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Faith and Evidence: Examining Marxist Explanations of Schools

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In spite of the recent Marxist debates over schooling and societal reproduction, little reliable empirical knowledge has been ascertained. Marxists, while critical of a strong paradigm of functionalism, employ facile functional "explanations." These explanations either assume the truth of their propositions or are framed in a manner immune to evidential examination. Marxists make functional knowledge claims about educational phenomena but do not discuss the accuracy of these claims. Instead, the arguments surrounding reproduction theory can be characterized as theoretical battles that continually alter the explanatory object and the conceptual framework and utilize confused, if not illicit, forms of explanation. In this article, I examine and assess the reproduction debate and offer suggestions concerning the empirical examination of functional explanations. I maintain that, if Marxists insist on functionally explaining schools in capitalist society, these explanations must be empirically assessed.

Introduction

Marxists propose explanations of educational institutions in capitalist countries—explanations that are problematic. Marxists offer explanations and make cognitive claims about schools in capitalist societies, but they tend not to examine their explanatory accuracy or consider how one could go about assessing such claims. Two questions are particularly appropriate: (1) How does one explain educational phenomena using Marxist theory? and (2) Are these proposed explanations empirically accurate?

Marxist studies of schooling explain public schools in large part as beneficial and necessary for the reproduction of capitalism. In order to assess the knowledge claims of these explanations, one must understand three elements: the object, the form, and the conceptual

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framework of the explanation (Garfinkel 1981). That is, in order to examine Marxist explanations, we must understand clearly what is being explained (the object of explanation), how it is being explained (the form of the explanation), and the concepts employed in the explanation (the conceptual framework). In this paper, although I examine all three facets, my primary concern is with the explanatory form. Specifically, I examine the Marxist use of functional explanation.

A functional explanation claims that an institutional feature or educational practice persists because of its beneficial consequences in a particular setting. The assertion that schools reproduce capitalism is essentially a functional claim. Although Marxists frequently employ functional analyses, they also deplore them. Marxists criticize functional analyses as positivistic, deterministic, and mechanistic and yet, at the same time, they offer functional analyses to explain schools in a capitalist society. If Marxism is going to represent a viable intellectual framework, one that can explain features of the public schools, then either functional explanations must be shown to be logically sound and empirically assessable or another explanatory form must take its place. Currently a marked ambivalence characterizes both the Marxist use of functional explanation and the Marxist approach to empirical examination.

All too often Marxists view evidential requests as positivist and therefore unsound. Allegedly positivists are preoccupied with "facts" and blinded by narrow methodological concerns. In contrast many Marxists maintain that facts and values and facts and theories are inextricably intertwined. Therefore they view any preoccupation with "facts" or methodology as simplistic and unreasonable. For these Marxists, evidential requests misconstrue the complex nature of social inquiry.

This shift away from empirical concerns has been aptly criticized by Frederick Crews. Crews argues that during the past decade social theorists (Marxists and others) have exhibited "a growing a priorism—a willingness to settle issues by theoretical decree without even a pretense of evidential appeal" (Crews 1986, p. 37). He adds that (ibid.)

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> The empiricism that stands in jeopardy today is simply a regard for evidence—a disposition to consult ascertainable facts when choosing between rival ideas. In practice of course the individual investigator never collects enough evidence to guarantee that a given idea is the best one going. Consequently the heart of empiricism consists of active participation in a community of informed people who themselves care about evidence and who can be counted on for unsparing criticism.

Exactly how one goes about gathering this evidence, what is to count as a "fact," and the assumptions underlying this evidential search are issues over which debate continues. Despite these disagreements, it seems clear that Marxist explanations of schooling cannot ignore evidential assessments. Empirical accuracy is required in order to achieve the Marxist goal of praxis (the "unity" of theory and practice). In the following discussion, I do not resurrect either a foundationalist empiricism or a logic of verification. Nor do I believe that evidential examinations will ultimately establish which theories are closest to *the* truth. I do, however, maintain that any reasonable and useful form of social inquiry must be thoroughly empirical (in Crews's sense of that word). Cogent explanations of schooling are those that are constrained by and answerable to a body of evidence.

There does not appear to be one best route for evidential assessment. In these methodological matters a pluralist approach seems appropriate. However, few researchers support a pluralist stance. After the demise of "positivism," philosophers and educational researchers have tended to take one of two approaches to social scientific methodology. Some individuals have stressed the scientific, while others have highlighted the social in their approach to social science. Those who maintain the scientific emphasis tend to search for a single method shared by both the natural and social sciences and are likely to utilize structural, statistical, and nomothetic explanatory approaches. Those who emphasize the social argue for the uniqueness of social inquiry and move toward constructing a distinct method for the social sciences. They tend to call for more interpretive and hermeneutic approaches. I maintain, along with Paul Roth (in his *Meaning and Methods*), that social inquiry should not utilize a single view of explanation or understanding but rather should accept a plurality of logically coherent and empirically examinable approaches. In this article my emphasis is less on the social and more on the scientific. Given the nature of functional explanation, this orientation seems appropriate.

In order to assess Marxist functional claims, it is necessary to distinguish different types of functional analysis. In the first section I

analyze distinct types of functional analysis. This exercise in conceptual clarification should resolve some of the ambiguity and ambivalence surrounding functional explanations. A second step is also necessary. So as to understand and evaluate Marxist functional propositions, I also outline the recent Marxist debate. In the second section of this paper, I focus on the explanatory forms, objects, and conceptual frameworks of various Marxist theorists. Through clarifying distinct types of functional analysis and analyzing the recent Marxist debate, I hope to establish the need for a more rigorous empirical examination of functional explanation. In the third and final section of this paper, I suggest ways to examine the empirical accuracy of functional explanations.

A single caveat is in order. I offer this critique of Marxist functional analyses as a sympathetic critic. As my argument proceeds, it should be evident that my criticisms could (and should) be applied to almost any functional explanation of social phenomena. The standards I use could be used to examine other sociological frameworks. I focus on the Marxist approach because it seems to me one of the most valuable ones available. My respect for the work of theorists like Bowles and Gintis, Apple, and Carnoy and Levin is considerable. For someone who senses that oppression by class, through schooling, is a prominent feature of capitalist societies, they need go no further than the radical-Marxist tradition. There are, however, weaknesses in that tradition. Currently it is hampered by a reliance on and confusion over functional analysis. My critique focuses on this confusion and reliance.

Functional Analyses

A discussion of Marxist functional analysis requires several distinctions. For purposes of clarification, I shall stipulate definitions distinguishing among functionalism, functional attribution, facile functional "explanations," and functional explanations (proper). Whereas functionalism represents a broad set of assumptions, functional attribution, facile functional "explanations," and functional explanations (proper) represent particular types of functional analysis.

Functionalism is a basic set of underlying assumptions about the social world that guides the questions and explanations of a research program.[1] The character of these background assumptions varies in strength, and below I identify a strong set of theses and a weaker individual thesis.

In *Karl Marx's Theory of History: A Defence*, G. A. Cohen (1978, pp. 283–84) characterizes functionalism as a strongly committed set of three interrelated theses about the social world. The three theses are:

1. All elements of social life are interconnected. They strongly influence one another and in aggregate form one inseparable whole (interconnection thesis).
2. All elements of social life support or reinforce one another and hence, too, the whole society which in aggregate they constitute (functional interconnection thesis).
3. Each element is as it is because of its contribution to the whole as described in 2 (explanatory functional interconnection thesis).

Cohen states that 3 entails 2, and 2 entails 1. All three claims are integral to a strong interpretation of functionalism. Interpreted in this manner, functionalism would commit a theorist to a view of society as an integrated whole, where each aspect reinforces the other elements and the entire society, and where every event can be explained by its contributions to (effects on) society.

This strong paradigm of functionalism can be compared to a weaker version. In its weakest form functionalism makes the minimal assumption that social systems exhibit a marked tendency toward self-maintenance. This tendency toward self-maintenance does not commit the theorist to any of the assumptions in the stronger version. The weaker thesis does not entail the assumptions that all elements of social life strongly influence one another or form an inseparable whole; all elements support and reinforce each other; or each element is as it is because of its consequences. It assumes neither a harmonious integration nor an antagonistic separation of society. It merely indicates that, over time, societies tend to reproduce themselves.

Functional attribution is a particular type of functional analysis. A beneficial function (or effect) is attributed to a particular practice or institutional feature. For example, tracking allegedly has the effect of aiding capital accumulation through the differential training of a future working population. This statement identifies an alleged effect of a particular educational practice. An effect of tracking is to train future workers. Such an identification cannot presume to explain the existence or persistence of tracking, it simply describes an effect of grouping students according to measured ability. This distinction between description and explanation needs to be emphasized. A few examples should help. A function of the nose, for some, is to hold a pair of eyeglasses in place. Citing this function does not explain why the nose is where it is on the human face. Instead, it merely identifies (attributes) a particular function of the nose. Similarly, a description of the effects

of tracking cannot, by themselves, explain the phenomenon of tracking. Simply noting the effects of tracking (attributing functions) does not constitute an explanation of why tracking persists but instead identifies consequences of tracking.

Frequently, though, the citation of an effect is presented as an explanation. When this occurs, a facile functional "explanation" is proffered and, for reasons given below, should be rejected. In these instances, the analyst identifies an effect (generally one that is "beneficial" in a given context) of a particular practice and assumes that the practice is "required" (or "necessary"). As noted earlier, supposedly tracking has the effect of differentially training a future labor force, and because it has this positive effect for capitalism, tracking is said to be "required" and therefore "explained." Such requirement explanations (facile functional explanations) rely on assumptions similar to Cohen's strong paradigm of functionalism. Following Cohen's theses, the different aspects of schooling are interconnected with each other and the broader capitalist society, and all the different elements reinforce one another. Furthermore, schools are as they are because they reinforce the larger society. Now, if it is assumed that all elements of schooling in a capitalist society reinforce that society, and that schools are as they are because of what they contribute to that society, then noting the effects of schools identifies the roles schools play in this complex web of maintenance and reinforcement.

This approach to functional explanation is facile since it assumes precisely that which must be examined. It presumes that educational practices persist because of their effects and takes as problematic only the identification of those effects. Once the effect has been noted, the function attributed, then schools are supposedly "explained." However, as noted in our earlier discussion of the human nose, the identification of a function does not explain the persistence or existence of a practice, institutional arrangement, or human feature. Any function could be purely coincidental. Throbbing sounds are an effect of the human heart. While such sounds facilitate diagnoses, these effects cannot explain why or how the human heart operates. Schools have an effect of employing bus drivers, but their employment does not explain the persistence of schools.

Recently, Marxists have identified contradictory requirements. Theorists no longer can assume that schools function solely to maintain a social order but rather must view schools as maintaining and conflicting with the existing social order. These "explanations" constitute another form of facile functional "explanation." The story is generally as follows. Capitalist societies issue contradictory requirements, and schools are as they are because they get caught amid these contradictions. Schools must meet both the accumulation and legitimation requirements of a capitalist social order. Sometimes these requirements coincide, at other times they conflict (contradict). Schools have the effect of training technically skilled and knowledgeable individuals and thus assist capital accumulation. Schools are also said to legitimate capitalism through a seemingly meritocratic system of rewards. When these requirements coincide, the effect of schooling is to maintain the social order, and when they contradict, schooling conflicts with the social order. For example, the student turmoil of the late 1960s and early 1970s goes something like this. In the late 1960s and early 1970s capitalism was in the throes of crisis. Fewer technically trained individuals were required, and this conflicted with the meritocratic promise that if you strive you'll thrive. Students caught in the midst of this "contradiction" rebelled.

The difficulty with such contradictory requirement explanations is twofold. Like the earlier harmonious requirement explanations, they presume exactly what must be explained. They assume that schools promote or conflict with the social order, and that schools are as they are because they promote or conflict with the existing society. A functional explanation cannot assume that schools are as they are because of those effects. Instead, a functional explanation must show that the effects of schools help to explain why and how schools are as they are. If effects play a significant role in the selection and persistence of an educational practice or a feature of schooling, then this must be shown and substantiated. Second, these contradictory requirement theories exhibit a remarkable resilience against rejection. If schools do not create effects that maintain a capitalist social order, then it is assumed they create effects that conflict with a capitalist order. At this level, it appears that there are not any phenomena that cannot be "explained." The citation of an effect in tandem with a requirement, contradictory or not, begs an explanation, it does not provide one.

In contrast to facile functional explanations, proper functional explanations do not cite effects and then assume that an educational institution or action is therefore explained. Functional explanations identify a particular effect and state explicitly that a practice or institutional feature persists because of the noted effect. Roughly stated, proper functional explanatory claims are those statements with the following form: A practice or institutional feature persists *because* of its effects. Biological examples include: "Birds have hollow bones because hollow bones facilitate flight" (Cohen 1978, p. 249). "When attacked, millipedes secrete a liquid sedative because this defense serves to protect its nearby kin (*Science* 1984, p. 6). In sociology, examples include: "A particular set of productive relations persists because they are conducive to the growth of the forces of production." "Tracking persists in schools

because such grouping minimizes crises in capitalist societies." Whereas facile functional "explanations" cite an effect with explanatory intent and assume that the practice (or institutional feature) persists because it is required for its effects, proper functional explanations explicitly hypothesize that an event persists because of its effects.

Functional explanations are not committed to any strong form of functionalism but generally do entail the weaker supposition that societies tend toward self-maintenance. In order to assess the adequacy of functional explanatory claims, it must be shown that, in fact, the event was selected and does persist because of its effects. Procedures for testing these claims will be addressed in the final section.

Having drawn distinctions between functionalism and three different types of functional analysis, I shall now outline and assess the recent Marxist debate over education. An analysis of the debate indicates that there is much confusion surrounding functional analysis (the form of explanation) and that much of the controversy concerns arguments over different explanatory objects and distinct conceptual frameworks. Through analyzing this debate the difficulties entailed in an assessment of Marxist claims can be better understood and an initial basis for this assessment can be constructed.

The Debate

My outline and critique of recent Marxist studies of schools begin with Samuel Bowles and Herbert Gintis's (1976) *Schooling in Capitalist America.* The subsequent radical debate was framed and formed as a reaction to Bowles and Gintis's initial reproduction theses. In *Schooling in Capitalist America,* the authors identify two explanatory relations of correspondence and two major mechanisms to account for these relations. Bowles and Gintis maintain that in the United States there has been a correspondence between the historically changing structures of class and public schooling and a correspondence between the social relations of work and education. To explain schooling in capitalist America, Bowles and Gintis examine capitalist America.

The historical correspondence claim states that each major change in the educational structure corresponds to a major transformation in the class structure:

> The three turning points in U.S. educational history which we have identified all correspond to particularly intense periods of struggle around the expansion of capitalist production relations. Thus the decades prior to the Civil War—the era of the common school reform—was a period of labor militancy associated with the rise of the factory system. . . . The Progressive educational movement—beginning at the turn of the present century—grew out of the class conflicts associated with the joint rise of organized labor and corporate capital. At least as much so, Progressive education was a response to the social unrest and dislocation stemming from the integration of rural labor . . . into the burgeoning corporate wage-labor system. . . . The recent period of educational change and ferment . . . is, in large measure, a response to the post–World War II integration of three major groups into the wage labor system. . . . [Bowles and Gintis 1976, pp. 234–35]

To explain how this correspondence is accomplished, Bowles and Gintis refer to the power of the capitalist class:

> The emerging class structure evolved in accord with these new social relations of production: An ascendant and self-conscious capitalist class came to dominate the political, legal and cultural superstructure of society. The needs of this class were to profoundly shape the evolution of the educational system. [Ibid., p. 157]

When push comes to shove, it is the capitalist class that shoves and pushes.

Bowles and Gintis also identify a correspondence between the social relations of public school and work:

> The educational system helps integrate youth into the economic system, we believe, through a structural correspondence between its social relations and those of production. . . . By attuning young people to a set of social relations similar to those of the work place, schooling attempts to gear the development of personal needs to its requirements. [Ibid., p. 131]

This correspondence of social relations is achieved through class differentiated parental expectations, and these expectations are a "reflection" of class experiences:

> . . . the consciousness of different occupational strata, derived from their cultural milieu and work experience, is crucial to the maintenance of the correspondences we have described. That working class parents seem to favor stricter educational methods is a reflection of their own work experiences. . . . That professional and self-employed parents prefer a more open atmosphere and a greater emphasis on motivational control is similarly a reflection of their position in the social division of labor. [Ibid., p. 133]

The noted correspondence between the social relations of school and work and the historical correspondence between class and educational changes constitute the major features of Bowles and Gintis's explanation. Thus far they seem to be presenting intentional explanations for both correspondences. The historical correspondence between class and educational change is said to be the outcome of power struggles won by the capitalist class, and the social relations correspondence appears to be the outcome of parental preferences. However, when these propositions are placed within the context of Bowles and Gintis's base-superstructure conceptual framework, it becomes evident that they are offering a facile functional explanatory framework. An examination of their implicit use of the base-superstructure model will support this characterization. However, before analyzing their conceptual framework, I want to identify Bowles and Gintis's explanatory object.

In one sense their explanatory object is fairly straightforward: Bowles and Gintis examine public schools in a capitalist society. However, such a broad identification can be misleading. In the historical correspondence, Bowles and Gintis focus on structural alterations in schooling and class. They examine how schools as institutions periodically changed at the local and state levels to accommodate modifications in the class structure. They examine internal school organization (Lancasterian model, family grouping, and separate grade levels), patterns of school governance (decentralized and centralized), and curricular distribution (common curriculum and differentiated curricula). Changes in the organizational structures of schools correspond to specific transformations in the class structure. As capitalism developed from commercial to industrial and then to corporate relations of production, the structure of education changed.

This focus on structure also characterizes Bowles and Gintis's second noted correspondence. When the authors examine the social relations of work and schools, they focus on the correspondence between the patterning of class-specific social norms and the social norms of the schools. Their explanatory object is the patterning of social relations and not individuals' processes of socialization. Their object is the forces that constrain behavior and not the behavior itself:

> By providing skills, legitimating inequalities in economic positions and facilitating certain types of social intercourse among individuals, U.S. education patterns personal development around the requirements of work. The educational system reproduces the capitalist social division of labor, in part, through a correspondence between its own internal social relations and those of the workplace. [Ibid., p. 147]

Bowles and Gintis focus on the structures that constrain behavior and not the determinate cause of actors' behavior.

As I noted earlier, Bowles and Gintis utilize a version of the Marxist base-superstructure model in their conceptual framework. This model affects their explanatory form. In what has been labeled a reflectionist or determinist interpretation, the economic base (forces and relations of production) determines the superstructural institutions. Bowles and Gintis situate the educational system within the superstructure and argue that public schools reflect the demands of the economic base. This unidirectional model stipulates that the economic base issues specific requirements that are to be fulfilled by the schools. The educational system does not determine the base but only reflects it. The mechanisms cited for Bowles and Gintis's correspondences, the power of the capitalist class or parental preferences, become mere conduits for the requirements of reproducing capitalism. With respect to the social relations correspondence, Bowles and Gintis write:

> The economic system is stable only if the consciousness of the strata and classes which compose it remains compatible with the social relations which characterize it as a mode of production. The perpetuation of the class structure requires that the hierarchical division of labor be reproduced in the consciousness of its participants. The educational system is one of the several reproduction mechanisms through which dominant elites seek to achieve this objective. By providing skills, legitimating inequalities in economic positions, and facilitating certain types of social intercourse among individuals, U.S. education patterns personal development around the requirements of work. The educational system reproduces the capitalist social division of labor, in part, through a correspondence between its own internal social relationships and those of the workplace. [Ibid., p. 147]

Characterizing their historical correspondence, Bowles and Gintis state:

> We have argued that the moving force behind educational change is the contradictory nature of capital accumulation and the reproduction of the capitalist order. Conflicts in the educational sphere often reflect muted or open conflicts in the economic sphere. [Ibid., p. 235]

They note the need to identify mechanisms through which this correspondence is maintained, but one senses that the identification of mechanisms is a foregone conclusion. In Bowles and Gintis's story, the educational system now appears to be part of the "naturally required" order: it all makes sense. Schools are superstructural institutions in a

capitalist formation where the economic base rules. Schools, as elements within the superstructure, are as they are because of economic requirements. If one accepts Bowles and Gintis's base-superstructure model, a central question is automatically answered. Why are schools as they are? Schools are as they are because of the requirements of a capitalist economy. The only "explanatory" task remaining is the identification of how schools meet these requirements. As noted earlier, such an explanatory framework is facile; it eludes the question through the assumption of requirements.

The debate that followed publication of *Schooling in Capitalist America* can be viewed more as a battle between contending interpretive frameworks than an argument between competing explanatory claims. Truly competing explanatory claims can differ over the form of the explanation and the use of conceptual frameworks, but they must agree on the explanatory object. This debate, however, is characterized by a confusion over explanatory forms, a profusion of conceptual frameworks, and a continually changing and expanding explanatory object. The participants in this debate respond in at least two distinct ways to Bowles and Gintis's initial work. I shall refer to these two types of responses as the sites and practices approach and the dialectical alternative.[2]

Sites and Practices

While there are certainly differences among the proponents of the sites and practices formulation, their similarities are substantial. Here I will discuss Michael Apple's reformulation.[3] I will note Apple's criticisms of the original reproduction theory, outline, and then assess his proposed alternatives.

Michael Apple's critique of Bowles and Gintis's reproduction theory proclaims a shift in the explanatory object and an alteration of the conceptual framework. He asserts that the explanatory object must be enlarged to include cultural dynamics in addition to structural forces and that the macrostructural focus must be integrated with a microindividual examination. He proposes a new conceptual framework, arguing that the base-superstructure model is deficient, and claims, somewhat ambivalently, that "functionalist" explanations are inadequate. He hopes that such a shift will allow space for political action.

The shift begins with Apple's dissatisfaction over the phenomena examined. The structural account of correspondence relations *excludes* two important phenomena: culture and the realm of individual action.

> The very notion that the educational system assists in the production of economically and ideologically useful knowledge implies that schools are cultural as well as economic institutions. [Apple and Weiss 1983, p. 7]

Schools, as cultural institutions, facilitate and obstruct students' growing sense of self and their understanding of the social world. So, for Apple, the culturalist problematic entails an investigation at the level of individual actors. In these investigations the important questions include:

> How are meanings made?, Whose meanings are they?, and What are the ties between these meanings and the economic and cultural reproduction (and contradictory non-reproduction) of sexual, racial and class relations in our society? [Apple 1982*a*, p. 11]

Citing Karabel and Halsey, Apple insists that the appropriate research agenda must be "one that will connect interpretive studies of schools with structuralist analyses" (Apple and Weiss 1983, p. 4). The role of theory is to uncover the determinants of educational outcomes, and, for theory to accomplish this task, it

> . . . has to do two things. Not only does it need to be structural—that is, it must, at the level of theory, be general enough to provide fruitful explanations of how the social order is both organized and controlled so that the differential benefits are largely accounted for—but, at the same time, it should be specific enough so as to account for the everyday actions, struggles, and experiences of real actors in their day-to-day lives in and out of school. . . . This requires a particularly sensitive perspective, a combination of what might be called a socioeconomic approach to catch the structural phenomena, and what might be called a cultural program of analysis to catch the routine phenomena. Nothing less than this kind of dual program—one that looks for the series of connections and interpenetrations . . . can overcome the previously noted problems of straightforward base-superstructure models. [Apple 1980, pp. 62–63]

Apple criticizes the base-superstructure formulation for its structural assumptions, its overly socialized view of individuals' actions, and the limitations it imposes on political action. For Apple, the base-superstructure model portrays a structural account of schools "wholly dependent upon and controlled by the economy" (Apple and Weiss 1983, p. 21). Within this view, schools are fundamentally determined institutions. Schools are mere reflections of an economic base and therefore

economic transformations, not political action, are required for programmatic change. Such claims, Apple says, are inaccurate.

The base-superstructure account is also mistaken when it portrays an economic base literally controlling almost every aspect of social and cultural life. According to Apple the reproduction theory of Bowles and Gintis assumes that everyday actors, like students and teachers, are thoroughly

> socialized and do not respond to those determinations, that these people do not creatively act in cultural ways to struggle against the ideological and structural constraints generated by powerful economic and social arrangements. [Apple 1980, p. 58]

Finally, Apple criticizes the "functionalist" assumptions present in reproduction theory.[4] First, functionalism points to a set of background assumptions that views society as working "relatively smoothly to maintain a basically unchanging social order" (Apple 1982*b*, p. 14). Second, and partially as a result of this assumption, functionalist frameworks subsume all of the elements in a society under the requirement of capitalist production. Quoting Richard Johnson approvingly, Apple notes that when prominence is bestowed on the requirements of capitalist production it appears that:

> Nothing else of importance is going on. Struggle, disjunctions, and conflicts are suppressed in the analysis and a model of one-dimensional control is substituted. [Apple 1980, p. 59]

In order to remedy these failures Apple constructs a conceptual framework that views a social formation as a "complex totality":

> Rather than seeing the economy as determining everything else, with schools having little autonomy, theories of this kind describe social formations as being made up of a complex totality of economic, political, and cultural/ideological practices. Unlike the base-superstructure models where superstructural institutions such as schools were seen as wholly dependent upon and controlled by the economy, . . . these three sets of interrelated practices jointly create the conditions of existence for each other. Thus, the cultural sphere, for instance, has "relative autonomy" and has a specific and critical role in the functioning of the whole. [Apple and Weiss 1983, pp. 20–21]

Focusing on an analysis of ideology, Apple constructs a conceptual orientation which posits the existence of three spheres: the economic, the cultural, and the political. The spheres are constituted by distinct practices, but their distinguishing characteristics are not presented. Within each of the spheres the "elements or dynamics" of class, race, and gender can be found. Again, Apple is not explicit about the relationship between these dynamics and the spheres of practices, but he does offer a few examples:

> The rejection of schooling by many black and brown youths in our urban centers, and the sense of pride that many unmarried minority high-school girls have in their ability to bear a child are the result of complex interconnections among the histories of class, race and gender oppression and struggles at the level of lived culture. [Apple and Weiss 1983, p. 25]

In this account, the youth's feelings of rejection and pride are "explained" by the "interconnections" between the dynamics and spheres of practices.

In addition to explanations which illustrate the interconnections within this complex totality, Apple views schools as performing three economic functions. Schools produce effects conducive to the accumulation, legitimation, and production needs of a capitalist economy. Schools produce a stratified and socialized work force (accumulation), a sense that the economic and social system is just (legitimation), and technically useful knowledge (production). At times these functions coincide, and at other times they conflict, but schools are as they are, at least in part, because of the functions they fulfill.

Although Apple provides a new conceptual framework to overcome the "functionalist" overtones of the base-superstructure model, he maintains that schools perform functions essential to a capitalist society. It seems that his expressed reservations about functional analysis have not inhibited him from identifying schools' economic functions. One might construe Apple's functional analysis as simply descriptive, as functional attributions. However, it appears that his is not a simple catalog of schools' effects but an explanation of certain characteristics through citing their beneficial effects for capitalism:

> We cannot fully understand the way our educational institutions are situated within a larger configuration of economic, cultural and political power unless we attempt to examine the different functions they perform in our unequal social formation. [Apple and Weiss 1983, p. 7][5]

An elaboration of schools' functions provides a basis for understanding schools in a capitalist society. Apple does add that

> . . . we cannot assume that educational institutions will always be successful in carrying out the three functions of accumulation, legitimation, and production. These reflect structural pressures on schools, not foregone conclusions. In part, the possibility that education may be unable to carry out what is "required" by these pressures is made even more of a reality by the fact that these functions are often contradictory. [Apple and Weiss 1983, p. 7]

At times schools create effects that satisfy the economic requirements of capitalist economies, but schools do not always satisfy these requirements. Furthermore, these requirements are at times contradictory: that is, they pressure schools to perform conflicting functions. No longer present are the assumptions that schools automatically fulfill these requirements or that the requirements harmoniously integrate schools into society. Nevertheless, according to Apple, schools are as they are in part because of capitalist requirements. A facile "explanation" is offered.

Despite the restrictions Apple places on functional analysis, he still offers functional "explanations." Schools produce effects, and these effects, at times, satisfy economic requirements. The pertinent empirical questions for these Marxist analyses is whether these effects are accidentally produced or whether schools persist because of the effects they engender. The proper functional question is the latter one, and it is a question that requires empirical examination.

The Dialectical Alternative

Recently the dialectic has achieved a prominent place among some Marxist analyses. For certain theorists, the dialectic represents an epistemological avenue for comprehensive understanding, and for others it captures the process of historical change. Martin Carnoy and Henry Levin utilize the historical dialectic, stressing the existence of "contradictory" dynamics that shape the educational system.[6] They criticize Bowles and Gintis (and their own earlier works) as functionalist, that is, as inadequate explanations of school and work. They offer instead a dialectical conceptual framework. For Carnoy and Levin their explanatory object, the relationship between education and work, is characterized by this dialectic. The relationship is "composed of a perpetual tension between two dynamics, the imperatives of capitalism and those of democracy in all its forms" (Carnoy and Levin 1985, p. 4). In brief, schools serve two contradictory purposes. They meet the requirements of an unequal capitalist economy and they serve the demands of an egalitarian democratic state. The opposing pulls, the tensions created by this dialectic, explain the relationship between schools and work.

According to Carnoy and Levin, in functionalist accounts "institutions can be understood only in terms of how they serve society" (Carnoy and Levin 1985, p. 19). In functionalist frameworks schools are examined in light of how they adjust students to their future work lives. Carnoy and Levin maintain that *critical* functionalist accounts (e.g., Bowles and Gintis) were valuable for they told us how the fit between schools and work is actually achieved. Purportedly Bowles and Gintis showed how schooling turns students against one another through competitive studies, how students are motivated to work for extrinsic rather than intrinsic rewards, and how schools legitimate work relations and societal norms (Carnoy and Levin 1985, p. 21). However, Carnoy and Levin argue, such explanations are incomplete and therefore inadequate. Bowles and Gintis do not "account for the contradictory trends toward equality and democracy in education. . . . Indeed, Bowles and Gintis argue that the 'laws and motion' of correspondence are so dominant that democratic or egalitarian reforms must necessarily fail or be limited in their impact" (Carnoy and Levin 1985, p. 22). In short, Carnoy and Levin state that Bowles and Gintis cannot "adequately explain the relationship between education and work" (ibid., p. 3).

Carnoy and Levin maintain that the relationship between education and work is more complex than Bowles and Gintis allow. The relationship is contradictory. Schools are not simply the product of the dynamics of capitalism. Schools do not simply meet capital's needs. Schools are also an "arena of social conflict," part of the democratic state that attempts to adjudicate the inequities resulting from capitalism. Schools appear to have two functions: (1) education's "role then is seen as improving the social position of have-not groups by making relevant knowledge and certification available to them" (Carnoy and Levin 1985, p. 27), and (2) schools must "by their very nature" reproduce capitalist relations of production (ibid., p. 27).

Schools' egalitarian and inegalitarian dynamics are, in Carnoy and Levin's historical account, the result of class actors struggling in both the political and economic realms of society. They argue that in the earlier part of this century:

> employers and professional educators shaped the organization and curriculum of schools to meet the needs of developing capitalism. They pushed for the tracking of students and the hierarchical development of secondary education in conjunction with segmented labor markets. But at the same time, the educational

> system expanded rapidly to incorporate the demands on the part of the parents for greater access to public secondary schooling for their children. By the 1920s and the 1930s secondary education was considered a right by most American families. As the curriculum and tracking system were being shaped to accommodate a segmented labor-market system, educators were pressured even more to open up secondary education to working-class families desiring social mobility for their children. [Ibid., pp. 96–97]

According to Carnoy and Levin, schools serve contradictory purposes, and these purposes are achieved through the class actions of employers, professional educators, and the working class.

Despite the "contradictory tendencies" in their dialectical framework, Carnoy and Levin offer a facile functional "explanation." In their conceptual framework, schools are viewed as reacting to the pressures of contradictory forces: the egalitarian needs of the democratic state, and the unequal drives of a capitalist wage labor system. Carnoy and Levin do posit class actors and class struggle as elements in their dialectical analysis. However, similar to Bowles and Gintis, these actors appear to function as mere conduits for the contradictory functional requirements of capital and the democratic state. Carnoy and Levin assume that the contradictory requirements exist and that schools are as they are because of these conflicting claims. Notwithstanding the claim of contradictory dynamics, Carnoy and Levin come awfully close to claiming that schools function to meet the economic requirements of capitalism. In a rather lengthy excerpt this becomes evident:

> Schooling expands in response to subordinate group demands, but as long as the class-race-gender structures are the underlying attributes of the society, only the form but not the substance of the reproductive role of schooling will change. Thus, the class-reproductive curriculum becomes more "hidden" when there are working class demands, when the states are required to equalize access to education for blacks and Hispanics, or when schools alter the advising of young women so that they are not counseled out of sciences and mathematics. As we have shown, however, administrators, teachers and parents still tend to reproduce capitalist relations of production and the division of knowledge associated with segmented-labor-market occupational roles. [Carnoy and Levin 1985, p. 162]

Regardless of assertions about contradictions and the dialectic, Carnoy and Levin offer a facile functional "explanation": schools function to reproduce capitalism. If schools are to be explained by their consequences, then it must be shown that educational practices persist because of the consequences they produce. It needs to be empirically ascertained that certain educational practices are selected and retained due to their positive effects for capitalism. Carnoy and Levin assert that this is the case but they have not shown how it occurs. Furthermore, if we accept their dialectical conceptual framework, it seems that, with dialectic in hand, they can "capably" explain almost everything. If schools do not create effects that maintain capitalism, then schools serve an egalitarian dynamic. It is difficult to assess theories empirically with such dense and resilient explanatory armor.

My analysis of the recent Marxist debate indicates that, in an attempt to explain features of schooling, researchers utilize a variety of conceptual frameworks altering the explanatory object and relying on questionable explanatory forms. The number of conceptual frameworks and the variety of explanatory objects are, in themselves, not obstacles to explaining schools in capitalist societies. In fact, multiple perspectives and shifting explanatory objects can bring a subtlety and richness to the examination of schooling. However, problems arise when researchers employ questionable explanatory forms and do not seriously assess the evidence for or against their causal claims. Without concerted evidential examinations of explanatory claims, the accuracy of Marxist research is suspect. The strands of a research program which persist in this manner soon begin to resemble a group of untethered kites floating off in separate directions. The kites, unconstrained by any earthly connection, soon disappear or come smashing back to the ground. Research programs that persist in this manner suffer similar fates. In order for any research program to grow and gain adherents, it must prove itself more capable than rival theories. One necessary facet of this competition is an exhibition of explanatory strength. Such strength is achieved, in part, by providing evidential warrants for key causal claims.

The pursuit of explanatory strength through empirical investigation can take on a shallow "academic" quality. Marxists, however, claim an aversion to such academic endeavors. Rather than engage in methodological and statistical debates, Marxists analyze schools holding out the promise of educational transformation. Their goal is the alteration of public schooling through theoretically informed social and political action (praxis). This transformative promise is dependent on a theoretically cogent and empirically accurate understanding of schools in capitalist society. A key Marxist tenet is that, in order to achieve educational excellence and equality, schools and capitalism must be understood and transformed. Marxists cannot adequately explain the linkages between schools and capitalism unless they consider the accuracy

of their explanations. Once an explanation's accuracy is considered, only then is educational transformation a possibility. Given the need for explanatory adequacy, I examine ways to empirically assess functional explanations of schooling.

Functional Explanations and Empirical Evidence

I have argued that those embroiled in the recent reproduction debate have relied on deficient functionalist assertions and ignored evidential investigations. Of all the authors analyzed, Bowles and Gintis provide the richest empirical support. However, both their earlier and later formulations are constructed in ways that make empirical refutation difficult, if not impossible. They rely on the strong paradigm of functionalism, offering facile functional explanations. Their functionalist faith appears quite firm and frequently carries too much "explanatory" weight. The other theorists (Apple and Carnoy and Levin) utilize evidence in a different fashion. They tend to use empirical propositions as examples to illustrate their theoretical claims. Despite these differences, all of the authors rely too heavily on functionalist faiths, employ questionable functional explanatory forms, and tend to disregard countervailing evidence.

Now it should be evident that functional explanations are not designed to account for all aspects of reality. Functional explanations concern social and institutional features or human practices that persist over time. These phenomena are explained by their effects. Not all social phenomena can be explained in this manner. Perhaps it is time for those in the Marxist tradition to recognize the limitations of functional explanation and begin to explore other explanatory forms. And yet, *Marxists should not ignore the potential role of functional explanation.* Certain educational phenomena (e.g., tracking) seem likely candidates for functional explanation. If Marxist analysts wish to pursue functional explanations it appears clear that they need (1) to reduce the reliance on functionalist faiths, (2) to formulate functional propositions open to empirical examination, and (3) to assess the empirical basis for their properly formulated functional claims.

A basic premise of Marxist analyses is that capitalism places severe constraints on schools, hampering educational efforts to achieve greater equality and freedom. An additional premise is that this system of societal and educational constraints tends to reproduce our current socioeconomic system. The reproduction metaphor is prominent in Marxist analyses and is an integral tenet of the Marxist functionalist faith. In its most common form, the reproduction proposition goes

something like this: schools "educate" students to maintain capitalism, and schools persist in this fashion because such effects are beneficial to capitalism. In lieu of this formulation a "dialectical" proposition is often heard. On the one hand, schools reproduce the inequalities of capitalism, while, on the other hand, schools must fulfill the more democratic and egalitarian functions of the state. Schools are caught amidst these contradictory functions. Both the contradictory and non-contradictory formulations are quite general and vague. In their present forms they are not amenable to empirical assessment. It would seem advantageous if Marxist researchers acknowledged that these propositions represent the sort of untestable assumptions on which almost all research programs are based, and then oriented their future research toward the generation of evidentially examinable empirical claims.

To facilitate a reduced reliance on functionalist faiths and an enhanced focus on empirical evidence, Marxist researchers should switch from the strong paradigm of functionalism to the weaker thesis. With the strong paradigm as a set of background assumptions, there is a tendency to place too much explanatory weight on unassessable theoretical beliefs. The weaker thesis, which simply assumes that schools tend to reproduce societies, cannot support such explanatory weight. Utilizing the weaker assumption, Marxist researchers could focus on (1) formulating empirically examinable explanations of schooling, and (2) examining the empirical accuracy of these causal claims.

A properly formulated functional explanation is not a straightforward causal proposition. Its structure is more complex and entails at least two distinct types of claims.[7] Generally a functional explanation hypothesizes that (1) an institutional structure or procedure produces a particular set of effects (an effect-producing claim), and (2) this structure or procedure was selected and persists because these effects are positive for capitalism (a functional-causal claim). In order to examine empirically a properly formulated functional explanation, two distinct "steps" are necessary. The empirical relationship asserted in 1 must be substantiated (it has to be shown that the structure or procedure does produce particular effects), and the causal claim in 2 needs to be supported (it has to be shown that the structure or procedure was selected and persists because of its positive effects for capitalism). There are a number of methodological ways to accomplish these examinations. In the remainder of this article, I will focus on a historical approach and in addition note a few comparative designs. Substantively, I will suggest that the topic of "tracking" (the institutional ways in which secondary students are sorted and selected to receive particular types of knowledge) represents a prime subject for a historical examination of Marxist functional claims.

Recently Jeannie Oakes has argued that, through tracking, schools provide "differential access to school knowledge in such a way that the children of more powerful societal groups have greater access to the kind of knowledge that may, in turn, permit them greater access to societal and economic power" (Oakes 1985, p. 202). Interpreted functionally, Oakes's thesis would be that this access to differentially valued knowledge persists because it helps to legitimate capitalist social relations and enhances capitalist production. Interpreted very roughly, Oakes's thesis can be broken down into a number of distinct effect-producing claims. As a result of tracking (1) students of distinct class positions are presented with qualitatively distinct curricula, (2) students of privileged backgrounds receive curriculum that is of a higher status, and (3) this differential distribution of knowledge allows these students greater access to social and economic power. In order to examine empirically functional claims about tracking, these effect-producing assertions would have to be tested. Methodologically this is not a difficult problem. Standard longitudinal and cross-school comparative studies could ascertain, with some degree of reliability, the accuracy of these statements. In fact, Oakes's project represents one attempt to show that these effect-producing statements are accurate.

A more difficult methodological problem, and one not confronted by Oakes, is encountered in attempts to ascertain the accuracy of the functional causal claim. Roughly, the functional claim is that tracking persists because it produces effects that are beneficial to the legitimation of and production within capitalism. In order to ascertain the accuracy of this type of claim, historical inquiry would be helpful. Historically it would have to be shown that, prior to the adoption of tracking, a variety of other options existed, the selection of tracking was class biased, and that tracking was institutionalized and persists in large part because of its positive effects for capitalism. In the last five years a few historians and social researchers have examined the historical record with an eye to these matters.

Julia Wrigley's work (1982, 1977) on class politics and school reform in Chicago is one example of research that focuses on the questions of the selection and institutionalization of tracking as a class-biased feature of public schooling. In a study on the politics of the Chicago school system from the turn of the century to the years directly following World War II, Wrigley found that organized labor and business organizations battled over the control of the curriculum. One of the areas of conflict concerned proposals made by Chicago's Commercial Club and other related capitalist interest groups to create a dual tracked system of academic and vocational education. The proposal was visibly resisted by the Chicago Federation of Labor and the Illinois State

Federation of Labor. Labor opposed the plan for the reorganization in explicit class terms: such a dual tracked system would confine their children's futures but not the futures of the children of members of the Commercial Club. A second area of contestation between labor and business had to do with the content of the public schools' curricula. Labor supported a "fads and frills" proposal that extended the scope of the curriculum beyond the basic, rudimentary skills. The employers' organizations wanted to limit the curricula of the public schools to the "Three R's." In both these areas of conflict, labor pressed for an extension of offerings to working-class students, while the business organizations pushed to limit the aims and content of the working-class schools. Workers did not want their children's futures tied to needs of capitalism, and the capitalists did not want an ill-trained and dissatisfied work force.

Originally the class conflict between labor and business occurred in the open political arena of the community and focused on the decision-making status of the school board. However, because of the initial defeat of the employers' proposals, the business groups altered their strategies, and instead of "'provoking direct conflict' as the Commercial Club had done, the business groups in most cases attempted to work with middle class civic organizations to secure revision of the structure of the school system. The goal of 'efficient' school administration was common to both and provided justification for many changes that met with business approval" (Wrigley 1977, p. 120). In Wrigley's account, bureaucratic procedures were instituted as a result of conflict between labor and business organizations. Defeated in the open political arena, business organizations joined forces with the middle-class civic organizations to create a bureaucratic procedure that established a differentiated curriculum for students of distinct class backgrounds. As such, Wrigley's study provides an example of how the selection and institutionalization of tracking was a result of class conflict and how business interests were able eventually to exclude labor's resistance.

It is debatable whether the explicit class conflicts found in Chicago can be uncovered in other cities at the turn of the century. Paul Peterson (1985) argues that the class politics attending educational policy decisions in Chicago cannot be found in San Francisco or Atlanta. But Bill Reese (1986) highlights that at the turn of the century class conflict was a feature of school politics in the school systems of Milwaukee, Wisconsin; Toledo, Ohio; and Rochester, New York. And Ira Katznelson and Margaret Weir (1985) argue that an analysis of class relations is essential to an understanding of schools at the turn of the century. Much more work is required to find out whether the functional causal claim is accurate in general, over a number of cases.

Because of the complex nature of functional claims, a number of additional methodological problems will surface. For example if, perchance, the selection of tracking can be shown to be class biased, this would not mean that tracking persists because it is beneficial to capitalism. Further arguments and evidence would be required to maintain that its persistence is linked to capitalism.[8] In fact, one reason tracking persists may very well be that it is seen by teachers, administrators, and parents as a fair means of sorting and selecting. In order for the Marxist functional argument about tracking to be given further empirical warrant, it would have to be shown that these beliefs are incorrect. That is, it would have to be shown that tracking does not sort and select in a manner that is equitable (free of the arbitrary constraints of class or race). If this can be ascertained, if it can also be shown that tracking was frequently selected because of capitalist class interests, and if it can be shown that the effect-producing claims are accurate (tracking provides distinct classes of children with distinct curricula, elite children with elite knowledge, and as a result allows the latter greater access to social and economic power), then it seems the Marxist claim about tracking would be given further empirical warrant. If any of these claims cannot be supported or can be shown to be false, then the Marxist argument would be weakened.

A second way to go about examining the functional claims of the Marxist literature would be to compare the educational efforts and outcomes of distinct capitalist, state-socialist, and democratic socialist nations. A central feature of the Marxist critique of capitalist schooling is that the capitalist context unduly constrains the equality of educational achievement. Educational inequality persists because of the "needs" of capitalism. One way to get a sense of the accuracy of this class of claims would be to compare the equality of educational achievement among countries characterized as advanced capitalist (United States and Great Britain), as state-communist (USSR and Eastern bloc countries), and as democratic socialist (Sweden and Denmark). Given the Marxist critique, one would expect differences to appear as a result of the distinctions in social, political, and economic contexts. Minimally, one would expect the democratic socialist countries to have achieved greater educational equality among citizens of distinct class backgrounds. From recent comparative research, it seems that the Soviet Union has not achieved any noticeable degree of educational equality (Zajda 1979, 1980). But then, this should not be surprising either to the Marxist critic or to the ardent defender of American schools. The Soviet Union has been aptly characterized as a state capitalist country stratified by class distinctions rooted in the state bureaucracy. In the USSR, class distinctions prevail.

In contrast to the Soviet Union, the recent revolutions in Cuba and Nicaragua have had direct educational repercussions. After both revolutions, literacy campaigns were instituted with the expressed purpose of creating a more egalitarian and literate citizenry. An interesting empirical examination could compare the educational equality achieved in postrevolutionary Cuba with the educational equality in another comparable but nonrevolutionary central American country. Again, given the Marxist critique, one would expect greater educational gains to have been made in Cuba.[9]

These are small beginnings in an effort to examine the empirical accuracy of Marxist functional claims, and they are fraught with all sorts of problems. One problem immediately stands out. This sort of empirical endeavor occurs within an academic setting where there are antagonists and protagonists, individuals committed to distinct theoretical and political frameworks. I am all too keenly aware that many non-Marxist researchers would love the opportunity to show that this tradition is all wrong and that other nonempirically oriented Marxists think my endeavor entirely misdirected. I recognize that research programs do not exist in a social vacuum and I think considerable thought needs to attend these investigations. Empirically and conceptually the distinct features of the Marxist framework must be taken into account. If the empirical program I am suggesting is going to test capably the Marxist propositions, then it will have to utilize the Marxist relational, rather than the standard gradational, view of class structure (Wright 1979, chaps. 1, 2) and be sensitive to features of a structural (as opposed to a reductive) explanatory account (Garfinkel 1981, chaps. 1, 2, 3). Without a due recognition of and sensitivity to these features and theories, any empirical examination will be inadequate. I certainly do not envision any sort of critical one-shot test being able to prove or disprove the Marxist claims, but I do expect that such empirical examinations, when accompanied by sufficiently refined theoretical elaborations, should lead to enhanced understanding. Surely, enhanced understanding is a goal both Marxists and non-Marxists share.

Conclusion

The Marxist tradition, through critique and theoretical assertion, has provided an alternative interpretation of schooling in America. Many proponents of that tradition have relied on an abiding faith that schools perform certain essential functions. Critics of the tradition are skeptical of the proponents' faith, their theoretical claims, and empirical assertions. If the Marxist tradition is going to offer routes for educational trans-

formation, researchers must begin to assess the accuracy of their explanations. While I do not envision hordes of "number-crunchers" descending on and assessing Marxist explanations, I do believe more attention should be given to the accuracy of these claims. Furthermore, while I do not think that Marxists should cease and desist their theoretical ruminations, I do believe that further progress depends on researchers keeping one foot in the theoretical world and the other in the empirical world.

Notes

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1. For similar interpretations, see G. A. Cohen (1978), Piotr Sztompka (1974) and Jonathan Turner (1979).

2. Elsewhere I identify and describe a third set of responses (see Liston, forthcoming).

3. Elsewhere I characterize Bowles and Gintis's more recent work (Bowles and Gintis 1982 and Gintis and Bowles 1980) as another example of the sites and practices approach (see Liston, forthcoming.)

4. As I noted at the beginning of this paper, functionalism is interpreted differently by various critics. Apple's characterization follows.

5. Apple's project to "understand" schools through citing their functions could be interpreted as functional attribution and not facile functional explanation. If this were the case, he would be offering a description, not an explanation, of schools' effects. While others disagree, I am convinced that Apple cites schools' functions to explain schools. Elsewhere I analyze Apple's claims that a selective tradition characterizes curriculum selection, an assertion that obviously follows a facile form (Liston 1984). Other examples of this explanatory approach are available in Apple's work. For instance, in his more recent criticism of Mortimer Adler's *Paideia Proposal*, Apple states that:

> In essence, I want to claim that what we are witnessing in schools is not easily fixable, and certainly not by a return to the academy. It is in fact "naturally" generated out of our modes of production, distribution and consumption.
>
> All too briefly in an economy that needs to stimulate individual consumption and a search for happiness based on the pursuit of consumable goods and services, older cultural values involving respect and the public good *need to be subverted* [Apple's emphasis]. Traditional cultural forms are not progressive for capital and need to be replaced by ideologies of individualism. Respect for position and "sacred" culture will be subverted and replaced by respect for possessions. [Apple 1985, p. 100]

I do not think any other interpretation of this particular passage would be accurate. Apple explains schooling phenomena ("what we are witnessing in schools") by referring to the needs and requirements of a capitalist economy. What occurs in schools is "naturally" generated out of our modes of production, distribution, and consumption. Schools have functions, and these functions

are required by capitalism. As I have argued earlier, such an approach is facile; it assumes what requires examination.

6. Elsewhere I characterize Henry Giroux's work (Giroux 1983, 1981*a*, 1981*b*) as utilizing both the epistemological and the historical notions of the dialectic (see Liston, forthcoming).

7. Cohen (1979, chaps. 9, 10) presents a more thorough examination of the logic and empirical adequacy of functional explanation.

8. This represents a difficult but not intractable methodological problem (see Liston, forthcoming).

9. I hesitate to point research in this direction because of the United States' role in undermining the stability of Cuba. Any such study would have to take such destabilizing factors into account.

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