a greater impact on income than will occupational status. The status

A. Model For Individual-Level Hypotheses Comparing Class and SEI.



[1]Land Variables, Gender, Age, and Education.

B. Model of Class Mediations For Structural-Level Hypotheses.



[2]Age, Education, and SEI.

Figure 12. Basic Models For the Two Levels of Hypotheses.

attainment tradition maintains that occupation is "the key variable in the American stratification system" (Duncan, 1968:689). Marxists, on the other hand, hold that class is a more fundamental determinant of social stratification. Hypothesis 2 seeks to get at this debate by comparing the relative effects of class and occupational status on income.

HYPOTHESIS 3: Class alone will give a better explanation of income differences than will the status attainment approach. This constitutes a comparison of paradigms--the "strongest" test of Marxist class theory at the individual level. There is a certain amount of overlap between Hypotheses 2 and 3. If 3 is confirmed, then 2 must also be. However, it is possible that 2 will receive support while 3 does not. Hypothesis 3 thus culminates my examination of competing theoretical accounts of income inequality among farm land owners.

2. Structural-Level Hypotheses

Analysis at the structural level is obviously central to the class structure approach to social stratification. At this level, classes themselves, and not individuals, are the proper unit of analysis. As discussed earlier, each class is assumed to have a fundamentally different manner of acquiring income. This is another way of saying that classes are structural mediations of the income determination process. The following hypotheses, then,

are formulated at the level of class. They are further specifications of the claim that classes have essentially dissimilar income determination processes.

HYPOTHESIS 4: Various measures of farm land (amount owned and operated, rented in and operated, rented out, market value) will have differential impacts on income depending on class. This proposition is portrayed in Figure 4 above: the six classes use farm land to acquire money in different ways. They should therefore "cash in" on their land in differential fashion.

HYPOTHESIS 5: The standard determinants of status attainment (age, education, occupation) will likewise differentially affect income by class. If classes are real entities, then they should influence the entire income determination process, not just the land components. This hypothesis, then, extends Hypothesis 4 to propose that class "structures" the monetary returns to various measures of status.

HYPOTHESIS 6: The returns to both the land measures and the status indicators will be similar for men and women within the same class. If the above two hypotheses are true for both men and women, then they will be so for each alone. Hypothesis 6 goes further in positing that class mediates the specific effects of gender on income. If class rather than gender per se accounts for much of the observed sexual discrimination, then class may be said to structure gender relations just as it does the returns

to land and status.

HYPOTHESIS 7: The difference between the average incomes of men and women in each class will be smaller than the overall income difference between men and women. Some of the income difference between them is due to the class-gender distribution rather than to a global "sexual discrimination." If this is true, we would expect a smaller income difference within a particular class than if class were not considered at all.

These, then, are the seven hypotheses that I shall test in this study. While they do not exhaust the questions that could be raised about the relationship between class structure and income determination (much less those about class theory in general), I believe that they constitute a meaningful series of propositions that are important to the understanding of how class operates in the agricultural sector of capitalist societies such as the United States. I now proceed to the empirical-analytic half of the work.

CHAPTER FIVE: SOURCE OF DATA, OPERATIONALIZATION OF VARIABLES, AND ANALYTIC STRATEGIES

I. Data Source

The data used in this study are from the 1978 Land Ownership Survey conducted by the Natural Resource Economics Division of the Economics, Statistics, and Cooperative Service (now the Economic Research Service) of the United States Department of Agriculture. The survey was based on a 2 percent stratified random sample of the nation's land area. One-third of this sample, which included every county in the United States (excluding Alaska), was randomly selected for the Land Ownership Survey. The sampling frame consisted generally of 160-acre parcels of land, called "primary sampling units," selected from all land units of 7,680 acres. A common probability of selection was 1/144 (= 1/3 x 160/7680). Within the sampling units, a single point was randomly picked, and its owner identified. In this manner, the Department of Agriculture attempted to survey 45,898 private land owners. Mail questionnaires, telephone interviews, and personal contacts ultimately resulted in usable data on over 37,000 land owners, for a response rate of 81 percent. Adjustments for non-response were made following a sample of non-respondents (D. Lewis, 1980:3; J. Lewis, 1980:33-37).

Because of the random selection of points of land, not all owners had equal chances of being surveyed. Owners of large parcels were more likely to receive a questionnaire. Therefore, in order to generalize from the sample to the population of land owners, respondents owning small acreages had to be weighted relatively more heavily than the owners of large parcels. The Department of Agriculture accomplished this weighting through differential expansion factors, equal to the inverse of the probality of being included in the sample. That probability is equal to the probability that one's primary sampling unit was selected times the probability that one's parcelreporting unit, or R.U.) was chosen within the sampling unit. The expansion factor for 160-acre sampling units thus equals

$$1/(1/3 \times 160/7680 \times R.U./160) = 23,040/R.U.$$

Each sample land owner has an expansion factor, or weight, computed in this way by the Department of Agriculture; each respondent, then, represents a number of land owners equal to the size of the expansion factor (D. Lewis, 1980:2-3; J. Lewis, 1980:34-35).

The Land Ownership Survey was a 70-item questionnaire that provided the following kinds of information about the owner and his or her land in the specified county (J. Lewis, 1980):

1) Type of owner--individual, family, partnership, corporation, etc.
2) Size of holding in acres.
3) Decade of acquisition of land.
4) Manner of acquisition--gift, purchase, inheritance.
5) Estimated market value of land.
6) Type of land use--three catagories: (a) farm, (b) residential, commercial, industrial, and similar "urban" uses, and (c) other, including forest, waste, and idle land.
7) Tenure--whether the owner is a farm operator, and whether the owner (of all types of land) rents to or from others.
8) Acres of land owned in other counties or states.
9) Residence--whether in same county or state as land.

The following information was asked only of individual-type owners:

10) Occupation: "What was your principal occupation during 1977?"
11) If "farmer": "Did you work at an off-farm job 100 days or more during 1977?"
12) Age.
13) Sex.
14) Race.
15) Years of schooling.
16) Net farm income (categorized up to $50,000).
17) Non-farm household income (categorized up to $50,000).
18) Number of dependents in household, and number contributing non-farm income.
19) National citizenship.

The Land Ownership Survey presents some rather serious limitations. As Castells (1980:27) observes, data gathered by government agencies in capitalist sicieties can hardly be expected to fit Marxist categories. Class, understood as position with the social relations of production, is a prime case in point. The questionnaire contains no information on whether the owner employs wage-labor--a crucial criterion for separating simple commodity producers from proper capitalists. Therefore, I cannot

differentiate these two classes on that basis. Secondly, only three land uses are identified, and only one, farm land, may reasonably be said to be in production. The other two types mix very different uses of the land such as residential with commercial and forest with waste land. A third shortcoming of the survey is that it gives no income data for corporate or institutional owners. Many of the larger farms and other capitalist enterprises are certainly incorporated, but they must be excluded from my empirical analysis of income determination.

Yet there are some strong points to the Land Ownership Survey. For one thing, it is the only large national study of land ownership per se ever done in the United States. In other words, until 1978, there was no good information on just who owned the land. The only comparable study, conducted in 1946, was limited to farm land ownership (see Gilbert and Harris, 1981, and forthcoming). Another benefit of the survey is that it offers considerable data on some quite wealthy Americans--information that is very difficult to come by. In fact, Wright (1979:224) and others often claim that the capitalist class cannot be studied by the survey method. On this point, the United States Department of Agriculture has shown them to be wrong. It is as if the Department of Commerce or the Treasury had taken a "sample" of stocks and bonds, traced them to their owners, and submitted them to a social survey. The resulting information would be

invaluable, as is the Land Ownership Survey. That is not to say that it is without drawbacks. It is, however, the best that we have to work with.

II. Operationalization of the Variables

1. Class

Figure 13, taken from the culmination of the theoretical discussion in Chapter Four, lays out the class structure of farm land ownership. As indicated above, operationalizing a Marxist concept of class with the Land Ownership Survey data is problematic. However, a reasonable approximation to delineating the class structure of farm land ownership can be made. Figure 14 shows how the following variables are combined for specific classes: tenure, occupation, number of acres owned, and number of acres operated. The operationalization is hierarchical; the "decision tree" in Figure 15 gives the ordering. The two "land-size" criteria are used to designate only the capitalist class; I begin with them.

Since there are no data on the hiring of wage-labor, I have resorted to the use of a proxy to indicate such employment: number of farm acres operated (not necessarily owned). The 1978 Census of Agriculture (U. S. Bureau of the Census, 1981:77) presents information on hired farm labor by size of farm. In 1978, 76 percent of all farms of 2,000 acres and over (almost 63,000) hired

Capitalist Mode of Production | Independent Commodity Production

CAPITALIST FARMER

Landlord

Farmer-Landlord

FAMILY FARMER

Farmer-Tenant

Part-Time Farmer

(FARM LABORER)

UPPER CASE = Basic Class Positions
lower case - Contradictory Class Positions
(·) = Non Land Owner

Figure 13. The Class Structure of Farm Land Ownership.

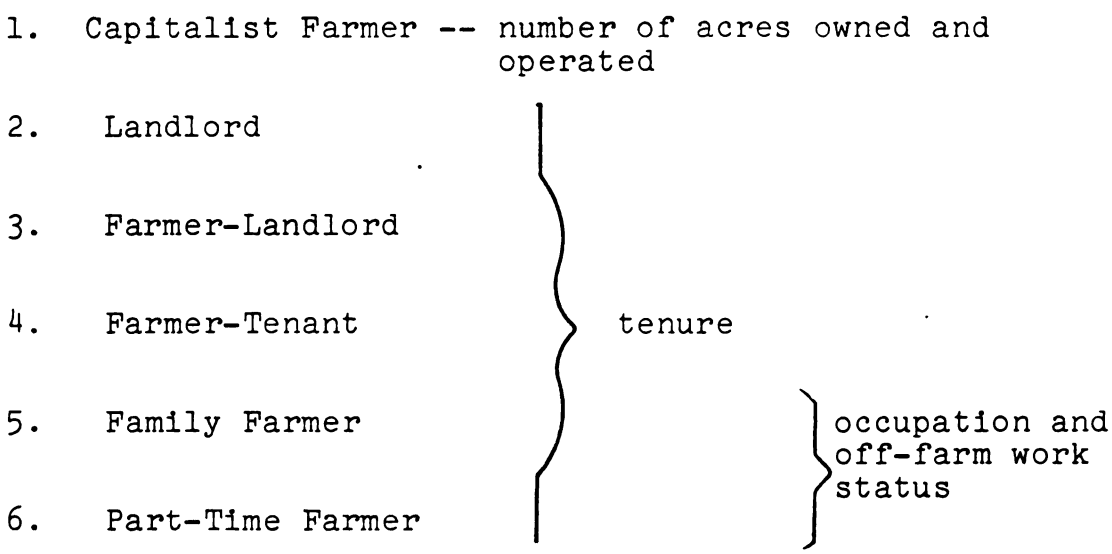
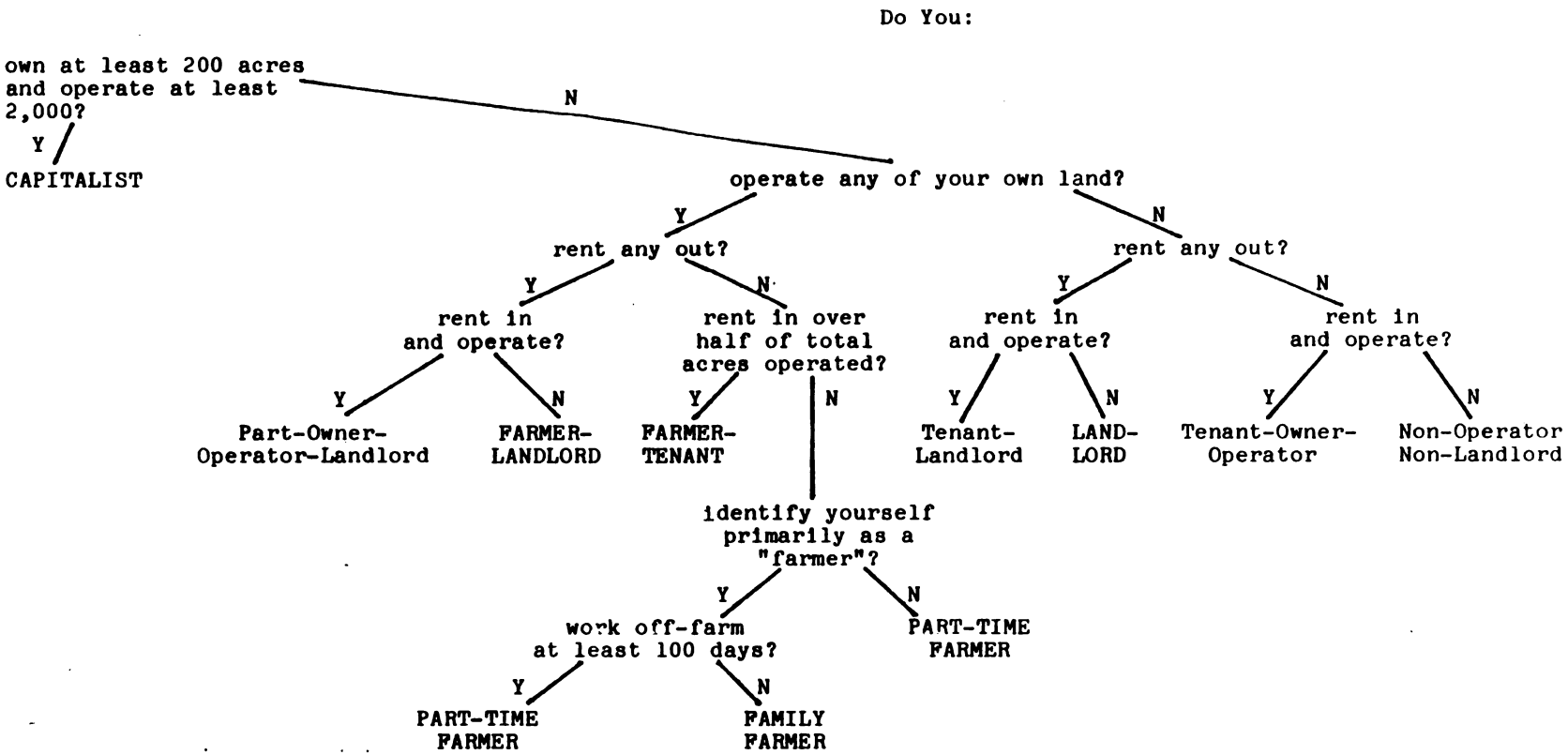


Figure 14. Criteria For Class Positions.



UPPER CASE Labels = Major Class Positions.

Figure 15. Decision Tree For Class Positions.

some wage-labor. The average expenditure for hired labor on this largest size of farm was over $34,000; the average number of workers per farm, on those farms that hired over 150 days of wage-labor, was 5.9. On the basis of these figures, from the same year as the Land Ownership Survey, I shall consider farms in my sample that have 2,000 or more acres operated to be in the capitalist class--with one additional stipulation. Although as we have seen in the theoretical sections, it is quite compatible to be both a capitalist and a tenant farmer, it is also reasonable to require that true capitalists have some minimum ownership in their primary means of production. For this criterion, I have chosen one-tenth of the minimum number of acres operated. To be a capitalist farmer, then, one must own at least 200 acres of farm land and operate at least 2,000 acres. While this is certainly not an ideal specification of the concept of "capitalist," it is the best that I can do with the data available. With this operationalization, I am certain to misclassify some portions to two groups: (1) Those capitalists who operate less than 2,000 acres. For instance, nearly half of the farms with from 1,000 to 1,999 acres also employ considerable wage-labor. In fact, nearly 273,000 commercial farms hired workers for 150 days or more in 1978. (2) Farmers who operate 2,000 or more acres but do not hire wage-labor. This amounts to about 24 percent (almost 15,000) of these very large farms. This problem

of misclassification is further considered below.

Family farmers, as we saw in the theoretical discussion earlier, are the agricultural version of the independent commodity producer. That is, they own and operate their own means of production but do not hire wage-labor. I operationalize this class of farm land owners by requiring that the majority of the land they operate be their own and that they do not rent land out to others (i.e., the tenure category of either full owner operator or part owner operator, but, if the latter, a "majority owner"). In addition, family farmers are self-identified primarily as "farmers" and they do not work off the farm for 150 days or more. These criteria define a family farmer. Unfortunately, this group (as well as the others) will also inevitably include the smaller capitalists who did not make it into the larger capitalist class. So this petty bourgeois class includes some small capitalists as well as independent commodity producers proper.

Landlords are much simpler to operationalize. They are the tenure category of non-operator landlord, that is, farm land owners who do not operate any farm land but rent their land out to others to farm.

There are three other "contradictory" class locations in the structure of farm land ownership: farmer-landlords, farmer-tenants, and part-time farmers. Capitalist farmers, as defined above, have already been

removed from consideration. Farmer-landlords include the tenure category of full owner operator landlords. That is, they operate their own farm land and also rent some of their land out for others to farm. Farmer-tenants, in contrast, own less than half the land they operate; hence, they rent in land from other farm land owners.

Part-time farmers, like family labor farmers, may be either full owner operators or part owner operators who own over half the land they farm. After the above classes have been determined, part-timers are those remaining whose reported principal occupation is farmer but work at least 150 days off the farm, or whose primary occupation is not farmer yet operate their own land. This six-class model completes my operationalization of the class structure of farm land owners.

In order to use these six qualitative categories in the quantitative analysis to follow, they had to be converted into "dummy variables." Five class dummy variables were created by assigning a value of "1" to all respondents within each class (except one) and "0" to all not in that particular class. The base or reference category, which received no "1" score, was the class of family labor farmers. Therefore, the coefficients for the class dummy variables are to be interpreted in light of this excluded class.

2. Other Variables

"Socioeconomic Index (SEI)"--The occupational data are coded into the ten broad occupational categories of the United States Bureau of the Census, with the additional breakdown of physicians and dentists, judges and lawyers, and real estate agents and brokers. Furthermore, retirees, housewives, and the unemployed are identified. I operationalize the occupational data by using Duncan's Socioeconomic Index for each of the broad categories and the specific occupations, as described in Figure 16.

"Net farm income" and "non-farm household income"--These two variables were originally categorized into twelve ranges, from "More than $10,000 Loss" to "Over $50,000." To make these variables interval rather than categorical, and thus more amenable to quantitative analysis, I converted each range into its midpoint. The range of $10,000 to $14,999, for example, became $12,250. For the minimum category I assigned the value of -$15,000, and $75,000 for the maximum category.

"Gender"--Gender is operationalized with a dummy variable, the excluded category being men. Thus, all values of the female dummy are in relation to males.

The other variables utilized in this study are self-explanatory (education is measured in years of schooling, the land variables in acres, etc.).

	SEI
Physicians and dentists	94
Lawyers and judges	93
Other professionals and technical workers	75
Managers and administrators	57
Real estate agents or brokers	62
Other sales workers	49
Clerical workers	45
Craft workers	31
Operatives workers	18
Laborers (except farm)	7
Farmers and farm managers	14
Farm laborers and foremen	9
Service workers (including private household)	13

Figure 16. Socioeconomic Index (SEI) Scores For Occupations of Farm Land Owners.

Source: Hauser and Featherman, 1977.

III. Strategies for Data Analysis

1. Samples and Sub-Samples

Not all land owners in the United States are dealt with in this study. Most obviously, just farm land owners are included. Secondly, non-individual owners are excluded. Only individuals (including sole proprietors and the main decision-maker among family (husband-wife) owners and partnerships) have particular income determination processes based on age, education, occupation, etc. They are the focus of my research. In any case, corporations, unsettled estates, and institutional owners did not report their incomes in the Land Ownership Survey. Thirdly, non-U.S. citizens are excluded. It seems likely that foreign owners of U.S. farm land (who constitute less than 1 percent of all owners) would have substantially different ways of acquiring income than do natives. Fourthly, one peculiar tenure category is not included: non-operator non-landlords. These are owners who identify their land as "farm land," yet they neither operate it nor rent it out to others. The conclusion I draw is that their land is not currently generating income from agricultural production, so I omit them from the analysis. Finally, I exclude non-white racial groups. After the above deletions were made, only 155 blacks remained in the sample. They are by far the largest racial minority owning farm land. Previous analyses have shown that

blacks have different income determination processes than whites (e.g., Duncan, 1969a; Wright, 1978b; Jencks et al., 1979:191-212), but too few blacks are left in my sample to analyze them separately--especially the analyses by class. For these reasons, then, my analysis is limited to white U.S. citizens who own productive farm land.

I shall test the seven hypotheses on three different types of income recipients: positive net farm income, negative net farm income, and non-farm household income. The third is evidently different from the other two and thus deserves separate treatment. More needs to be said, however, about farm income.

There are two basic kinds of farm income recipients, those who report a net gain and those who report a net loss (Larson, 1974, 1975; Larson and Carlin, 1974). In any given year, from 20 percent to 40 percent of all farm operators in the United States report a net farm loss (Crecink, 1979:3; Carlin and Ghelfi, 1979:272; Carr, 1980:29; Coughenour and Swanson, 1983:25). In 1975, nearly half of all farm owners (not necessarily operators) declared a farm loss to the Internal Revenue Service (Banks and Kalbacher, 1981:5). Larson and others have shown that this group includes farm-related people who seek to "lose money" in agriculture for tax purposes as well as farmers who do so quite unwillingly. Both wind up, nonetheless, with a negative net farm income.

In preliminary analysis of the Land Ownership Survey

data, I found that negative net farm income recipients (17 percent of the sample) have different income determination processes than do the net farm income gainers. This being the case, it makes sense to treat the two separately. (As demonstrated in the next chapter, this tentative conclusion was fully borne out in subsequent analysis.)

Further analysis revealed that these two net farm income types do not differ significantly in their non-farm income processes, so dealing with all non-farm income recipients together is reasonable. My analysis of non-farm income at the class level also differs from that of net farm income in that it is limited to the economically active sample, i.e., those with SEI measures. The net farm income analyses by class are not limited in this way because so many farm income recipients do not have occupations with SEI scores, especially housewives and retirees (see Chapter Six). Although the use of three incomes complicates the presentation of results, it is justified on the above substantive grounds.

2. Statistical Technique

To evaluate the six hypotheses, I shall employ the statistical technique of multiple regression. This technique produces several important pieces of information that are germane to my research questions. In general, multiple regression estimates the impact of two or more "independent" variables on a "dependent" variable.

Regression analysis yields, first of all, a measure of the effect of each independent variable on the dependent variable, with all the others being "held constant" or "controlled for." This estimate, the unstandardized regression coefficient or "b," represents the change in the dependent variable that is associated with a change of one unit in the independent variable. Secondly, in order to compare the effects of independent variables measured in different units (e.g., dollars, years, acres), regression coefficients can be standardized to the same unit. This form is called, naturally enough, the standardized regression coefficient, or "beta." Finally, in addition to these two related measures of the impact of single independent variables, regression analysis estimates the explanatory power of all the independent variables together. That is, it offers a summary measure of how well they statistically explain change in the dependent variable. This is the coefficient of multiple determination, or "R squared," that signifies the amount of overall variance explained in the dependent variable (to a maximum of 100 percent). Thus, 1.00 minus R squared is the residual or the error term, the amount of variation that is left unaccounted for, or unexplained, by the set of independent variables (Blalock, 1972; Gujarati, 1978; Kenny, 1979; Lewis-Beck, 1980).

3. Regression Equation and the Hypotheses

Two general regression equations will be estimated for the hypotheses, one at the individual level, the other at the structural or class level. The basic equation for the analysis of individual income is as follows:

Income = B1 Acres Owned & Operated + B2 Acres Rented In & Operated + B3 Acres Rented Out + B4 Value of Owned Acres + B5 Gender + B6 Age + B7 Education + B8 SEI + B9-13 Class,

where B = beta.

Hypotheses 1, 2, and 3 are addressed by this full regression and various parts of it run separately. Hypothesis 1 simply compares the standardized regression coefficients (betas) for SEI and the Class dummy variables. This procedure will permit an initial evaluation of the comparative independent effects of the two concepts at issue--occupational status and class structure.

For Hypothesis 2, I examine the change in the variance explained (R squared) of income as SEI and the Class dummy variables are entered and withdrawn from the full equation containing all the independent variables (cf. Kenny, 1979:49-50; Allen, 1971:202-03). In particular, the four measures of land size, plus Gender, Age and Education, will be the base-line model, which provides controls for the theoretically relevant variables. After the full regression is run, the SEI and

Class variables will alternately be introduced, and the changes in variance explained compared. This series of regression equations should inform us of the relative impacts of occupational status and class structure on income.

Hypothesis 3 undertakes to assess the overall explanatory power of the status attainment and the class structure models per se. Including Gender as a control, I shall first regress income on the four farm land ownership variables alone to determine the effect of land-size. Then I shall address the theoretical question by separately regressing income on Age-Education-SEI and the Class dummies. The resulting R squared's will indicate the relative statistical explanatory power of the status attainment and the class structure paradigms of income determination. This will constitute my empirical analysis of the three individual-level hypotheses on the competing theoretical explanations.

A somewhat different data-analytic strategy is necessary in order to assess the structural-level hypotheses. The following general regression equation will be run for each class:

$$\text{Income} = A + b1\ \text{Acres Owned \& Operated} + b2\ \text{Acres Rented In \& Operated} + b3\ \text{Acres Rented Out} + b4\ \text{Value of Owned Acres} + b5\ \text{Gender} + b6\ \text{Age} + b7\ \text{Education} + b8\ \text{SEI}.$$

Hypotheses 4 and 5 are addressed by the across-class comparisons of the regression coefficents for each

variable and the amount of variance in income explained (R squared). Hypothesis 6 is evaluated by this general equation (without Gender) for men and women within each class. Hypothesis 7 simply compares the mean incomes of men and women by class with their overall means. These numbers will furnish evidence of whether or not the farm land owning classes do in fact exhibit different income determination patterns. This entire analytic procedure will be performed on all three types of income.

CHAPTER SIX: RESEARCH RESULTS

This chapter presents the empirical results of my data analysis. It contains four sections. Before examining the regression analyses, it will be useful to know some of the characteristics of the farm land-owning classes. The first section summarizes this information. The second assesses the individual-level hypotheses, first for positive net farm income, then for negative net farm income, and finally for non-farm household income. The third section evaluates the structural hypotheses dealing with land and status by class. The last section concerns the structural analysis of gender by class.

I. Descriptive Analysis of the Class Structure of Farm Land Owners

Table 1 presents the frequency distributions for both the raw or unweighted sample and the expanded or weighted sample. Column 1 gives the actual numbers in the sample and Column 2, their percentage breakdown. These unweighted columns reinforce the sampling reliability of the estimates of the parameters to follow. That is, they show that the sample size is large enough to offer reliable estimates of the population of farm land owners by class. Columns 3 and 4 are of more concern since they

Table 1. Distribution of Farm Land Owners, by Class.

	Raw N		Expanded N		
	(#)	(%)	(#)	(%) Relative	Adjusted
Capitalist Farmer	2,399	12.1	48,427	1.1	1.1
Land-lord	5,001	25.2	1,134,984	26.1	26.9
Farmer-Landlord	1,482	7.5	253,686	5.8	6.0
Farmer-Tenant	1,333	6.7	448,225	10.3	10.6
Part-Time Farmer	3,906	19.7	1,646,403	37.9	39.0
Family Farmer	5,262	26.5	687,836	15.8	16.3
Missing[1]	461	2.3	121,175	2.8	--
Total	19,844	100	4,340,735	100	100

[1]Cases that did not fit into any of the above classes.

-- = not applicable.

contain the numbers used in the subsequent analysis. They are weighted to represent the population of farm land owners in the United States. Of the more than 4 million, only 1 percent are classified as capitalists. Estimates of the capitalist class in general are usually within this range (e.g., Anderson, 1974; Wright et al., 1982). Perhaps more suprising are the two largest class positions. Pure landlords constitute over a fourth of all farm land owners. Even more numerous (39 percent) are part-time farmers. After capitalists, the two smallest categories also occupy contradictory class locations, farmer-landlords (6 percent) and farmer-tenants (11 percent). The basic class of family farmers amount to 16 percent, a figure close to Mooney's (1979) estimate for Wisconsin agriculture. Now, before analyzing the income determination processes of these classes, let me explore some descriptive characteristics of the class structure.

Table 2 shows the central tendencies of the land variables for typical members of each class. I shall not discuss each class column by column but rather offer some summary observations. First, note the sheer size of capitalist farmers--far and away the largest on the "owned" and "operated" variables. This is partly a reflection of my operational definition of capitalists, yet these averages vastly exceed my minimal requirements of 200 farm acres owned and 2,000 operated. Members of this class are indeed large farmers, typically operating

Table 2. Land-Size Measures of Farm Land Owners, by Class (Means).

	Farm A. Owned	A. Owned & Operated	A. Rented In & Operated	Total A. Operated	A. Rented Out[1]	Value of A. Owned ($) Per A.	Value of A. Owned ($) Total
Capitalist Farmer	2,928	2,847	6,466	9,313	65	357	612,166
Land-lord	157	0	0	0	145	857	98,848
Farmer-Landlord	178	88	0	88	77	765	113,102
Farmer-Tenant	92	86	926	1,013	0	1,237	75,445
Part-Time Farmer	68	60	3	64	0	2,262	45,145
Family Farmer	249	238	34	272	0	943	164,192
All	163	110	180	292	45	1,448	92,810

[1]All acres (not only farm acres) rented out by farm land owners.

nearly 10,000 acres (mostly rented) and owning land worth well over $500,000. In contrast, the average landlord, whether also an operator or not, is small, with under 200 acres. As their label implies, farmer-tenants are distinguished by a low proportion of ownership to operatorship; on the average they own 92 acres but work over 1,000 acres. Family farmers have medium-sized operations, most of which they own, while part-timers operate quite small acreages; neither rent much land in. The average number of acres rented out by class is, as expected, tilted toward the landlord classes. The total value of farm land owned is in line with the number of acres owned.

Per acre values, though, require further comment. Capitalists' land is worth by far the least ($357) whereas part-timers, the most ($2,262). This may be explained, at least in part, by two points. Most of the larger (capitalist) farms are in the West, where land, especially ranch land, is not as valuable as elsewhere (U.S. Bureau of the Census, 1978:II-9). Conversely, many of the part-time farmers, who, by definition, have off-farm employment, live near or in urban areas. Thus, their real estate is much more valuable than is that in rural America (Geisler et al., 1982). The greater value, however, comes from potential sale for non-farm use.

Table 3 presents personal and income characteristics of farm land owners by class. The older average age of

landlords supports the notion that they are often near retirement, whether from farming or not (Rodefeld, 1978:161). On the other hand, the class with the least degree of ownership, farmer-tenants, are the youngest. This finding is consistent with two interpretations of tenancy: it is a entry device for young farmers (the "agricultural ladder" concept), or it represents a change in the structure of agriculture (toward more part-owner-operators--Penn, 1979). The typical levels of education for each class are unexpected. Capitalist farmers are the highest even though they are mostly farmers by occupation. This suggests that operating a large farm today calls for some degree of technical knowledge. Family farmers appear to fit the more traditional image of farmers as relatively uneducated. The average occupational Socioeconomic Index scores are not surprising. Family farmers, by definition, are "farmers," with an SEI score of 14. Capitalists and farmer-tenants are also very near to this occupational location. Landlords and part-timers typically have much higher status occupations.

Since income is the empirical focus of this work, a few words on these two variables are in order. The overall average net farm income is rather low, only $3,570, compared to nearly four times as much non-farm household income. This indicates, obviously, that most farm land owners do not receive much money from agriculture. In fact, only the three central "operating"

Table 3. Socio-Economic Characteristics of Farm Land Owners, by Class (Means).

	Age (years)	Education (years)	SEI	Net Farm Income ($)	Non-Farm Household Income ($)
Capitalist Farmer	52.9	12.7	16.5	8,944	7,763
Land-lord	63.3	11.5	44.0	3,111	12,966
Farmer-Landlord	61.0	11.3	31.8	2,790	11,556
Farmer-Tenant	45.8	11.9	18.3	7,420	7,122
Part-Time Farmer	50.2	12.2	36.8	841	17,014
Family Farmer	54.5	10.9	14.0	8,210	3,176
All	54.6	11.7	29.3	3,570	12,068

classes have significant net farm income, and the range here is rather small. Capitalist farmers make only $1,500 more than farmer-tenants, with family farmers between the two. The households of the latter class bring in by far the lowest non-farm income, which gives them the least total income. The relatively low non-farm incomes of both capitalists and tenants further reflects their primary commitment to farming--just the opposite of part-timers, who have the highest non-farm income. The two landlord class positions are between these extremes.

So far I have summarized the data on typical members of each class. Let me now examine some of the data from a more structural perspective. The rest of this section is at the level of class, as distinct from the averages of individuals who make up the classes.

Table 4 presents the land and income variables aggregated by class. Landlords and family farmers each own about one-fourth of the total amount of farm acres, followed closely by capitalists and tenants. The latter two classes rent in practically all the leased land; the pure landlord class rents almost all of it out. Total value follows approximately the pattern of farm land distribution. The distribution of net farm income, however, is of more interest. Based on sample size, three classes--capitalists, tenants, and family farmers--each receive over twice the percentage of their proportionate share (cf. Table 1). The two landlord classes nearly

Table 4. Distribution of Land and Income of Farm Land Owners, by Class.

	(Percent of Total)							
	Farm A. Owned	A. Owned & Operated	A. Rented In & Operated	Total A. Operated	A. Rented Out[1]	Total Value of Owned A. ($)	Net Farm Income ($)	Non-Farm Household Income ($)
Capitalist Farmer	21	30	41	37	2	8	3	1
Land-lord	26	0	0	0	88	29	23	28
Farmer-Landlord	7	5	0	2	10	7	5	6
Farmer-Tenant	6	8	55	37	0	9	22	7
Part-Time Farmer	16	21	1	9	0	19	9	55
Family Farmer	25	35	3	15	0	29	38	4
Total (000,000)	690	462	757	1,219	188	391,400	13,030	42,580

[1]All acres (not only farm acres) rented out by farm land owners.

acquire their "expected" share; part-timers do not. Based on proportion of total acres operated, however, capitalists do very poorly: using 37 percent of the land, they get only 3 percent of the net farm income. This is in part a reflection of the low value per acre of their land (see Table 2). From this standpoint, farmer-tenants do somewhat better, and family farmers much better; the latter class operates 15 percent of the land and receives 38 percent of the farm income.

The distribution is reversed for non-farm income, with the two landlord classes and the capitalists obtaining roughly proportionate percentages (based on sample size). Part-time farmers receive over half of all non-farm income. Farmer-tenants and family farmers, who together constitute 27 percent of farm land owners, get only 11 percent of the non-farm income. These proportions should be kept in mind as we analyze the income determination processes for the various classes.

I conclude this descriptive section with two separate cross-tabulations, class by gender and occupation. Panel A of Table 5 reveals, first of all, that women constitute 16 percent of all farm-land owners. Their distribution across the classes, though, is highly variable, ranging from 4 percent of farmer-tenants to 35 percent of landlords. Men dominate every class, making up about 90 percent of all except the two landlord ones. Panel B indicates that a majority (60 percent) of all women are

Table 5. Class-Gender Distribution of Farm Land Owners.

A. Gender by Class

	Men (%)	Women (%)	Total (%)	N (000)
Capitalist Farmer	94.6	5.4	100	48
Landlord	65.0	35.0	100	1,127
Farmer-Landlord	77.8	22.2	100	253
Farmer-Tenant	96.4	3.6	100	447
Part-Time Farmer	90.9	9.1	100	1,639
Family Farmer	94.0	6.0	100	682
All	84.3	15.7	100	
				4,196

B. Class by Gender

	Men (%)	Women (%)	All (%)	
Capitalist Farmer	1.3	0.4	1.2	
Landlord	20.7	59.9	26.9	
Farmer-Landlord	5.6	8.5	6.0	
Farmer-Tenant	12.2	2.5	10.6	
Part-Time Farmer	42.2	22.5	39.1	
Family Farmer	18.1	6.2	16.2	
Total	100	100	100	
N(000)	3,536	660		4,196

non-operator landlords. More men (42 percent), in contrast, are in the part-timer class than in any other. This is the second most common position for women. If we add to landlords the proportion in part-timers (22 percent), it accounts for over 80 percent of all land-owning females. These two are in fact the largest classes (see Table 1). Men are also concentrated in them, but not so tightly (65 percent).

Table 6 presents the class-by-occupation breakdown. Almost all of the capitalist class (93 percent) identify themselves primarily as farmers, as do most farmer-tenants (80 percent). Nearly half of all landlords are retired, and 10 percent of them are housewives. Together, these two occupational categories constitute over 36 percent of the farmer-landlords, followed by occupational farmers (25 percent). Part-timers are the most varied occupationally: 27 percent are white-collar; 40 percent blue-collar; 19 percent retired; and 3 percent housewives. The family farming class can only be farmers. Overall, the farm land owning occupational structure is 18 percent white-collar, 22 percent blue-collar, 33 percent farmers, 22 percent retired, and 4 percent housewives.

Table 7 breaks down class by occupation. Over half of the following occupational categories are non-operator landlords: physicians and dentists, attorneys and judges, farm laborers, housewives, and retirees. Most of the remaining occupations are primarily part-time farmers, the

Table 6. Distribution of Occupations of Farm Land Owners Within Classes.

	Capitalist Farmer (%)	Land-lord (%)	Farmer-Landlord (%)	Farmer-Tenant (%)	Part-Time Farmer (%)	Family Farmer (%)	All (%)
Physicians & Dentists	0.4	2.4	1.9	0.2	1.1	--	1.2
Lawyers & Judges	0.7	0.8	0.6	--	0.3	--	0.4
Other Professionals & Technical Workers	1.1	5.8	3.9	0.6	8.4	--	5.1
Managers & Administrators	1.6	6.4	7.5	2.5	13.5	--	7.7
Real Estate Agents or Brokers	--	1.2	1.1	0.1	0.8	--	0.7
Other Sales Workers	0.3	2.9	2.9	3.1	3.3	--	2.6
Clerical Workers	--	3.8	3.0	1.5	2.7	--	2.4
Craft Workers	0.5	5.7	7.0	5.6	16.2	--	8.8
Operatives Workers	0.2	3.9	6.0	3.0	12.0	--	6.4

Table 6 (cont'd).

	Capitalist Farmer (%)	Land-lord (%)	Farmer-Landlord (%)	Farmer Tenant (%)	Part-Time Farmer (%)	Family Farmer (%)	All (%)	
Laborers (Except Farm)	0.1	2.3	2.8	1.1	5.0	--	2.8	
Service Workers (Including Private Household)	--	0.1	1.6	0.3	3.8	--	1.9	
Farm Laborers and Foremen	0.2	0.3	0.1	--	0.2	--	0.1	
Farmers and Farm Managers	93.1	5.2	24.9	79.7	8.4	100	32.7	
Retirees	1.2	46.9	30.1	1.5	19.1	--	21.8	
Housewives	0.4	9.7	6.3	0.7	3.2	--	4.3	
Total	100	100	100	100	100	100	100	
N(000)	48	1,090	247	445	1,573	688		4,091

-- = zero.

highest percentages being among blue-collar and service workers. In fact, every occupation has at least a third, and often two-thirds, of its members in the part-timer position--with the exceptions of housewives (29 percent) and farmers (10 percent). The majority of farmers (56 percent) are in the family farmer class. Over 26 percent of all farmers are in the farmer-tenant class location. There are more farmers than any other occupation in the capitalist class, but this is only 3.4 percent of all farmers. Again, this distribution of occupations-by-class should be kept in mind as we compare occupational status and land-owning classes below. Having covered in some detail the descriptive characteristics of the classes, I now turn to the regression alalysis of income determination among and between them.

II. Individual-Level Results

This section presents the results of the individual-level regressions. Hypotheses 1-3 offer progressively more stringent tests of the class structure model compared to the status attainment paradigm. In addition to the means and standard deviations of all variables, the correlation coefficients used in the regression analyses are in the Appendix (Tables A1-A3).

Table 7. Distribution of Classes of Farm Land Owners Within Occupations.

	Capitalist Farmer (%)	Land-lord (%)	Farmer-Landlord (%)	Farmer-Tenant (%)	Part-Time Farmer (%)	Family Farmer (%)	Total (%)	N(000)
Physicians & Dentists	0.4	53.2	9.6	2.0	34.8	--	100	46
Lawyers & Judges	2.1	53.7	10.2	--	34.1	--	100	15
Other Professionals & Technical Workers	0.3	30.5	4.6	1.3	63.3	--	100	208
Managers & Administrators	0.3	22.4	5.9	3.5	67.9	--	100	313
Real Estate Agents or Brokers	0.1	46.6	9.5	2.1	41.8	--	100	28
Other Sales Workers	0.1	30.2	6.9	13.2	49.5	--	100	105
Clerical Workers	--	42.2	7.4	6.7	43.6	--	100	99
Craft Workers	0.1	17.1	4.8	6.9	71.1	--	100	359
Operatives Workers	--	16.5	5.6	5.2	72.7	--	100	261

Table 7 (cont'd).

	Capitalist Farmer (%)	Land-lord (%)	Farmer-Landlord (%)	Farmer-Tenant (%)	Part-Time Farmer (%)	Family Farmer (%)	Total (%)	N(000)
Laborers (Except Farm)	--	21.9	6.0	4.2	67.9	--	100	116
Service Workers (Including Private Household)	--	15.8	5.2	1.5	77.4	--	100	77
Farm Laborers and Foremen	1.4	51.4	3.6	--	43.6	--	100	6
Farmers and Farm Managers	3.4	4.2	4.6	26.5	9.8	55.5	100	1,336
Retirees	0.1	57.3	8.3	0.7	33.6	--	100	894
Housewives	0.1	60.4	8.9	1.7	28.8	--	100	175
All	1.2	26.6	6.0	10.9	38.4	16.8		
								4,091

-- = zero.

1. Positive Net Farm Income

Hypothesis 1 holds that class will exert an influence on income that is independent of occupational status. Table 8 displays the results of four non-hierarchical regressions of positive net farm income on various combinations of the Land variables, Gender, Age, Education, SEI, and the five Class dummy variables. Column 1 presents the standardized coefficients (betas) when all variables are included in the regression equation. The SEI coefficient is only -.11, in contrast to three single Class dummy variables (part-timers, landlords, and farmer-tenants) that have larger betas. This indicates immediately that Class influences net farm income independently of occupational status. A stronger assertion is the concern of Hypothesis 2, which can now be investigated in more detail.

As evident in Table 8, all variables in the equation explain 18.3 percent of the variance in positive net farm income (column 1). The baseline model of Land, Gender, Age, and Education accounts for only 3.8 percent. SEI increases this percentage to 9.0, but (in the absence of SEI) Class raises it to 17.6 percent. Table 9 summarizes this comparison of SEI and Class. In terms of percentage change in variance explained as each enters the baseline equation, the main status attainment variable has a net effect of less than half that of Class (5.2 percent and 13.8 percent). For total net effect, there is no real

Table 8. Comparison of the Impacts of SEI and Class on Positive Net Farm Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land, Gender, Age, Education	(3) Land, Gender, Age, Education, SEI	(4) Land, Gender, Age, Education, Class
A. Owned & Operated	.08	.15	.13	.08
A. Rented In & Operated	-.02	.03	.01	-.02
A. Rented Out	.06	.04	.05	.06
Value of A. Owned	.05	.07	.06	.05
Gender (Female=1)	-.02	-.05	-.02	-.02
Age	-.05	-.04	-.03	-.05
Education	.06	-.04	.09	.02
SEI	-.11		-.26	
Capitalist Farmer	.04			.04
Land-lord	-.15			-.19
Farmer-Landlord	-.08			-.09
Farmer-Tenant	.12			.12
Part-Time Farmer	-.29			-.34
R^2	.183	.038	.090	.176

Table 9. Comparison of the Relative Changes in Variance Explained of Positive Net Farm Income.

Equations Compared (From Table 8)	Interpretations of Comparison	Change in Variance Explained (%)
3-2	SEI net of Land, Gender, Age, Education	5.2
4-2	Class net of Land, Gender, Age, Education	13.8
1-4	SEI net of Land, Age, Gender, Education, Class	0.7
1-3	Class net of Land, Age, Gender, Education, SEI	9.3

contest. SEI alone explains merely 0.7, and Class 9.3, percent of the variance. On this point the results appear quite clear: Class is a far superior predictor of positive net farm income. Hypothesis 2 is strongly confirmed.

Let us now consider Hypothesis 3, regarding the full Status Attainment model (Age, Education, and SEI) versus the Class Structure approach. Here we are not so much concerned with comparing individual variables within the same equation as with estimating the overall effect of theoretically divergent equations, with Gender included as a control in each case. Table 10 repeats the R squared of .183 for the full equation. (Appendix Table A4 presents the unstandardized coefficients.) The four Land-Size variables alone account for only 3.7 percent (column 2), while the Status Attainment model nearly doubles that amount, to 6.5 percent (column 3). The Class Structure model, however, doubles again the explanatory power attributable to the Status Attainment variables; it contributes fully 15.9 of the total 18.3 percent variance explained (column 4). Again, the interpretation seems straightforward. For positive net farm income, the Class Structure model vastly outperforms that of Status Attainment.

Table 10. Comparison of Models for Positive Net Farm Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	.08	.15		
A. Rented In & Operated	-.02	.03		
A. Rented Out	.06	.03		
Value of A. Owned	.05	.07		
Gender (Female=1)	-.02	-.05	-.02	-.03
Age	-.05		-.01	
Education	.06		.10	
SEI	-.11		-.28	
Capitalist Farmer	.04			.08
Land-lord	-.15			-.18
Farmer-Landlord	-.08			-.09
Farmer-Tenant	.12			.12
Part-Time Farmer	-.29			-.34
R^2	.183	.037	.065	.159

2. Negative Net Farm Income

Tables 11-13 compare the effects of SEI/Status Attainment and Class Structure on negative net farm income. Like the results for positive net farm income, these findings confirm Hypotheses 1-3. My discussion of the negative income regressions will thus be brief. Some more general observations, though, are in order.

The first thing to notice is that the signs on almost all the coefficients are opposite those for positive net farm income (cf. Tables 8-10). This suggests that farm income losers have a different determination process than farm income gainers. For example, operating more of one's own farm land loses money for the former while it increases the income of the latter. This finding may reflect the phenomenon of farmers aggressively expanding production but still not "breaking even." In particular, throughout the later 1970s, many young farmers bought land at extreme prices and interest rates. These "costs of production" could be paid only with very high yields as well as product prices. Yet after 1976, farm prices dropped off sharply as interest rates continued to climb. And 1977--the year that the Land Ownership Survey asked about income--was "probably the worst year for farmers since the depression" (General Accounting Office, 1980:26). One possible interpretation of these negative net farm income recipients, then, is that they overexpanded and thus could not meet their ever-rising

Table 11. Comparison of the Impacts of SEI and Class on Negative Net Farm Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land, Gender, Age, Education	(3) Land, Gender, Age, Education, SEI	(4) Land, Gender, Age, Education, Class
A. Owned & Operated	-.06	-.09	-.08	-.06
A. Rented In & Operated	-.19	-.23	-.21	-.20
A. Rented Out	-.03	-.04	-.04	-.03
Value of A. Owned	-.07	-.08	-.08	-.07
Gender (Female=1)	.07	.07	.07	.07
Age	.03	.01	...	.03
Education	-.07	-.02	-.09	-.03
SEI	.09		.13	
Capitalist Farmer	-.05			-.05
Land-lord	-.05			-.03
Farmer-Landlord	.05			.07
Farmer-Tenant	.02			.02
Part-Time Farmer	.11			.15
R^2	.110	.080	.093	.105

... = beta less than .01.

debts--even though they kept buying and operating more land. A similar interpretation could apply as well to the high negative betas for Acres Rented In and Operated. In fact, the negative land betas overall indicate that no matter what these farm land owners tried to do with their land, they lost money.

There are other important differences between negative and positive net farm income recipients. Women benefit from being among the farm losers but are discriminated against among farm gainers. This may be explained by the fact that the largest "loser" variable, Acres Rented In and Operated, has a mean of 736 for men and only 32 for women. That is, the leading proximate reason that this subsample loses money is that they rent too much land in, and women do very little of this. Therefore, women as a whole do better than men in this net income category. In addition, both age and SEI tend to increase the income of the losers whereas it decreases that of the gainers, and education has precisely the opposite impacts. Actually, the only independent variables that act in the same direction for both samples are the class dummy variables for landlords (negative) and farmer-tenants (positive). Even here, the betas for the negative net income sample are near zero in each case. These results, then, provide strong evidence that the income determination processes for negative and positive net farm income recipients are substantially different.

Another remarkable difference between the two samples is the greatly increased explanatory power of the land variables for the net farm income losers. Although all have negative effects, the four together with gender explain 8 percent of the variance. All the other independent variables account for only 3 percent more. The implication is that land per se is much more important (i.e., costly) in determining the income of net farm losers than of gainers. Again, this is probably related to the overexpansion in terms of land among young aggressive farmers. In the late seventies, as total farm income began to drop, they tried to compensate by increasing the size of their operations. They overexpanded by buying too much high-priced land and by renting in even more (Penn, 1979). Both strategies often failed; their debt was too large to overcome by any means.

Besides being interesting in itself, this outcome on the importance of land also affects the tests of the individual-level hypotheses. Since the baseline model (Column 2 in Table 11) takes up so much of the total R squared, it leaves relatively little for either SEI or Class to explain. Nevertheless, Table 11 reveals that the Class variables are indeed independent of SEI (Hypothesis 1). Further, Table 12 summarizes the comparison of the two predictors, showing that Class has a greater impact on income than SEI (Hypothesis 2). Finally, the last two columns of Table 13 indicate that the Class Structure

Table 12. Comparison of Relative Changes in Variance Explained of Negative Net Farm Income.

Equations Compared (From Table 11)	Interpretations of Comparison	Change in Variance Explained (%)
3-2	SEI net of Land, Gender, Age, Education	1.3
4-2	Class net of Land, Gender, Age, Education	2.5
1-4	SEI net of Land, Age, Gender, Education, Class	0.5
1-3	Class net of Land, Age, Gender, Education, SEI	1.7

Table 13. Comparison of Models For Negative Net Farm Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	-.06	-.09		
A. Rented In & Operated	-.19	-.23		
A. Rented Out	-.03	-.04		
Value of A. Owned	-.07	-.08		
Gender (Female=1)	.07	.07	.08	.07
Age	.03		-.02	
Education	-.07		-.14	
SEI	.09		.18	
Capitalist Farmer	-.05			-.15
Land-lord	-.05			-.03
Farmer-Landlord	.05			.06
Farmer-Tenant	.02			-.01
Part-Time Farmer	.11			.15
R^2	.110	.079	.033	.060

model is nearly twice as powerful as the overall Status Attainment paradigm (Hypothesis 3). (Appendix Table A5 presents the b's.) These findings, while not as overwhelming as with net farm income gainers, also point to the superiority of Class over SEI/Status Attainment in predicting negative net farm income.

To this point, I have tested the first three hypotheses on two different samples, positive and negative net farm income recipients. In each of the six cases, Class has clearly outperformed the Status Attainment model. Now I turn to the third and final type of income to be examined.

3. Non-farm Household Income

Table 14 compares the impacts of SEI and Class. Note that the R squared is twice as large as for positive net farm income. The independent variables explain over one-third of the total variation in non-farm income. Although some of the Class betas are increased, this dramatic rise in variance explained is due largely to the improved predictive power of Education and SEI--variables that are traditionally associated with non-farm income anyway.

As before, Hypothesis 1 is supported: Class clearly exerts independent effects on the dependent variable. Hypothesis 2, that Class will be a better predictor than SEI, is also confirmed, but just barely. The difference between columns 3 and 4 is only .016. In addition, as

Table 14. Comparison of the Impacts of SEI and Class on Non-Farm Household Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land, Gender, Age, Education	(3) Land, Gender, Age, Education, SEI	(4) Land, Gender, Age, Education, Class
A. Owned & Operated	.01	-.05	-.01	.01
A. Rented In & Operated	-.03	-.08	-.04	-.04
A. Rented Out	.02	.05	.04	.02
Value of A. Owned	...	.01	...	...
Gender (Female=1)	-.14	-.08	-.13	-.12
Age	.04	.03	.01	.06
Education	.20	.37	.17	.31
SEI	.29		.44	
Capitalist Farmer	.02			.02
Land-lord	.22			.33
Farmer-Landlord	.10			.14
Farmer-Tenant	.05			.07
Part-Time Farmer	.33			.45
R^2	.358	.145	.293	.309

... = beta less than .01.

Table 15 shows, Class outperforms SEI by 1.6 percentage points. While this does support Hypothesis 2, it bodes ill for Hypothesis 3, which pits the full Status Attainment model against Class. As we would expect given the above results, SEI plus Age, Gender, and Education account for more of the variance explained in non-farm income than does Class Structure and Gender. Table 16 reports an R squared of .289 for the Status Attainment variables and .223 for Class. (Appendix Table A6 presents the b's.) Hypothesis 3 is thus not supported for non-farm income.

In retrospect, this is not really surprising. The Class variables are defined on the basis of farm land ownership, yet here we are trying to predict non-farm income. The more surprising result, in this light, is that the Class Structure approach competes as well as it does with the Status Attainment model, and even outperforms SEI alone. This finding may be due, at least in part, to the class-occupation interactions. Recall from Tables 3 and 7 that the higher status occupations tend to be grouped in the landlord class--implying that class is to some extent a proxy for SEI. An alternative interpretation, of course, is that occupation is a proxy for class. In either view, the point is that there is considerable overlap between the two measures, and it becomes especially notable when the two "compete" closely with one another, as in predicting non-farm income.

Table 15. Comparison of the Relative Changes in Variance Explained of Non-Farm Household Income.

Equations Compared (From Table 14)	Interpretations of Comparison	Change in Variance Explained (%)
3-2	SEI net of Land, Gender, Age, Education	14.8
4-2	Class net of Land, Gender, Age, Education	16.4
1-4	SEI net of Land, Age, Gender, Education, Class	4.9
1-3	Class net of Land, Age, Gender, Education, SEI	6.5

Table 16. Comparison of Models for Non-Farm Household Income.

	(Standardized Regression Coefficients)			
	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	.01	-.04		
A. Rented In & Operated	-.03	-.06		
A. Rented Out	.02	.07		
Value of A. Owned	...	-.01		
Gender (Female=1)	-.14	-.07	-.13	-.12
Age	.04		.01	
Education	.20		.16	
SEI	.29		.44	
Capitalist Farmer	.02			.03
Land-lord	.22			.40
Farmer-Landlord	.10			.15
Farmer-Tenant	.05			.07
Part-Time Farmer	.33			.49
R^2	.358	.016	.289	.223

... = beta less than .01.

In summary, the three individual-level hypotheses are substantially supported. Hypotheses 1 and 2, that Class is independent of, and superior to, SEI, receives confirmation with all three samples: both positive and negative net farm incomes as well as non-farm income. Hypothesis 3, that the Class Structure variables will predict income better than will the entire Status Attainment model (Age, Education, and SEI), is confirmed for the two net farm incomes but not for non-farm income, as discussed above. This single instance of a superior performance by Status Attainment is where we might expect it to offer a fuller statistical explanation than would the Class Structure of farm land ownership, concerning non-farm income. Overall, the Class Structure approach has performed quite well at the individual level. I now investigate the classes themselves as units of analysis.

III. Structural-Level Results: Class Analyses

This section addresses Hypotheses 4 and 5, which concern the income determination processes of classes instead of individuals. The regressions were run for each class. The means, standard deviations, and correlation matrices by class are in Appendix Tables A7-A24.

1. Positive Net Farm Income

Table 17 presents both standardized and unstandardized regression coefficients for positive net farm income by class. The first (beta), as in the previous section, indicates the relative weight of the variable within a regression equation. The second (b), on the other hand, is the estimate of the monetary return to the variable. For example, on the Acres Rented Out variable, both landlords and farmer-landlords receive around $3.50 for every acre they lease out. However, their respective betas differ substantially. For landlords, Acres Rented Out is the most important variable predicting income (beta = .19). For farmer-landlords, two other variables are more important (beta = .08 compared to .32 and .14). So, although unstandardized coefficients may be rather similar, the relative importance of the variables can be quite different across the various classes. Both comparisons are germane to the structural hypotheses. I deal first with the betas, then with the b's. They both tend to support Hypotheses 4 and 5.

Looking at the betas in Table 17, we see that the relative importance of the independent variables varies greatly by class. The major variable predicting positive net farm income for capitalists is Acres Rented and Operated, but it has a negative impact (beta = -.17). Acres Owned and Operated and the value of that land itself are the main positive contributors to capitalists' income.

Table 17. Comparison of Class Processes for Positive Net Farm Income.

	Unstandardized Regression Coefficient / Standardized Regression Coefficient					
	Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
A. Owned & Operated	.53 .10	--	18.09 .32	-6.74 -.05	10.41 .25	7.78 .15
A. Rented In & Operated	-.28 -.17	--	--	4.53 .17	26.84 .11	10.99 .07
A. Rented Out	*	3.73 .19	3.47 .08	--	--	--
Value of A. Owned	.001 .09	.004 .18	.003 .14	.03 .22	.002 .09	.0002 .02
Gender (Female=1)	-6,739.58 -.07	-536.48 -.04	-401.97 -.02	-7,092.37 -.10	-503.06 -.03	*
Age	*	-7.68 -.01	-31.31 -.05	-155.71 -.12	8.99 .02	-113.82 -.11
Education	507.27 .06	88.77 .04	*	-323.31 -.05	72.41 .05	537.67 .10
Constant Term	12,321.70	2,536.63	4,570.59	21,635.82	177.68	9,229.92
R^2	.055	.087	.178	.098	.117	.075

Legend for Table 17.

* = not significant at .01 level.

-- = not applicable.

Landlords' income, not surprisingly, is most positively affected by Acres Rented Out as well as the value of owned land. Farmer-landlords have a somewhat similar determination process, with the major difference that they benefit very much from operating their own land (beta = .32). No class approaches such a high relative return to this land variable except for part-timers (beta = .25). And the second most important determinant for their income is renting in and operating land, which farmer-landlords do not do at all. Farmer-tenants, on the other hand, are the only class position to benefit most from the value of owned land (beta = .22). These relative measures of the impact of the independent variables for each class provide tentative support for the claim that the classes have fundamentally different income determination processes. The fairly wide range of variances explained (from 5.5 percent for capitalists to 17.8 percent for farmer-landlords) is also evidence for such an assertion. However, in order to compare the estimated monetary effects of the variables across class, we need to examine the unstandardized coefficients.

The returns to the same predictor variable are quite different depending on class. Focusing on the land variables for the three classes most centrally involved in commercial agriculture: capitalists "cash in" very little from operating their own acres (b = .53), farmer-tenants lose considerably (b = -6.74), and family farmers gain

significantly (b = 7.78). Why such large differences? Recall that these unstandardized coefficients estimate the monetary return per unit change in the independent variable (e.g., for every owned acre operated, capitalists get $0.53). Capitalist farmers have the least valuable land (see Table 2), which indicates lower productivity, and this leads to less income per acre fror the class. Other factors, though, are necessary to explain why farmer-tenants lose money by operating their own land. As discussed above, such loss probably reflects the overexpansion of land ownership on the part of younger, aggressive, commercial farmers--who typically rent in most of the land they operate (i.e., they are in the farmer-tenant class location). Yet the land they bought in the 1970s was so expensive, and the interest rates so high, that they could not recover the costs of production from their land. Family farmers, on the other hand, are not nearly as large as farmer-tenants (see Table 2). Apparently, they are at the right level of ownership in order to capture high returns (nearly $8.00 per acre owned and operated).

The income of capitalists is likewise little affected by renting in and operating land (b = -.28), whereas farmer-tenants gain a good bit (b = 4.53) and family farmers gain a lot (b = 10.99). Similarly, farmer-tenants receive relatively high returns to the market value of their owned land (b = .03), capitalists significantly less

(b = .001), and family farmers practically nothing (b = .0002). I conclude from the wide differences in the above coefficients that the classes do indeed use their productive farm land differently to generate income. These results thus support Hypothesis 4.

There are also considerable differences in the effects of the other, non-land variables according to class. It "costs" women a large amount to be either capitalists (b = -6740) or farmer-tenants (b = -7092). These two classes rent in most of the land they operate and are by far the largest operators. Women who farm very large acreages apparently do much worse in terms of income than their male counterparts. In the other classes, women are discriminated against to a lesser extent. Age, in contrast, has a large negative effect in the incomes of farmer-tenants and family farmers, both of whom operate significant amounts of land. Age does not matter to capitalists, who presumably do not work as hard physically as the other two, non-employer commercial producers. Finally, Education increases the incomes of capitalists and family farmers the most (both over $500 per year of schooling), makes no difference to farmer-landlords, and penalizes farmer-tenants (b = -156). The differential effects of these variables by class, then, are substantial. Hypothesis 5 asserts such differences and is thus confirmed for positive net farm income.

The above discussion has centered on the regression

coefficients, interpreted as the amount of change in income associated with a unit change in the independent variable. Another way to approach the class differences in income determination is to estimate not the effect per unit (e.g., acres) but the total effect. This measure of the overall impact for the land variables can be approximated by multiplying the unstandardized coefficient by the mean value for that variable. For example, the b for capitalists on Acres Owned and Operated is .53, and they own and operate an average of 2,608 acres (see Appendix Table A7). To get the total expected impact of this variable on capitalist income, multiply the two numbers, which gives $1,382. Table 18 presents these estimates for the land variables, three of which are measured in acres and one (market value) in dollars. The table reveals that both capitalists and farmer-landlords receive about $1,400 from operating their own land. Farmily farmers have somewhat higher returns, nearly $1,800. In contrast, farmer-tenants lose $647 from operating owned acres. However, by renting in farm land, they make almost $2,300, while capitalists lose over $1,500. Only the two landlord classes obtain any money from renting land out, pure landlords getting twice as much as farmer-landlords. All class positions benefit slightly from the total market value of their owned land, except farmer-tenants, who benefit a great deal ($2,664). These calculated total returns provide further evidence

Table 18. Total Expected Returns to Land Variables For Positive Net Farm Income, by Class.

(Unstandardized Regression Coefficient x Mean)

	A. Owned & Operated ($)	A. Rented In & Operated ($)	A. Rented Out ($)	Value of A. Owned ($)
Capitalist Farmer	1,382	-1,562	*	690
Land-lord	--	--	507	391
Farmer-Landlord	1,393	--	212	351
Farmer-Tenant	-647	2,270	--	2,664
Part-Time Farmer	520	54	--	87
Family Farmer	1,766	363	--	35

-- = not applicable.
* = b not significant at .01 level.

that the classes use their farm land to acquire income in quite different ways.

2. Negative Net Farm Income

As with the individual-level analysis, the structural or class analysis of negative net farm income has the same theoretical conclusion as with positive net farm income: Hypotheses 4 and 5, positing different impacts by class of the land variables and the status attainment variables, are substantially confirmed. The discussion here will therefore be brief.

Table 19 presents the coefficients resulting from the regression of negative net farm income on the independent variables. The most striking finding is that every one of the land coefficients is negative. In other words, no class position obtains positive returns for any of the four land variables. Granted, we are dealing here with negative net farm income recipients, yet it seems remarkable that all classes lose money by using land in any way whatsoever. A possible reason for this result is that land is considerably more influential on negative net farm income than on positive, as discussed in the previous section. This being the case, given that these recipients lose money in agriculture, then they most probably do so via their land. Thus, all the land measures have negative effects.

An indication of the different processes governing

Table 19. Comparison of Class Processes for Negative Net Farm Income.

	Unstandardized Regression Coefficient / Standardized Regression Coefficient					
	Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
A. Owned & Operated	*	--	-2.08 -.12	-7.05 -.13	-4.37 -.17	-3.02 -.17
A. Rented In & Operated	-.09 -.30	--	--	-.30 -.40	-3.15 -.03	*
A. Rented Out	*	-.76 -.07	-.36 -.02	--	--	--
Value of A. Owned	-.001 -.18	*	-.005 -.33	-.02 -.25	-.0003 -.04	-.006 -.28
Gender (Female=1)	*	2,308.29 .18	1,376.88 .11	2,492.26 .07	1,372.38 .10	959.34 .04
Age	*	*	6.78 .02	85.74 .17	8.25 .02	57.28 .16
Education	-89.53 -.05	-101.53 -.06	-157.14 -.12	154.39 .06	-115.38 -.09	-30.59 -.02
Constant Term	-7,211.74	-3,618.79	-1,400.50	-9,508.96	-2,434.75	-6,567.82
R^2	.116	.042	.204	.305	.072	.205

Legend for Table 19.

* = not significant at .01 level.

-- = not applicable.

net farm income losers as compared to gainers is that almost all of the coefficients have opposite signs between the two samples (cf. Table 17). Only Acres Owned and Operated for farmer-tenants, Acres Rented In and Operated for capitalists, and Age for landlords and part-timers work in the same direction in their influence on net losers. The most remarkable overall shift is probably the Gender variable. In direct contrast with net gainers, women who lose money in agriculture are benefitted by their gender in relation to men; all the Gender coefficients are positive, indicating that women have higher net farm income returns than do men. I have no ready explanation for this dramatic shift in the effect of being female.

The main point about negative net farm income recipients, though, is that it still matters which class one is in. The betas, which estimate the relative importance of the variables for a given class, differ by class. The largest betas are even more widely distributed than for positive net farm income. Only two classes, farmer-landlords and family farmers, have the same variable making the greatest impact on their income (Value of Acres Owned). The least important variables for each class are also generally different, as are the variances explained, ranging from 4 percent to over 30 percent. This, again, suggests that the classes have different income determination processes.

Although all the land variables have negative impacts (they all contribute to the loss of farm income), the classes still vary quite a bit in monetary returns. The b's for the Acres Owned and Operated variable range from statistical insignificance to -7.00; Acres Rented In and Operated, from insignificance to -3.15; Acres Rented Out, from -.36 to -.76; and Value of Acres Owned, from -.0003 to -.02. Age is somewhat more varied by class, from farmer-landlords (b = 6.78) to farmer-tenants (b = 86). The Education coefficients are all negative except for farmer-tenants, and the range is smaller (-31 to -157). Yet these differences are substantial enough to support Hypotheses 4 and 5, if not as strongly as with positive net farm income recipients.

Table 20 gives the total expected returns to the land variables. As noted above, all the impacts are negative. However, the losses due to land are not that great. Family farmers, for instance, lose over $800 by operating their own land, and capitalists lose slightly more by renting in land. Farmer tenants and family farmers lose nearly $1,000 from the value of their land; capitalists and farmer-landlords, about half as much. The total effects, then, generally differ by class. The main thrust of this table, though, is that the land variables per se have relatively little overall impact on the income of negative net farm income recipients.

Table 20. Total Expected Returns to Land Variables For Negative Net Farm Income, by Class.

(Unstandardized Regression Coefficient x Mean)

	A. Owned & Operated ($)	A. Rented In & Operated ($)	A. Rented Out ($)	Value of A. Owned ($)
Capitalist Farmer	*	-873	*	-534
Land-lord	--	--	-109	*
Farmer-Landlord	-279	--	-31	-671
Farmer-Tenant	-472	-565	--	-958
Part-Time Farmer	-398	-22	--	-17
Family Farmer	-821	*	--	-927

* = b not significant at .01 level.
-- = not applicable.

3. Non-Farm Household Income

Hypotheses 4 and 5 for non-farm income are somewhat similar to negative net farm income: they are supported by the data, but not as vigorously as for positive net farm income. Table 21 presents the results of the regressions. Looking first at the betas, we note that the highest coefficients are all for either Education or SEI, while most of the lowest ones are Acres Rented Out or Value of Owned Acres. The unstandardized coefficients give a different portrait of the class differences for non-farm income. Acres Owned and Operated ranges from -6.37 (farmer-tenants) to 5.68 (part-timers), with both capitalists and family farmers being about zero. Of the four classes that rent in land to operate, three have negative returns, but the range is wide (-.08 to -13.32). Family farmers appear to benefit slightly from renting in land (b = .52).

However, Table 22 shows that the impact of the land variables on non-farm income is rather small, with the partial exception of the capitalist class. The most significant effects are that capitalists obtain nearly $1,000, and farmer-tenants lose half that much, from the Acres Owned and Operated variable. Capitalist farmers also lose over $500 by renting in land. All the class positions except farmer-tenants gain a slight amount from the market value of their land. Yet, overall, the impact of land on non-farm income is minimal. There is little

Table 21. Comparison of Class Processes for Non-Farm Household Income.

	Unstandardized Regression Coefficient Standardized Regression Coefficient					
	Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
A. Owned & Operated	.35 .10	--	3.18 .04	-6.37 -.07	5.68 .05	-.14 -.01
A. Rented In & Operated	-.08 -.08	--	--	-.16 -.07	-13.32 -.02	.52 .01
A. Rented Out	.56 .02	1.14 .03	.87 .01	--	--	--
Value of A. Owned	.0003 .03	.0002 .01	.002 .06	-.001 -.02	.0003 .01	.00002 .01
Gender (Female=1)	-4,154.06 -.05	-12,309.79 -.27	-4,892.86 -.10	*	-9,000.02 -.15	537.07 .02
Age	105.36 .10	57.17 .03	-56.32 -.04	*	76.34 .05	59.69 .11
Education	839.26 .14	1,909.83 .34	948.41 .19	*	1,251.11 .24	481.28 .19
SEI	576.38 .40	151.03 .21	328.21 .46	427.27 .53	138.37 .20	--

Table 21 (cont'd).

	Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
Constant Term	-18,520.59	-11,979.53	-4,203.74	58.48*	-4,481.16	-5,094.51*
R^2	.250	.314	.392	.308	.157	.034

* = not significant at .01 level.

-- = not applicable.

Table 22. Total Expected Returns to Land Variables For Non-Farm Household Income, by Class.

(Unstandardized Regression Coefficient x Mean)

	A. Owned & Operated ($)	A. Rented In & Operated ($)	A. Rented Out ($)	Value of A. Owned ($)
Capitalist Farmer	959	-577	36	190
Land-lord	--	--	152	21
Farmer-Landlord	350	--	71	276
Farmer-Tenant	-529	-163	--	-70
Part-Time Farmer	375	-53	--	16
Family Farmer	33	18	--	3

-- = not applicable.

reason to expect otherwise.

To continue with Table 21: The variable that exhibits the most difference by class is Gender. Women are disadvantaged in four of the classes, but, again, this ranges from over $4,000 (capitalists) to over $12,000 (landlords). Gender makes no difference in the farmer-tenant class, whereas women in the family farming class are benefitted in non-farm income. Age is not as differentially rewarded. Only farmer-landlords receive negative returns to increased age, although it has no effect on farmer-tenants. Every class except farmer-tenants benefit from more education, with highest rewards going to landlords (b = 1910). Similarly, all classes acquire more money from higher occupational statuses, capitalists getting the most return and part-timers the least. Finally, we should note the different amounts of variance explained for each class, ranging from a little over 3 percent for family farmers to nearly 40 percent for farmer-landlords. One reason that the R squared for family farmers is so low is that the major explanatory variable, SEI, is constant in that class (farmers = 14). These results indicate that Hypotheses 4 and 5 receive moderate support with regard to non-farm income. Class continues to make a difference in the variable effects, but not nearly so much as it did with net farm income.

IV. Structural-Level Results: Gender by Class

Hypotheses 6 and 7 deal with gender differences within class as compared to the differences if class is not considered. Hypothesis 6 follows all the above hypotheses in that it contrasts regression coefficients. Hypothesis 7, however, is unique in that it simply compares the mean incomes of the genders by class. This section is also different since it treats only two types of income: positive net farm and non-farm household. There are not enough women in several classes of negative net farm income recipients to make the comparisons needed for this set of hypotheses. The means and standard deviations, as well as the correlation matrices used to evaluate Hypothesis 6, are in Appendix Tables A25-A36.

1. Positive Net Farm Income

Table 23 presents the unstandardized regression coefficients by gender within each class. Hypothesis 6 holds that the returns for the land and the status variables will be similar for both men and women within each class. One immediate indication that this may not be the case is the large differences in variance explained of incomes for men and women in almost every class. The smallest differential is over 6 percent (farmer-landlords) and the biggest is 53 percent (farmer-tenants)! (This latter difference may be attributable to the small sample of women in the farmer-tenant class who were net farm

Table 23. Comparison of Class Processes For Men and Women With Positive Net Farm Income.

(Unstandardized Regression Coefficients)

		Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
A. Owned & Operated	Men	.45	--	21.60	-6.99	10.73	8.04
	Women	1.32	--	-5.05	3.75	2.97	-5.57
A. Rented In & Operated	Men	-.29	--	--	4.50	25.00	9.38
	Women	+	--	--	6.03	+	+
A. Rented Out	Men	#	3.90	2.48	--	--	--
	Women	+	1.43	7.36	--	--	--
Value of A. Owned	Men	.001	.003	.002	.03	.002	.0002
	Women	#	.02	.02	.03	.02	.03
Age	Men	#	-21.86	-37.11	-156.88	12.84	-81.11
	Women	-581.24	13.66	-15.06	-169.27	-18.96	-554.36
Education	Men	510.67	33.21	#	-304.51	83.55	646.86
	Women	#	171.62	#	-847.93	-140.73	-1,078.86
Constant Term	Men	11,535	4,143	4,846	21,509	-143	6,303
	Women	43,616	-1,003	2,715	19,766	3,291	51,473
R^2	Men	.060	.071	.196	.079	.113	.079
	Women	.136	.281	.261	.610	.352	.238

= not significant at .01 level.
-- = not applicable.
+ = less than 30 cases.

income gainers, only 25.) In any case, a close analysis of Table 23 fails to offer strong support for Hypothesis 6: men and women within the same class appear to "cash in" somewhat differently on both the land and the status variables. Let us examine the more intriguing differences, some of which are contrary to my theoretical predictions.

Within the capitalist class, women gain three times as much per acre of land owned and operated as do men (b's = 1.32 and .45). Men receive significant returns to both the market value of the land they own and to Education whereas women do not. Age, on the other hand, disadvantages women while it has no effect on the income of male capitalists. In the landlord class, Age works against increased income for men and in the opposite direction for women. The other three variables which affect landlord income are of the same sign for both genders, but they exert significantly divergent impacts. Men's returns to Acres Rented Out--which defines landlords--is over twice as large as women's. Women's returns to Education are over five times as great as men's. The differential effects between men and women landlords who also operate part of their land are not as great, yet they are still important. For example, farmer-landlord males have large, positive returns to Acres Owned and Operated (b = 21.60), but females in that class have moderate, negative returns (b = -5.05). The Education

variable, however, does have similar impacts on both of them (b's = -25 and -20), and Age is fairly similar (b's = -37 and -15).

Farmer-tenants are the most alike by gender. Only two of the relevant variables have substantially different effects, Acres Owned and Operated (which have opposite signs) and Education (with women having negative impacts nearly three times as great). Male and female part-timers, on the other hand, are different on every measure. Age and Education both affect them in opposite directions; men gain thrice more by operating their own acres, but women benefit much more from the value of the land they own. Family farmers, finally, are also quite different by gender. Men benefit from Acres Owned and Operated while women lose; Agenegatively influences the incomes of both, but women much more so; and Education greatly helps men (b = 647) while hurting women (b = -1079).

The conclusion here is equivocal: some of the class positions significantly mediate the effects of gender while others do not. For instance, for farmer-landlords and farmer-tenants, the returns to all of the land variables (except Acres Owned and Operated) as well as to Age and Education appear to be quite similar for men and women. The other classes, however, seem to have different variable impacts according to gender. Hypothesis 6 thus does not receive enough support to be fully confirmed. Wright also reaches this conclusion. He found that

significant differences exist between the income determination processes of men and women even when controlling for class. Interestingly, this gender differential is much greater than for race; sexism may be less "class-bound" than is racism (Wright and Perrone, 1977:50; Wright, 1979:219). In any case, classes themselves do not appear to mediate most of the effects of gender on positive net farm income.

This point is reinforced by Table 24, which presents the total impacts of the land variables for each class by gender. As in the above analysis, men and women in the farmer-tenant class are the most alike. They also receive the largest total returns to land, $4,346 for males and $3,337 for females. Both genders in the capitalist class also obtain significant "pay-offs," especially for operating their own land; women get over $3,800 and men over $1,100. On the other variables, though, capitalists differ substantially by gender, as do the other class positions on practically every measure. Therefore, the overall expected returns to land for positive net farm income recipients fail to support Hypothesis 6.

Hypothesis 7 takes another approach to the class-gender relation. It posits that the average mean incomes of men and women within a particular class will be closer to each other than will the overall gender difference in income (i.e., not taking class into account). Table 25 presents the relevant data. It appears that this

Table 24. Total Expected Returns to Land Variables for Men and Women With Positive Net Farm Income, by Class.

(Unstandardized Regression Coefficient x Mean)

	A. Owned & Operated ($)	A. Rented In & Operated ($)	A. Rented Out ($)	Value of A. Owned ($)
Capitalist Farmers				
Men	1,164	-1,683	*	670
Women	3,839	+	+	*
Landlords				
Men	--	--	538	312
Women	--	--	190	1,709
Farmer-Landlords				
Men	1,858	--	188	252
Women	-232	--	493	1,739
Farmer-Tenants				
Men	-685	2,340	--	2,691
Women	202	1,001	--	2,134
Part-Time Farmers				
Men	536	75	--	86
Women	172	+	--	926
Family Farmers				
Men	1,875	328	--	36
Women	-919	+	--	2,694

* = b not significant at .01 level.
+ = sample size too small (less than 30) to estimate b.
-- = not applicable.

Table 25. Positive Net Farm Income of Men and Women, by Class (Means).

	Men ($)	Women ($)	Women/Men Ratio (%)
All	5,849	3,527	60.3
Capitalist Farmer	18,922	14,489	76.6
Landlord	4,047	3,351	82.8
Farmer-Landlord	4,657	3,256	69.9
Farmer-Tenant	14,774	4,785	32.4
Part-Time Farmer	2,189	1,770	80.9
Family Farmer	10,999	10,510	95.5

hypothesis is largely confirmed. Average women, regardless of class, have 60 percent of the positive net farm income that average men do. Analyzing men and women by class, however, raises that ratio considerably, from 70 percent (farmer-landlords) to 95 percent (family farmers). There is one exception: female farmer-tenants make only 32 percent as much as males in that class. The main point, though, is that the positive net farm income differentials by gender are significantly reduced in every class except one, compared to the overall gender differential. Hypothesis 7 is largely confirmed.

2. Non-farm Household Income

Table 26 shows that the gender differences within classes for non-farm household income are not as great as for positive net farm income. One indication of this is the general similarity of the variance explained for men and women in each class position--much closer than in the above section. Hypothesis 6 thus receives somewhat more support with non-farm income. Yet, it still falls short of solid confimation.

Capitalists are largely alike on the land variables. They differ by gender mainly in the returns to Age (men are "positive," women "negative") and SEI (men are highly benefitted, women are not affected). Landlord returns are in the same direction for men and women with regard to their definitive feature, Acres Rented Out, although the

Table 26. Comparison of Class Processes For Men and Women With Non-Farm Household Income.

(Unstandardized Regression Coefficients)

		Capitalist Farmer	Land-lord	Farmer-Landlord	Farmer-Tenant	Part-Time Farmer	Family Farmer
A. Owned & Operated	Men	.30	--	3.44	-6.12	5.95	-.33
	Women	.72	--	3.12	-22.04	-3.95	2.68
A. Rented In & Operated	Men	-.08	--	--	-.16	-12.51	*
	Women	-.54	--	--	5.84	+	25.46
A. Rented Out	Men	.56	.99	1.24	--	--	--
	Women	+	3.19	-5.90	--	--	--
Value of A. Owned	Men	.0005	.0002	.002	-.001	*	.00003
	Women	*	-.001	.002	-.01	*	-.002
Age	Men	110.65	103.13	-45.42	8.29	56.16	60.19
	Women	-121.34	-67.97	-113.37	-262.86	299.42	52.64
Education	Men	803.44	2,091.46	1,022.96	*	1,241.24	466.65
	Women	1,200.49	1,112.91	666.49	551.82	1,523.14	787.99
SEI	Men	598.13	166.54	344.00	431.77	141.14	--
	Women	*	76.24	266.50	180.36	121.20	--
Constant Term	Men	-18,674	-17,370	-6,230	-340	-3,536	-3,377
	Women	-6,470	-4,284	1,013*	11,176	-25,481	-15,379*
R^2	Men	.257	.262	.381	.315	.143	.034
	Women	.280	.313	.555	.315	.256	.056

* = not significant at .01 level.
-- = not applicable.
+ = less than 30 cases.

coefficient for females is over three times the size. Landlords differ substantially by gender on land value and Age; on the other variables they are similar. As with net farm income, farmer-landlords and farmer-tenants are the most alike by gender. Men and women in the former class are quite close on every variable except Acres Rented Out, which is, however, a definitive characteristic of this class. Likewise, farmer-tenants differ by gender on the crucial variable, Acres Rented In and Operated, yet have the same sign on most of the other measures; women generally have larger coefficients. Both part-timers and family farmers have comparable returns to the status attainment variables but not to land. As in the previous analysis, then, Hypothesis 6 is only partially supported for non-farm income: some class positions have similar income determination processes for both men and women whereas others do not.

Table 27 presents the total effects of the land variables by class and gender. Capitalist women average nearly $2,500 by operating their own land while men bring in $800. Landlords generally benefit from renting land out, if only slightly. The largest returns are to female farmer-tenants, who lose over $1,200 by operating their own land but earn nearly as much by renting in land. I cannot explain this dramatic turnabout--unless women in this class are an exaggerated version of the aggressive commercial farmers who overexpanded by buying too much

Table 27. Total Expected Returns to Land Variables For Men and Women With Non-Farm Household Income, by Class.

	(Unstandardized Regression Coefficient x Mean)			
	A. Owned & Operated ($)	A. Rented In & Operated ($)	A. Rented Out ($)	Value of A. Owned ($)
Capitalist Farmers				
Men	813	-596	36	308
Women	2,494	-727	+	*
Landlords				
Men	--	--	136	22
Women	--	--	357	-75
Farmer-Landlords				
Men	399	--	107	293
Women	202	--	-307	162
Farmer-Tenants				
Men	-504	-167	--	-70
Women	-1,234	1,209	--	-647
Part-Time Farmers				
Men	399	-63	--	*
Women	-205	+	--	*
Family Farmers				
Men	-79	*	--	5
Women	557	356	--	-207

* = b not significant at .01 level.
+ = sample size too small (less than 30) to estimate b.
-- = not applicable.

land at very high prices and now compensate by leasing land for increased net returns. If this is the case, however, then why don't men to it, too? I do not know. The upshot of Table 26 backs up the above negative evaluation of Hypothesis 6: For most of the class locations, men and women appear to have different income determination processes.

Unlike with net farm income, however, Hypothesis 7 is also rejected for non-farm income. Table 28 reports the overall mean non-farm incomes for men and women, the ratio being 70 percent. The class breakdowns reveal only two classes for which the gender differential is lessened. Farmer-tenant women make 82 percent of the men's income in that class. Most remarkably, females in the family farmer class have higher non-farm incomes than do men, the ratio being 129 percent. Other than these two, however, the ratios are smaller than for men and women in general. Landlords are the lowest (41 percent); capitalists, farmer-landlords, and part-timers all have female/male income ratios around 65 percent--lower than the overall figure of 70. Thus, Hypothesis 7 is not supported for non-farm income.

To conclude: Of the four tests of the gender-class hypotheses, only one was convincingly confirmed. For positive net farm income recipients, class does appear to mediate absolute levels of gender differences in income.

Table 28. Non-Farm Household Income of Men and Women, by Class (Means).

	Men ($)	Women ($)	Women/Men Ratio (%)
All	13,375	9,418	70.4
Capitalist Farmer	7,620	5,074	66.6
Landlord	22,315	9,265	41.5
Farmer-Landlord	14,770	9,458	64.0
Farmer-Tenant	7,236	5,935	82.0
Part-Time Farmer	19,594	12,952	66.1
Family Farmer	3,113	4,022	129.2

This is not the case with non-farm income. Furthermore, the income returns to the predictor variables are usually rather different by gender within the same class. Thus, we cannot claim that class effectively accounts for the different income determination processes of men and women.

CHAPTER SEVEN: SUMMARY AND CONCLUSIONS

This study is basically an extension of Wright's (1979) class structure perspective on income determination. However, it is not simply an extension because of the subject matter--land ownership. This leads to some divergence from Wright. He analyzed a random sample of the U.S. working population, and found, for example, that individuals' incomes rise as their SEI scores increase. In contrast, my analysis indicates that as SEI scores go up, net farm incomes decline. This otherwise inexplicable finding is easily understood once we realize that my sample consists of farm land owners and so is not representative of the U.S. population as a whole. That is, many farm land owners are farmers, who have a low SEI measure (14), but who also tend to have high net farm incomes. Occupational status, then, plays a somewhat different role in the income determination process of farm land owners than it does for other people. In this sense, many of my results do not parallel those of Wright.

Moreover, whereas Wright relied mainly upon authority relations to designate classes, I focus upon the social relations of property ownership itself. Carchedi (1980), for one, criticizes Wright for overemphasizing workplace

domination while excluding ownership. At the end of his study, Wright (1979:224) admits the need for examining the propertied. Some time ago, Stinchcombe (1961) urged the priority of property relations over occupation, at least for the study of rural social stratification. Newby (1978, 1980) recently repeated this suggestion. My investigation of farm land ownership took place within this context.

As laid out in Chapter One, land has several characteristics that make it unique among the means of production. The relative fixedness of land--in quantity, quality, and location, for example--in conjunction with the social institution of private property leads to a distinctive class structure of farm land ownership, and therefore of agriculture, in capitalist societies (Newby, 1978, 1980). My theoretical model of this class structure is an initial effort at specifying some of the more important economic dimensions of owning farm land. It is certainly not an ideal specification. I think, though, that the class structure model of farm land ownership presented here makes a contribution to the "new" sociology of agriculture.

Next I employed this model in an analysis of income determination. First, I compared it to the standard sociological explanation of stratification, the status attainment paradigm. Wright (1979) found that class compares favorably with occupational status in predicting

individual income. I wanted to see if this would hold for farm land owners, a very different population than Wright studied. Actually, I used a much more stringent "test" of the class structure model. He pitted it against only occupational status while my comparison included the additional attainment variables of age and education. Since farm land owners usually receive income from two sources, farm and non-farm, I applied the competing approaches to both types. For non-farm income as well as net farm income, class outpredicted the status attainment variables. These results furnish strong empirical support for the class structure view.

I then sought to discover whether class itself makes a difference in income determination processes. These were my structural-level hypotheses that the effects of both land size measures and conventional determinants of status would vary significantly by class. The findings here also provided evidence in favor of class analysis, although considerably more so for net farm than for non-net farm income. That is, the regression coefficients differ more by class with net farm income. Finally, I investigated class mediations of the "returns" to gender. Do men and women within the same class have similar income determination processes compared to those across class? Wright (1979) found that this is generally the case. But most of my results for farm land owners indicated that class is not a very important mediator of the proposed

gender-income relation. Men and women appear to have substantially different processes for acquiring money, regardless of class location. This suggests that by and large gender is not effectively "structured" by class. This set of results was my main negative findings. For the most part, however, the structural-level analyses reinforce the class approach to income determination.

What does this imply for our understanding of social stratification? Most especially, does it mean that occupation and education are unimportant in determining an individual's income? No; in only a few cases were the effects of these variables insignificant (cf. Wright, 1979; Crompton and Gubbay, 1978:149-65). Throughout this work, I have discussed the two approaches as though they were mutually exclusive. Several sociologists maintain that this is not necessarily so, for two different reasons.

First, status attainment researchers deal almost exclusively with the individual level of analysis. They determine how people are sorted into various positions--assuming, often implicitly, the given social structure of "empty places." This line of argument holds that there is nothing intrinsically incompatible with a class structure that is filled with people according to their individual characteristics such as educational attainment (Kalleberg and Griffin, 1980; Kalleberg, 1982; Bielby, 1981; Bielby and Kalleberg, 1981). Wright (1979) concludes, for

example, that educational impacts are structured by class position. This is somewhat akin to seeing stratification as comprised of resources and rewards (Coleman and Rainwater, 1978; Parkin, 1971:33). Productive property or wealth is an instance of the former while prestige or income exemplifies the latter (cf. Wright, 1980c). The dichotomy can be extended to include Marx's emphasis on production and Weber's on distribution (Crompton and Gubbay, 1978:16, 153; Saunders, 1978:68; Giddens, 1973:75-96; Parkin, 1979:3, 11).

Second, some sociologists identify two distinct structures in the economic realm, class and occupation (e.g., Bottomore, 1968:295; Hill, 1973:175; cf. Wilson, 1978, 1981). Following Wright (1979), Kalleberg and Griffin (1980:735) see classes in terms of the social relations of production and occupations as similar "technical activities within a division of labor." They do not, though, restrict occupation to occupational status and in fact extend the concept to include other measures of occupational differentiation such as complexity of involvement, relative cognitive development, and training time (cf. Kalleberg et al., 1981; Bielby and Kalleberg, 1981). Thus, there may well be two somewhat overlapping but theoretically distinct social structures that govern the productive organization of society, one occupational, the other class-based.

If this is correct, it still is reasonable to inquire

into the relative impacts of class and occupation. Which is the better predictor of income? My research addresses this issue and the answer is fairly straightforward. First, at the individual level, the class structure of farm land owners is evidently more important than even the combination of age, education, and occupation. Secondly, it is also apparent that class mediates the impacts of the land-size measures as well as the status attainment variables (but not of gender). Therefore, I conclude that class substantially influences both individual-level characteristics and the occupational structure itself. Class is evidently more important than occupation in structuring the income determination process.

Let me now summarize some of the major limitations of my work. First of all, it is a very incomplete form of class analysis. As mentioned at the end of Chapter Three, the Marxist concept of class includes not only economics but also politics and culture. This research dealt only with the economic structure of farm land ownership. One obviously missing element is the political determinants of farm income. Throughout U.S. history, and especially since the New Deal, the national state has played a vital role in agricultural development and in income policy in particular. Yet I had no data on this impact--a serious shortcoming indeed since I was trying to explain the income determination process. Therefore, I do not claim

to have offered a full class analysis of farm land owners.

A related limitation is that my data are for only one point in time. This leads to several problems. One is the volatility of farm income. The year that income was reported in my data (1977), was probably the worst year for farm income since the 1930s (General Accounting Office, 1980:26). This situation could give a highly biased view of the incomes of farm land owners. Moreover, my work lacks an historical perspective on U.S. agriculture. How did the six class positions arise? Which are just now emerging, and which are declining? My cross-sectional data cannot begin to answer such questions.

Finally, I am unable to account for most of the gender differences that my results point to. Men and women within the same class appear to have quite different income determination processes--contrary to my hypothesis. I had reasoned that much of the income differences between males and females would disappear if their class location were held constant. By and large, this did not occur, and I cannot adequately explain why. Such an inability is often the outgrowth of an approach to sociology that Mills (1959) castigated as "abstracted empiricism." Without a detailed, concrete knowledge of one's subject matter, the numbers tend to dominate the research. Real social relationships give way to abstractions.

What suggestions, then, could I offer for further

research in this area? At the empirical level, I would ask for better measures of class relations. The most glaring deficiency in this work is the lack of information on the employment of wage-labor. Data on what kind of farm is owned (e.g., fruit, wheat, livestock) would also be extremely useful since type of enterprise varies so much, especially at the national level. More information on the jobs of the non-farmers would allow us to locate them in the larger class structure of the U.S. Questions on the reasons that they own farm land would also help us to understand their motivations. What are they hoping to get out of the land? This would permit a comparison of the subjective attitudes of the different classes.

In light of the above self-criticisms, a number of other recommendations can be made. Historical examination of the various class positions could shed light on the sociology of property relations. For instance, a regional study comparing the rise of part-owner-operators and the decline of tenant farmers in the South would be instructive. Such an investigation should take note of the role of the New Deal in transforming the old plantation system. How were those public policies made, and who benefitted from them? Furthermore, what place did the sharecropper unions of the thirties have in hastening their own decline? Did they realize the eventual outcome of their protests? These queries hint at the sort of historical class analysis that could be performed.

My work holds some implications for agricultural policy. For example, the issue of the separation of the ownership and control of farm land has recently been raised within the U.S. Department of Agriculture (1981; cf. Raup, 1980). Should non-farming owners of farm land be allowed to gain control of the agricultural sector, or should operating farmers increase their own power? Does nominal ownership imply actual direction of farm land use, or are landlords often dominated by their large, commercial farming tenants? The structure of agriculture has long been moving away from a family labor farming system and toward more capitalistic arrangements. Which farm land owning classes are in ascendency? Which should receive public support? The national state plays a significant role in farm incomes. My results would suggest that it matters a great deal whether government payments are tied to land or to enterprise--and that different classes are differentially affected by income policies.

I shall conclude with some further theoretical reflection on property relations. Of my two basic aims in this work--to develop a theoretical model of the class structure of farm land ownership and to employ it in an empirical analysis of income differences among farm land owners--the results from the latter are encouraging. However, even though the model did perform rather well

empirically, I am not completely satisfied with its conceptual basis. It is not so much the delineation of the class structure of farm land owners that is problematic, but rather the several theoretical foundations upon which it is based. Specifically, there is an unfortunate lack of interaction among the three perspectives on property: Marxism, Weberianism, and institutional economics. This issue is not directly tied to income determination although it holds implications for such. Everyone agrees that property ownership contains the legal claim to income. For instance, a leading Marxist economist (Mandel, 1968:283) approvingly quotes the following institutional-economic view of land ownership: "The buyer of land is actually buying the right to receive a series of annual incomes..." (Renne, 1947:215). Let me elaborate upon the broader conceptual problem of property ownership with respect to the further integration of the three theoretical standpoints.

As pointed out in Chapter One, Pryor's (1973) analysis of property highlights economic inequality and domination. This institutional-economic focus on the power relations of property strikes a sociologist as being straight out of Weber. Yet the relationship between the two is unclear. Institutional economists occasionally claim Weber as one of their own, but my interest here is not mainly intellectual history. Rather, what are the similarities and differences between Weber's social

economics and that of the institutionalists? True, both view property ownership as including a claim on income. This point, however, does not exhaust the amount of overlap.

As regards farm land, both institutional agricultural economists and Weberian rural sociologists focus on the concept of tenure. Land tenure analysis can be a formal, arid exercise, as, for example, in the simplistic "bundle of rights" concept of property. The problem with this notion is two-fold. On its own terms, it usually fails to differentiate any hierarchy of rights; they all seem equally important. Secondly, from the broader standpoint discussed above, property is not just "rights." As the best practioners of both subdisciplines stress, property is not essentially limited to income rights. They focus instead on actual control of farm land (e.g., Harris, 1958, 1974; Breimyer, 1977; Raup, 1980) and, more generally, on the role of power in agricultural property relations (Newby et al., 1978; Newby, 1980). Sometimes they also broach the subject of the "social relations of production."

This phrase is not a perfectly clear one. The version I have employed is Wright's (1979, 1980b), but there are competing renditions. Bowles and Gintis (1974:33; cf. 1976:55-61) state:

> By the "social relations of production" we mean the system of rights and responsibilites, duties and rewards, that

> governs the interaction of all individuals involved in organized productive activity.

Giddens (1977:206) distinguishes four such social relationships: paratechnical, authority, market, and consumption (cf. Giddens, 1973:86, 1981:299). Therborn (1976:376-86) discusses three aspects of the relations of production: distribution of the means of production and means of subsistence, the objective of production, and the structured social relations between workers and appropriators. Cutler et al. (1977:243-62) state simply that the effective possession of, or separation from, the means of production constitutes the basis class relationship. Many of these definitions overlap to a considerable degree, but they are far from being identical.

Wright and others, as outlined in Chapters One and Four, break the capitalist social relations of production down into three dimensions of control over property, real economic ownership (resource investment decisions) and possession (of both the physical means of production and the labor-power of others). These concepts relate closely to the institutional economists' sophisticated formulations of property (e.g., Pryor's (1973) control rights) and land tenure (Moyer et al.'s (1969) access--the "decision-making prerogatives over land.") Do these labels point toward different--or the same--aspects of the ownership and control of production? Writing from an

ostensibly Marxist point-of-view, Goss et al. (1980:96) argue that tenure categories tend to obscure instead of advance class analysis. My work suggests that this may not in fact be the case. The conclusion to be drawn from both the theoretical and empirical analysis is that tenure is a useful indicator of economic class position, of one's location within the social relations of production.

Finally, what of Marx and Weber themselves? Saunders (1978, 1979:66-102) presents concise summaries of the issues. Weber studied tenure and property ownership chiefly as exchange situations that could lead to income via the market. This was central to his analysis of property classes. Marx, in contrast, was relatively unconcerned with tenure and property as such. Only as these implied the exploitation of labor did his attention turn to them. While Marx (1973) commented extensively on the changing place of property in history, his primary interest was in class relations--the social relations of production (Hunt, 1979). This concept still seems to me to be the best one available for investigating class structures and their social-economic implications.

Many of these issues, however, remain unresolved. We are still debating "what Marx (and Weber) really said." But, more importantly, we need to move forward to deal with substantive matters, whatever they are called: power, control, ownership, or exploitation. Then we can develop a more satisfactory sociology of property.

APPENDIX

Table A1. Means, Standard Deviations, and Correlation Coefficients For All Variables--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) A. Owned & Operated	...														
(2) A. Rented In & Operated	.15	...													
(3) A. Rented Out	.10	#	...												
(4) Value of A. Owned	.12	.05	.06	...											
(5) Gender (Female = 1)	-.03	-.03	.03	-.01	...										
(6) Age	.05	-.02	.06	.03	.06	...									
(7) Education	#	#	.05	.01	.02	-.36	...								
(8) SEI	-.10	-.06	.06	-.03	.14	-.14	.46	...							
(9) Capitalist Farmer	.50	.38	.02	.08	-.02	.03	.01	-.07	...						
(10) Landlord	-.10	-.04	.22	#	.18	.09	.12	.30	-.06	...					
(11) Farmer-Landlord	-.01	-.02	.06	.01	.04	.12	-.04	-.01	-.03	-.10	...				
(12) Farmer-Tenant	-.02	.08	-.05	#	-.07	-.11	-.03	-.18	-.04	-.16	-.08	...			
(13) Part-Time Farmer	-.10	-.07	-.11	-.05	-.05	-.22	.12	.28	-.09	-.36	-.18	-.29	...		
(14) Family Farmer	.10	-.04	-.07	.05	-.04	.20	-.23	-.38	-.06	-.24	-.12	-.19	-.43	...	
(15) Net Farm Income	.17	.05	.05	.09	-.06	-.01	-.02	-.23	.12	-.08	-.02	.25	-.30	.21	...
$\bar{X}$	123	152	28	103 (000)	.08	50	12	29	.01	.16	.05	.11	.39	.23	6506
S.D.	566	1651	202	825 (000)	.27	12	3	22	.11	.37	.22	.32	.49	.42	11658

= less than .01.

Table A2. Means, Standard Deviations, and Correlation Coefficients For All Variables--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) A. Owned & Operated	...														
(2) A. Rented In & Operated	.05	...													
(3) A Rented Out	.01	-.01	...												
(4) Value of A. Owned	.16	*	.05	...											
(5) Gender (Female = 1)	*	-.03	.02	-.01	...										
(6) Age	.05	.04	.04	.01	.05	...									
(7) Education	.02	.06	.04	.05	*	-.22	...								
(8) SEI	-.06	-.09	.05	-.03	-.01	-.07	.50	...							
(9) Capitalist Farmer	.42	.29	.02	.11	-.01	.04	.04	-.08	...						
(10) Landlord	-.05	-.04	.21	.04	.09	.16	.07	.16	-.04	...					
(11) Farmer-Landlord	-.01	-.03	.09	.01	.06	.03	.04	.12	-.03	-.07	...				
(12) Farmer-Tenant	-.06	.14	-.06	-.05	-.07	-.22	-.06	-.25	-.08	-.16	-.12	...			
(13) Part-Time Farmer	-.06	-.12	-.09	-.05	*	-.12	.09	.36	-.13	-.24	-.19	-.44	...		
(14) Family Farmer	.04	-.06	-.05	.04	-.01	.26	-.14	-.32	-.07	-.14	-.11	-.25	-.38	...	
(15) Negative Net Farm Income	-.11	-.23	-.04	-.10	.08	*	-.04	.11	-.17	-.06	.04	-.07	.17	-.04	...
$\bar{X}$	181	697	18	101 (000)	.05	48	12	30	.02	.08	.05	.23	.40	.18	-5016
S.D.	1013	4789	171	587 (000)	.22	12	3	23	.15	.27	.22	.42	.49	.38	5061

* = less than .01.

Table A3. Means, Standard Deviations, and Correlation Coefficients For All Variables--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) A. Owned & Operated	...														
(2) A. Rented In & Operated	.08	...													
(3) A. Rented Out	.07	*	...												
(4) Value of A. Owned	.11	.02	.06	...											
(5) Gender (Female = 1)	-.02	-.03	.03	-.01	...										
(6) Age	.04	*	.05	.03	.06	...									
(7) Education	.01	.04	.05	.02	.01	-.31	...								
(8) SEI	-.08	-.06	.06	-.03	.13	-.09	.44	...							
(9) Capitalist Farmer	.46	.31	.02	.08	-.02	.03	.03	-.07	...						
(10) Landlord	-.08	-.04	.21	*	.17	.09	.12	.29	-.05	...					
(11) Farmer-Landlord	-.01	-.02	.06	.01	.04	.10	-.02	.03	-.03	-.10	...				
(12) Farmer-Tenant	-.03	.11	-.05	-.02	-.07	-.14	-.01	-.19	-.05	-.17	-.10	...			
(13) Part-Time Farmer	-.08	-.08	-.10	-.05	-.03	-.19	.08	.27	-.10	-.32	-.18	-.32	...		
(14) Family Farmer	.08	-.05	-.07	.05	-.04	.21	-.21	-.35	-.07	-.22	-.12	-.22	-.41	...	
(15) Non-Farm Household Income	-.04	-.06	.07	-.01	-.07	-.09	.36	.50	-.04	.19	.02	-.16	.31	-.35	...
$\bar{X}$	139	284	26	104 (000)	.08	50	12	28	.01	.15	.05	.15	.37	.22	13070
S.D.	695	2740	207	804 (000)	.27	12	3	22	.12	.36	.22	.35	.48	.42	15224

* = less than .01.

Table A4. Comparison of Models for Positive Net Farm Income.

(Unstandardized Regression Coefficients)

	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	1.73	3.08		
A. Rented In & Operated	-.17	.19		
A. Rented Out	3.18	1.88		
Value of A. Owned	.0007	.001		
Gender (Female=1)	-690.94	-2239.12	-757.52	-1225.74
Age	-44.62		-14.27	
Education	238.07		403.01	
SEI	-58.05		-149.18	
Capitalist Farmer	4867.93			8559.95
Land-lord	-4576.56			-5741.95
Farmer-Landlord	-4110.33			-4936.76
Farmer-Tenant	4443.49			4392.28
Part-Time Farmer	-7051.91			-8061.76
Constant Term	10424.52	6135.98	6766.75	10347.36
R^2	.183	.037	.065	.159

Table A5. Comparison of Models For Negative Net Farm Income.

(Unstandardized Regression Coefficients)

	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	-.29	-.44		
A. Rented In & Operated	-.20	-.24		
A. Rented Out	-.83	-1.23		
Value of A. Owned	-.0006	-.0007		
Gender (Female=1)	1669.73	1619.52	1832.83	1687.30
Age	11.72		-8.65	
Education	-127.94		-224.27	
SEI	20.42		39.44	
Capitalist Farmer	1757.92			-4995.72
Land-lord	-913.18			-575.63
Farmer-Landlord	1083.26			1395.99
Farmer-Tenant	234.41			-124.15
Part-Time Farmer	1115.56			1509.63
Constant Term	-4859.12	-4755.65	-2831.48	5590.34
R^2	.110	.079	.033	.060

Table A6. Comparison of Models for Non-Farm Household Income.

(Unstandardized Regression Coefficients)

	(1) All	(2) Land-Size	(3) Status Attainment	(4) Class Structure
A. Owned & Operated	.30	-.95		
A. Rented In & Operated	-.17	-.35		
A. Rented Out	1.58	5.43		
Value of A. Owned	.0001	-.0002		
Gender (Female=1)	-8164.77	-4227.46	-7471.33	-7133.33
Age	55.26		12.36	
Education	1025.43		859.27	
SEI	201.43		312.56	
Capitalist Farmer	1986.43			3496.98
Land-lord	9529.48			16939.25
Farmer-Landlord	6693.98			10679.29
Farmer-Tenant	2233.24			3108.93
Part-Time Farmer	10359.80			15343.02
Constant Term	-13093.00		-6110.69	4290.64
R^2	.358	.016	.289	.223

Table A7. Means, Standard Deviations, and Correlation Coefficients For Capitalist Farmers--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	-.06	...						
(3) A. Rented Out	.27	*	...					
(4) Value of A. Owned	.19	.07	.13	...				
(5) Gender (Female = 1)	.02	-.07	.01	.04	...			
(6) Age	.08	-.07	.03	.03	.08	...		
(7) Education	.10	.01	.04	.04	.08	-.18	...	
(8) Positive Net Farm Income	.13	-.16	.04	.09	-.04	.01	.07	...
$\bar{X}$	2608	5578	73	690 (000)	.05	53	12	18743
S.D.	4046	13147	792	2062 (000)	.22	18	3	21767

* = less than .01.

Table A8. Means, Standard Deviations, and Correlation Coefficients For Landlords--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	--	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	--	--	.20	...				
(5) Gender (Female = 1)	--	--	-.01	-.03	...			
(6) Age	--	--	.03	.02	.17	...		
(7) Education	--	--	.06	.08	-.05	-.40	...	
(8) Positive Net Farm Income	--	--	.23	.22	-.05	-.03	.07	...
$\bar{X}$	--	--	136	98 (000)	.34	63	11	3814
S.D.	--	--	361	320 (000)	.47	14	3	7141

-- = not applicable.

Table A9. Means, Standard Deviations, and Correlation Coefficients For Farmer-Landlords--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	--	...						
(3) A. Rented Out	.34	--	...					
(4) Value of A. Owned	.25	--	.19	...				
(5) Gender (Female = 1)	-.11	--	-.02	-.03	...			
(6) Age	-.07	--	*	-.03	.13	...		
(7) Education	.10	--	.07	.08	-.10	.49	...	
(8) Positive Net Farm Income	.38	--	.21	.24	-.07	-.08	.07	...
$\bar{X}$	77	--	74	117 (000)	.21	61	11	4345
S.D.	149	--	201	442 (000)	.41	14	3	8507

-- = not applicable.
* = less than .01.

Table A10. Means, Standard Deviations, and Correlation Coefficients For Farmer-Tenants--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	.09	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.57	.01	--	...				
(5) Gender (Female = 1)	-.08	-.13	--	-.03	...			
(6) Age	.07	-.16	--	.04	.17	...		
(7) Education	.01	.05	--	.03	-.13	-.51	...	
(8) Positive Net Farm Income	.09	.19	--	.19	-.13	-.13	.04	...
$\bar{X}$	96	501	--	89 (000)	.05	46	12	14261
S.D.	117	599	--	135 (000)	.22	13	3	16273

-- = not applicable.

Table All. Means, Standard Deviations, and Correlation Coefficients For Part-Time Farmers --Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	.31	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.24	.10	--	...				
(5) Gender (Female = 1)	.02	-.02	--	*	...			
(6) Age	.09	*	--	.02	.04	...		
(7) Education	.01	-.01	--	.02	.02	-.42	...	
(8) Positive Net Farm Income	.31	.20	--	.16	-.03	.03	.04	...
$\bar{X}$	50	2	--	43 (000)	.09	50	12	2149
S.D.	111	20	--	190 (000)	.29	13	3	4665

-- = not applicable.
* = less than .01.

Table A12. Means, Standard Deviations, and Correlation Coefficients For Family Farmers--Positive Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	.40	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.09	.04	--	...				
(5) Gender (Female = 1)	-.06	-.07	--	-.01	...			
(6) Age	-.05	-.13	--	*	.04	...		
(7) Education	.15	.11	--	.03	.09	-.37	...	
(8) Positive Net Farm Income	.20	.15	--	.04	-.01	-.16	.17	...
$\bar{X}$	227	33	--	176 (000)	.06	54	11	10950
S.D.	266	87	--	1560 (000)	.24	13	3	14115

-- = not applicable.
* = less than .01.

Table A13. Means, Standard Deviations, and Correlation Coefficients For Capitalist Farmers--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	-.13	...						
(3) A. Rented Out	.01	-.04	...					
(4) Value of A. Owned	.39	-.19	.09	...				
(5) Gender (Female = 1)	.07	-.09	.09	.01	...			
(6) Age	.07	-.09	.06	-.03	.01	...		
(7) Education	.04	.43	.01	.08	*	-.34	...	
(8) Negative Net Farm Income	-.05	-.28	-.02	-.13	.01	.02	-.18	...
$\bar{X}$	2922	9703	49	534 (000)	.04	52	13	-10388
S.D.	5893	18816	346	956 (000)	.20	11	3	5428

* = less than .01.

Table A14. Means, Standard Deviations, and Correlation Coefficients For Landlords--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	--	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	--	--	.12	...				
(5) Gender (Female = 1)	--	--	.01	-.02	...			
(6) Age	--	--	-.02	.01	.37	...		
(7) Education	--	--	.03	.02	-.07	-.35	...	
(8) Negative Net Farm Income	--	--	-.07	-.02	.18	.07	-.07	...
$\bar{X}$	--	--	144	173 (000)	.23	61	12	-4874
S.D.	--	--	474	2842 (000)	.42	13	3	5245

-- = not applicable.

Table A15. Means, Standard Deviations, and Correlation Coefficients For Farmer-Landlords--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	--	...						
(3) A. Rented Out	.28	--	...					
(4) Value of A. Owned	.34	--	.22	...				
(5) Gender (Female = 1)	-.06	--	-.01	-.05	...			
(6) Age	.06	--	.07	.02	.13	...		
(7) Education	.08	--	.03	.13	-.04	-.33	...	
(8) Negative Net Farm Income	-.25	--	-.13	-.40	.14	.06	-.18	...
$\bar{X}$	134	--	86	134 (000)	.13	54	13	-3895
S.D.	236	--	278	254 (000)	.33	14	3	4072

-- = not applicable.

Table A16. Means, Standard Deviations, and Correlation Coefficients For Farmer-Tenants--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	-.03	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.60	.11	--	...				
(5) Gender (Female = 1)	-.05	-.04	--	-.05	...			
(6) Age	.10	.23	--	.01	.04	...		
(7) Education	.01	.09	--	.05	.02	*	...	
(8) Negative Net Farm Income	-.25	-.39	--	-.37	.11	.06	.01	...
$\bar{X}$	67	1883	--	48 (000)	.02	44	12	-5571
S.D.	95	7179	--	90 (000)	.15	10	2	5538

-- = not applicable.
* = less than .01.

Table A17. Means, Standard Deviations, and Correlation Coefficients For Part-Time Farmers--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	.31	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.12	.14	--	...				
(5) Gender (Female = 1)	-.04	-.03	--	-.01	...			
(6) Age	.10	-.02	--	*	.12	...		
(7) Education	.07	.01	--	.01	-.25	-.34	...	
(8) Negative Net Farm Income	-.19	-.09	--	-.07	.13	.05	-.14	...
$\bar{X}$	91	7	--	56 (000)	.10	49	12	-3788
S.D.	161	36	--	567 (000)	.30	11	3	4083

-- = not applicable.
* = less than .01.

Table A18. Means, Standard Deviations, and Correlation Coefficients For Family Farmers--Negative Net Farm Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...							
(2) A. Rented In & Operated	.39	...						
(3) A. Rented Out	--	--	...					
(4) Value of A. Owned	.45	.16	--	...				
(5) Gender (Female = 1)	.06	-.03	--	-.04	...			
(6) Age	-.12	-.15	--	-.16	.07	...		
(7) Education	.05	-.02	--	.18	.03	-.37	...	
(8) Negative Net Farm Income	-.31	-.13	--	-.39	.05	.23	-.13	...
$\bar{X}$	272	37	--	155 (000)	.05	55	12	-5468
S.D.	290	100	--	241 (000)	.21	14	3	5116

-- = not applicable.
* = less than .01.

Table A19. Means, Standard Deviations, and Correlation Coefficients For Capitalist Farmers--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	...								
(2) A. Rented In & Operated	-.11	...							
(3) A. Rented Out	.19	-.01	...						
(4) Value of A. Owned	.19	-.01	.13	...					
(5) Gender (Female = 1)	.03	-.07	*	.05	...				
(6) Age	.06	-.07	.03	.02	.05	...			
(7) Education	.07	.21	.03	.03	.05	-.21	...		
(8) SEI	.04	-.08	.01	*	-.10	.02	.26	...	
(9) Non-Farm Household Income	.15	-.10	.06	.06	-.03	.09	.21	.45	...
$\bar{X}$	2739	7211	64	634 (000)	.04	53	13	16	7509
S.D.	4764	15732	690	180 (000)	.19	16	3	12	16470

* = less than .01.

Table A20. Means, Standard Deviations, and Correlation Coefficients For Landlords--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	--								
(2) A. Rented In & Operated	--	--							
(3) A. Rented Out	--	--	...						
(4) Value of A. Owned	--	--	.13	...					
(5) Gender (Female = 1)	--	--	-.02	-.02	...				
(6) Age	--	--	.06	.05	.15	...			
(7) Education	--	--	.06	.06	-.08	-.20	...		
(8) SEI	--	--	*	-.01	.03	-.09	.53	...	
(9) Non-Farm Household Income	--	--	.06	.04	-.28	-.09	.47	.38	...
$\bar{X}$	0	0	133	103 (000)	.19	52	13	.43	19884
S.D.	0	0	445	549 (000)	.39	11	3	.26	18032

* = less than .01.
-- = not applicable.

Table A21. Means, Standard Deviations, and Correlation Coefficients For Farmer-Landlords--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	...								
(2) A. Rented In & Operated	--	--							
(3) A. Rented Out	.37	--	...						
(4) Value of A. Owned	.22	--	.18	...					
(5) Gender (Female = 1)	-.09	--	-.05	-.04	...				
(6) Age	.06	--	.04	.01	.04	...			
(7) Education	.09	--	.09	.10	-.05	-.51	...		
(8) SEI	-.10	--	-.05	-.05	.02	-.40	.59	...	
(9) Non-Farm Household Income	.03	--	.03	.07	-.10	-.32	.50	.58	...
$\bar{X}$	110	0	82	138 (000)	.12	55	12	31	14096
S.D.	191	0	227	509 (000)	.33	13	3	23	16726

-- = not applicable.

Table A22. Means, Standard Deviations, and Correlation Coefficients For Farmer-Tenants--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	...								
(2) A. Rented In & Operated	-.03	...							
(3) A. Rented Out	--	--	--						
(4) Value of A. Owned	.57	.03	--	...					
(5) Gender (Female = 1)	-.04	-.03	--	-.01	...				
(6) Age	.09	.09	--	.06	.08	...			
(7) Education	-.01	.06	--	.01	-.05	-.37	...		
(8) SEI	-.10	-.06	--	-.05	-.05	.06	.21	...	
(9) Non-Farm Household Income	-.14	-.10	--	-.09	-.02	.01	.11	.54	...
$\bar{X}$	83	1020	0	70 (000)	.03	45	12	18	7193
S.D.	110	4411	0	119 (000)	.17	12	2	12	9601

-- = not applicable.

Table A23. Means, Standard Deviations, and Correlation Coefficients For Part-Time Farmers--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	...								
(2) A. Rented In & Operated	.33	...							
(3) A. Rented Out	--	--	...						
(4) Value of A. Owned	.15	.12	--	...					
(5) Gender (Female = 1)	-.03	-.02	--	*	...				
(6) Age	.09	.01	--	.02	-.05	...			
(7) Education	.09	*	--	.01	.05	-.25	...		
(8) SEI	-.01	-.05	--	.02	.15	-.05	.50	...	
(9) Non-Farm Household Income	.07	.02	--	.01	-.11	-.01	.32	.30	...
$\bar{X}$	66	4	--	54 (000)	.07	47	12	36	19151
S.D.	134	28	--	378 (000)	.25	10	3	23	15329

-- = not applicable.
* = less than .01.

Table A24. Means, Standard Deviation, and Correlation Coefficients For Family Farmers--Non-Farm Household Income.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) A. Owned & Operated	...								
(2) A. Rented In & Operated	.40	...							
(3) A. Rented Out	--	--	...						
(4) Value of A. Owned	.10	.04	--	...					
(5) Gender (Female = 1)	-.03	-.05	--	-.01	...				
(6) Age	-.08	-.14	--	*	.05	...			
(7) Education	.15	.09	--	.04	.03	-.35	...		
(8) SEI	--	--	--	--	--	--	--	...	--
(9) Non-Farm Household Income	.02	*	--	.01	.03	.05	.15	--	...
$\bar{X}$	237	34	--	173 (000)	.06	55	11	14	3161
S.D.	270	89	--	1451 (000)	.23	13	3	0	6961

-- = not applicable.
* = less than .01.

Table A25. Means, Standard Deviations, and Correlation Coefficients For Capitalist Farmers by Gender--Positive Net Farm Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) A. Owned & Operated		...	.25	-.08	.01	.10	.26	.18
(2) A. Rented In & Operated		-.06	...	.03	-.03	-.09	.05	.10
(3) A. Rented Out		.28	*	...	-.03	.08	-.06	.03
(4) Value of A. Owned		.23	.09	.17	...	.13	.01	*
(5) Age		.08	-.07	.02	.02	...	-.06	-.29
(6) Education		.10	.01	.04	.04	-.19	...	.08
(7) Positive Net Farm Income		.13	-.17	.04	.12	.02	.07	...
$\bar{X}$	Men	2587	5083	71	670 (000)	53	12	18922
	Women	2908	1316	112	1081 (000)	60	13	14489
S.D.	Men	4084	13433	803	1707 (000)	18	3	21816
	Women	3140	3747	571	5489 (000)	11	2	19871

* = less than .01.

Table A26. Means, Standard Deviations, and Correlation Coefficients For Landlords by Gender--Positive Net Farm Income.

(Women above and men below the diagonal)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) A. Owned & Operated	...	--	--	--	--	--	--
(2) A. Rented In & Operated	--	...	--	--	--	--	--
(3) A. Rented Out	--	--	...	.36	.03	.10	.26
(4) Value of A. Owned	--	--	.18	...	.02	.11	.51
(5) Age	--	--	.03	.02	...	-.32	.01
(6) Education	--	--	.04	.07	-.43	...	.15
(7) Positive Net Farm Income	--	--	.22	.18	-.04	.05	...
$\bar{X}$ Men	--	--	138	104 (000)	61	12	4047
Women	--	--	133	85 (000)	66	11	3351
S.D. Men	--	--	392	379 (000)	14	3	7943
Women	--	--	294	156 (000)	14	3	5138

-- = not applicable.

Table A27. Means, Standard Deviations, and Correlation Coefficients For Farmer-Landlords by Gender--Positive Net Farm Income.

		(Women above and men below the diagonal)						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	A. Owned & Operated	...	--	.30	.27	-.09	.14	.06
(2)	A. Rented In & Operated	--	...	--	--	--	--	--
(3)	A. Rented Out	.34	--	...	.40	.01	.20	.32
(4)	Value of A. Owned	.25	--	.18	...	-.03	.13	.48
(5)	Age	-.05	--	*	-.02	...	-.44	-.03
(6)	Education	.08	--	.04	.08	-.50	...	.08
(7)	Positive Net Farm Income	.42	--	.20	.23	-.07	.06	...
$\bar{X}$	Men	86	--	76	126 (000)	60	11	4657
	Women	46	--	67	87 (000)	65	10	3256
S.D.	Men	154	--	215	494 (000)	14	4	9202
	Women	114	--	131	133 (000)	13	3	5171

-- = not applicable.
* = less than .01.

Table A28. Means, Standard Deviations, and Correlation Coefficients For Farmer-Tenants by Gender--Positive Net Farm Income.

(Women above and men below the diagonal)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) A. Owned & Operated	...	.73	--	.55	-.22	.29	.54
(2) A. Rented In & Operated	.07	...	--	.43	-.47	.28	.61
(3) A. Rented Out	--	--	...	--	--	--	--
(4) Value of A. Owned	.58	*	--	...	-.19	.42	.65
(5) Age	.09	-.14	--	.06	...	-.77	-.29
(6) Education	-.02	.03	--	.01	-.49	...	.20
(7) Positive Net Farm Income	.08	.18	--	.19	-.11	.02	...
$\bar{X}$ Men	98	520	--	90 (000)	46	12	14774
Women	54	166	--	71 (000)	56	10	4785
S.D. Men	118	608	--	136 (000)	13	2	16536
Women	80	208	--	115 (000)	12	3	5182

-- = not applicable.
* = less than .01.

Table A29. Means, Standard Deviations, and Correlation Coefficients For Part-Time Farmers by Gender--Positive Net Farm Income.

		(Women above and men below the diagonal)						
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) A. Owned & Operated		...	.18	--	.43	.18	*	.32
(2) A. Rented In & Operated		.32	...	--	.17	-.01	.04	.29
(3) A. Rented Out		--	--	...	--	--	--	--
(4) Value of A. Owned		.23	.10	--	...	.02	.10	.55
(5) Age		.07	*	--	.02	...	-.51	*
(6) Education		.01	.01	--	.01	-.42	...	*
(7) Positive Net Farm Income		.31	.20	--	.15	.03	.04	...
$\bar{X}$	Men	50	2	--	43 (000)	50	12	2189
	Women	58	1	--	46 (000)	52	12	1770
S.D.	Men	110	20	--	197 (000)	13	3	4712
	Women	117	11	--	100 (000)	15	3	4194

-- = not applicable.
* = less than .01.

Table A30. Means, Standard Deviations, and Correlation Coefficients For Family Farmers by Gender--Positive Net Farm Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) A. Owned & Operated		...	.29	--	.48	.10	.05	.07
(2) A. Rented In & Operated		.41	...	--	.10	-.21	.02	.29
(3) A. Rented Out		--	--	...	--	--	--	--
(4) Value of A. Owned		.09	.04	--	...	.06	.09	.21
(5) Age		-.06	-.12	--	*	...	-.41	-.35
(6) Education		.17	.12	--	.04	-.37	...	.02
(7) Positive Net Farm Income		.21	.15	--	.04	-.14	.19	...
$\bar{X}$	Men	231	35	--	182 (000)	54	11	10999
	Women	165	11	--	90 (000)	56	12	10510
S.D.	Men	267	89	--	1614 (000)	13	3	13658
	Women	247	40	--	172 (000)	13	3	19875

-- = not applicable.
* = less than .01.

Table A31. Means, Standard Deviations, and Correlation Coefficients For Capitalist Farmers by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	A. Owned & Operated	...	.15	.02	*	.05	.13	*	.43
(2)	A. Rented In & Operated	-.12	...	-.01	-.04	-.18	.26	-.09	.04
(3)	A. Rented Out	.20	-.01	...	-.03	.11	-.14	-.30	.02
(4)	Value of A. Owned	.24	.01	.16	...	.14	.01	*	.02
(5)	Age	.06	-.07	.03	*	...	-.28	.07	-.14
(6)	Education	.07	.21	.04	.04	-.21	...	.06	.31
(7)	SEI	.05	-.08	.01	*	.02	.26	...	.04
(8)	Non-Farm Household Income	.14	-.10	.06	.07	.10	.21	.46	...
	$\bar{X}$ Men	2709	7454	64	617 (000)	52	13	16	7620
	Women	3464	1346	65	1062 (000)	57	13	16	5074
	S.D. Men	4637	16007	700	151 (000)	16	3	12	16622
	Women	7221	2391	389	5208 (000)	12	3	11	12265

* = less than .01.

Table A32. Means, Standard Deviations, and Correlation Coefficients For Landlords by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...	--	--	--	--	--	--	--
(2) A. Rented In & Operated	--	...	--	--	--	--	--	--
(3) A. Rented Out	--	--	...	.38	.07	.13	-.03	.13
(4) Value of A. Owned	--	--	.13	...	.03	.28	-.04	.12
(5) Age	--	--	.06	.06	...	.01	.03	-.07
(6) Education	--	--	.05	.05	-.23	...	.35	.50
(7) SEI	--	--	*	*	-.12	.57	...	.38
(8) Non-Farm Household Income	--	--	.05	.03	-.05	.47	.42	...
$\bar{X}$ Men	--	--	137	110 (000)	52	13	43	22315
Women	--	--	112	75 (000)	56	12	45	9265
S.D. Men	--	--	479	607 (000)	11	3	26	18776
Women	--	--	259	114 (000)	10	3	26	8359

-- = not applicable.
* = less than .01.

Table A33. Means, Standard Deviations, and Correlation Coefficients For Farmer-Landlords by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated		...	--	.35	.28	.05	.07	-.02	.02
(2) A. Rented In & Operated		--	...	--	--	--	--	--	--
(3) A. Rented Out		.36	--	...	.40	.05	.18	-.02	-.03
(4) Value of A. Owned		.22	--	.18	...	*	.19	-.04	.02
(5) Age		.07	--	.05	.02	...	-.54	-.46	-.47
(6) Education		.09	--	.08	.09	-.50	...	.79	.66
(7) SEI		-.11	--	-.05	-.05	-.39	.56	...	.72
(8) Non-Farm Household Income		.02	--	.03	.06	-.31	.49	.58	...
$\bar{X}$	Men	116	--	86	147 (000)	55	12	31	14770
	Women	65	--	52	81 (000)	57	11	32	9458
S.D.	Men	195	--	236	541 (000)	13	3	23	17286
	Women	146	--	134	153 (000)	13	3	25	11293

-- = not applicable.
* = less than .01.

Table A34. Means, Standard Deviations, and Correlation Coefficients For Farmer-Tenants by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated	...	.68	--	.43	.02	.19	.52	-.13
(2) A. Rented In & Operated	-.03	...	--	.34	-.37	.14	.37	.12
(3) A. Rented Out	--	--	...	--	--	--	--	--
(4) Value of A. Owned	.58	.03	--	...	.10	.27	.13	-.18
(5) Age	.10	.10	--	.06	...	-.33	-.06	-.51
(6) Education	-.01	.06	--	.01	-.37	...	.15	.24
(7) SEI	-.12	-.06	--	-.06	.06	.21	...	.07
(8) Non-Farm Household Income	-.14	-.10	--	-.09	.03	.10	.55	...
$\bar{X}$ Men	84	1046	--	70 (000)	45	12	18	7236
Women	56	207	--	65 (000)	51	11	15	5935
S.D. Men	110	4479	--	119 (000)	12	2	12	9642
Women	98	209	--	117 (000)	12	2	6	8235

-- = not applicable.

Table A35. Means, Standard Deviations, and Correlation Coefficients For Part-Time Farmers by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	A. Owned & Operated	...	.19	--	.33	.16	.10	.03	.04
(2)	A. Rented In & Operated	.33	...	--	.34	-.01	.01	-.04	-.08
(3)	A. Rented Out	--	--	...	--	--	--	--	--
(4)	Value of A. Owned	.15	.12	--	...	.12	.10	-.18	.02
(5)	Age	.08	.01	--	.02	...	-.47	-.29	.05
(6)	Education	.09	*	--	.01	-.23	...	.70	.38
(7)	SEI	-.01	-.05	--	.02	-.02	.48	...	.41
(8)	Non-Farm Household Income	.07	-.02	--	.01	-.02	.33	.31	...
	$\bar{X}$ Men	67	5	--	54 (000)	47	12	35	19594
	Women	52	2	--	48 (000)	45	13	49	12952
	S.D. Men	135	29	--	390 (000)	10	3	22	15443
	Women	111	15	--	94 (000)	12	3	26	11892

-- = not applicable.
* = less than .01.

Table A36. Means, Standard Deviations, and Correlation Coefficients for Family Farmers by Gender--Non-Farm Household Income.

(Women above and men below the diagonal)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) A. Owned & Operated		...	.26	--	.41	.05	.28	--	.13
(2) A. Rented In & Operated		.40	...	--	.07	-.28	.09	--	.12
(3) A. Rented Out		--	--	...	--	--	--	--	--
(4) Value of A. Owned		.10	.04	--	...	-.03	.26	--	.04
(5) Age		-.08	-.14	--	*	...	-.17	--	.01
(6) Education		.14	.09	--	.04	-.36	...	--	.19
(7) SEI		--	--	--	--	--	--	...	--
(8) Non-Farm Household Income		.01	*	--	.01	.05	.15	--	...
$\bar{X}$	Men	239	35	--	177 (000)	54	11	14	3113
	Women	208	14	--	103 (000)	58	11	14	4022
S.D.	Men	270	91	--	1495 (000)	13	3	0	6703
	Women	273	44	--	178 (000)	12	2	0	10434

-- = not applicable.
* = less than .01.

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