

The Memberships Theory of Poverty: The Role of Group Affiliations In Determining Socioeconomic Outcomes

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Abstract

This paper describes a particular perspective on the causes of poverty: a memberships based theory. The idea of this theory is that an individual's socioeconomic prospects are strongly influenced by the groups to which he is attached over the course of his life. Such groups may be endogenous; examples include residential neighborhoods, schools and firms. Other groups are exogenous, including ethnicity and gender. I describe the main ideas of the memberships theory, characterize the empirical evidence in its support, and remark on its implications for anti-poverty policy.

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1. Introduction

“Not only is the pathology of the ghetto self-perpetuating, but one kind of pathology breeds another. The child born in the ghetto is more likely to come into a world of broken homes and illegitimacy; and this family and social instability is conducive to delinquency, drug addiction, and criminal violence. Neither instability nor crime can be controlled by police vigilance or by reliance on the alleged deterring forces of legal punishment, for the individual crimes are to be understood more as symptoms of the contagious sickness of the community itself than as the result of inherent criminal or deliberate viciousness.”

Kenneth B. Clark, *Dark Ghetto* (pg. 81)

As Kenneth Clark's eloquent 1965 description makes clear, social scientists have long been aware of the importance of group influences as a cause of socioeconomic deprivation. Nevertheless, research in economics has generally focused on individual and family explanations of poverty. The reasons for this, I think, are twofold. First, it has generally been difficult to formally model the sorts of interactions which are associated with group influences. Second, data have typically not existed to allow quantification of the insights which social approaches might provide.

Since the late 1980's there has been a major change in thinking about poverty within the economics community towards group-based explanations. Manski (2000) provides a nice discussion of various reasons for this shift. In addition to his focus on developments in economic theory and econometrics, I would suggest that interest in group-level influences has also been sparked by a growing sense within empirical economic research that individual-level explanations are inadequate for understanding cross-group patterns for a range of socioeconomic phenomena.

One aspect of the growing perception that group influences matter is the growing number of papers which have established that knowledge of group characteristics is useful in predicting individual behavior. For example, in studying teenage sexual activity and fertility, Crane (1991), Brewster (1994a,b) and others have shown that the accuracy in predicting such behaviors for a given individual is improved by knowledge of certain characteristics of the adults in the neighborhoods in which the individuals reside.¹ In parallel, the writings of William Julius Wilson (1987,1996) have sensitized social scientists to the causal role of social isolation in

producing the large scale socioeconomic problems commonly associated with slums.² Similar conclusions may be drawn from recent ethnographies such as Anderson (1999). My suspicion is that underlying the new interest in group memberships among economists is a feeling that one cannot explain the levels of socioeconomic deprivation and self-destructive behavior associated with inner cities in a framework which embodies the neoclassical assumptions of rationality, preferences defined exclusively over commodities, and complete markets for borrowing and lending. Put differently, the standard neoclassical assumptions seem better suited for explaining socioeconomic success rather than socioeconomic failure.

One important scientific aspect of this new research on group memberships, poverty and inequality is that it represents an attempt to integrate ideas from sociology and social psychology into economics. It is no exaggeration to say that the traditional oppositions between economic and sociological approaches in explaining phenomena of common interest – oppositions which are often described in terms of rational choice versus social structural models – are being dissolved in this new paradigm.

In this essay I attempt to describe the basic ideas of the memberships theory of poverty, indicate the dimensions along which it has found empirical support, and indicate some of the implications of this new body of theories for public policy. As will become clear, the links between theory, empirics and policy are still relatively weak, reflecting the fact that this paradigm is still in its infancy. These weaknesses represent opportunities for new research rather than fundamental weaknesses in the paradigm.

2. Theory

i. basic ideas

¹This new empirical work, in turn, reflects the growing availability of neighborhood and school data. I thank Robert Haveman for this point.

²I distinguish slums and ghettos because within the sociology literature, slums usually refer to very low income neighborhoods whereas ghettos refer to communities whose members have been forced to live there due to overt discrimination. I thank Mitchell Duneier for pointing out this distinction to me.

The basic idea of the memberships theory of poverty is straightforward. Suppose that an individual's socioeconomic outcomes depend upon the composition of the various groups of which he is a member over the course of his life. Such groups may in principle be defined along many dimensions including ethnicity, residential neighborhood, schools, and workplace.³ These memberships can exert causal influences on individual outcomes through a range of factors. These factors are assumed to include:

1) Peer group effects. These effects refer to the impact the choices of some members of a group have on the preference of others in assessing those same choices. Standard examples of peer group effects include juvenile crime, in which the appeal of participating in a crime is higher when one's friends are involved and cigarette smoking, in which the use of cigarettes is more appealing when one's friends also smoke.

2) Role model effects. These effects occur when the characteristics of older members of a group influence the preferences of younger members. If a typical student places a higher value on a college education when the percentage of adults in his community who attended college is high, then college attendance exhibits role model effects.

3) Social learning. Social learning refers to the influences which the choices and outcomes experienced by some members of a group have on the subsequent choices of others via the information that those choices and consequences impart. When a community only contains adults who have attended college but not succeeded economically, this information can influence how high school students assess the benefits of college.

4) Social complementarities. Social complementarities refer to the idea that the choices of some members of a group make the choices of other members more or less productive depending on whether the choices are positively correlated or not. A study

³One could in principle also treat family formation in this group-membership framework. Fernandez and Rogerson (1999) make a compelling case that this mechanism, via assortative mating, is important in understanding inequality.

group, in which hard work by other members makes the efforts of each member more productive, exhibits social complementarities.

Clearly, these types of group effects are not independent, and one could imagine alternative classifications.

Depending on a particular context, the group memberships themselves may or may not be choice variables. In this sense, one often distinguishes memberships defined by residence, school, or firm from those determined by ethnicity, religion or gender.⁴ When the memberships are themselves choices, a complete theory of inequality needs to account for these choices as well as for the consequences of the choices. For example, a theory of the role of residential neighborhoods in perpetuating poverty needs to explain how families are assigned to neighborhoods in addition to how neighborhood compositions affect individual families.

When group-level influences are powerful, then socioeconomic success or failure is significantly causally influenced by the evolution of these memberships as well as the groups themselves. Suppose that an individual is a member of an ethnic group which suffers from discrimination, further grows up in a poor community whose role models and peer groups militate against economic success, and is in turn placed in a sequence of poor schools and jobs. This sequence constitutes an explanation of why such an individual is in poverty. By the memberships theory of poverty, I refer to a perspective on poverty in which these group influences play a primary role in understanding why an individual is poor for much of his life.

To understand how economists conceptualize this type of explanation, it is useful to outline a basic model of individual choice. Suppose we are interested in the outcomes ω_i for individuals in some population of size I . These outcomes are assumed to represent choices made by individuals in order to maximize a payoff function V subject to the requirement that the choices lie in the constraint set each individual faces, which we can denote as Ω_i . In a standard formulation of these choices, both the payoffs to individuals and the constraint sets are assumed to depend on two types of

⁴This dichotomy between endogenous and exogenous groups is not entirely satisfactory, since one would in principle like to know why certain endogenous group memberships are salient. For example, one does not normally think of the set of bald, bearded professors as a salient source of role models for children the way one thinks of parents in a community.

factors: observable individual characteristics X_i , and unobservable characteristics (to the modeller, but observable to agent i) ξ_i . The observable vector can include elements such as family background and past behavior. Algebraically, the choice of each individual i represents the solution to

$$\max_{\omega_i \in \Omega_i} V(\omega_i, \tilde{X}_i, \xi_i)$$

such that $\Omega_i = \Omega(\tilde{X}_i, \xi_i)$

The standard approach to characterizing the behavior of the population of choices, an approach which renders the model both amenable to formal analysis as well as econometrically estimable, is to make some assumption concerning the distribution of the ξ_i 's.

Memberships-based theories of behavior, at least qualitatively, are based upon studying this same model once explicit attention has been given to the influence of a group's characteristics and behaviors on its individual members. In order to formally incorporate these influences, I make several assumptions. Each individual i is a member of one neighborhood, denoted as $n(i)$. Each of these neighborhoods is associated with a set of observable group characteristics, $Y_{n(i)}$, as well as a set of beliefs individual i possesses concerning the choices of others; these beliefs may be expressed as a subjective probability measure $\mu_i^e(\omega_{-i})$ where $\omega_{-i} = (\omega_1, \dots, \omega_{i-1}, \omega_{i+1}, \dots, \omega_I)$. Algebraically, an individual's choice is now described by

$$\max_{\omega_i \in \Omega_i} V(\omega_i, \tilde{X}_i, Y_{n(i)}, \mu_i^e(\omega_{-i}), \xi_i)$$

such that $\Omega_i = \Omega(\tilde{X}_i, Y_{n(i)}, \mu_i^e(\omega_{-i}), \xi_i)$

At this level of abstraction, such formalism is really tautological, in that all it says is that one is interpreting individual behavior as a set of choices determined by some combination of individual and group factors; presumably, any observed behavior can be interpreted this way through suitable specification of the objective function and

constraint set associated with a given agent. At the same time, the fact that this formulation is tautological has an important implication: there is nothing in the introduction of group influences on individual outcomes that is inconsistent with the methodological individualism, or equivalently, the choice-based reasoning about individual behavior, that underlies economic theory. See Blume and Durlauf (1999) and Durlauf (2000) for more on this issue.

The memberships theory is substantively different from standard economic models in two respects. First, it shifts the emphasis in a causal explanation of poverty from individual characteristics as an explanation of heterogeneity in behavior to memberships and group influences which constrain individual outcomes. Second, such theories highlight the role of externalities in producing poverty. In this respect, poverty is conceptualized not as a by-product of an efficient economy, but rather as a manifestation of various factors which are traditionally associated with economic inefficiency. Typically, role models and peer influences fulfill the standard conditions which characterize externalities in that each is an example in which the choices of one group of individuals directly (i.e. without market mediation) affect others.

The presence of group level externalities has important implications for aggregate outcomes observed in these environments.⁵ First, there can exist multiple equilibria in the level of behavior within a group. Intuitively, this occurs because the existence of strong interdependences between the behaviors of individuals within a group does not provide any information as to what sorts of behaviors will be observed. Rather, these interdependences only imply that whatever behaviors occur will be highly correlated with the group. When these interdependences are strong enough, the private factors which lead to one choice versus another may be overwhelmed by the incentives to conform, so that there will be more than one possible set of individual behaviors consistent with individual rationality. Operationally, this means that phenomena such as the levels of out-of-wedlock births, crime rates, and substance abuse within a group will not be uniquely determined by the microeconomic characteristics of the members of the group.

⁵Brock and Durlauf (1999,2000a) and Durlauf (1997) provide a general theoretical framework for studying these properties. There is a very rich literature on models with interactions within the economics and sociology literatures. Schelling (1971) is an important precursor. See also Granovetter and Soong (1988) for a nice example from sociology.

Second, the models can exhibit large “social multipliers.” When individuals are highly interdependent, small changes in their individual incentives to make a particular choice (these are the X_i 's in our choice problem) can, because of the feedbacks induced, create large changes in group-level behavior. Such a property has important implications for policy. For example, a given level of resources allocated to fight poverty could have much larger effects if concentrated on individuals who interact rather than spread across individuals who do not.

Third, these models are highly nonlinear. This means that the effect of change in a particular individual or group characteristic on a group's behavioral outcomes can differ according to the levels of the various variables that are involved. This is important because it means that the use of linear statistical methods to uncover the effect of some policy can be highly misleading.

ii. applications

This basic choice structure has been used to illuminate several aspects of the determination of poverty and inequality. Perhaps the most common application has been to the role of residential neighborhoods in transmitting poverty and inequality across generations. Models of this type have been developed by Bénabou (1993,1996a,b), Cooper (1998) and Durlauf (1996a,b). These models have a common structure. At a given point in time, families organize themselves into residential neighborhoods. Entry into particular neighborhoods may be restricted through rental or house prices or through overt forms of discrimination. Each residential neighborhood influences children through some combination of peer groups, role models and local determination of educational expenditures via taxes. As adults, the onetime offspring in various neighborhoods reorganize themselves into possibly new neighborhoods, and the cycle is repeated. In these models, the incentives for stratification of neighborhoods is increased by the degree of cross-section inequality. This means that as inequality at a point in time increases, social mobility can be reduced. In addition, phenomena such as uniformly poor neighborhoods can emerge endogenously as individual families desire affluent neighbors. Further, if one considers black ghettos which were historically socioeconomically diverse, a reduction of

barriers to social mobility can produce residual communities suffering from many forms of deprivation. These dynamic models of neighborhood feedbacks and endogenous stratification represent a formalization of ideas of longstanding importance in sociology, such as William Julius Wilson's (1987) analysis of the modern ghetto:

"...changes have taken place in ghetto neighborhoods, and the groups that have been left behind are collectively different than those that lived in these neighborhoods in earlier years. It is true that long-term welfare families and street criminals are distinct groups, but they live and interact in the same depressed community and they are part of the population that has, with the exodus of the more stable working- and middle-class segments, become increasingly isolated socially from mainstream patterns and norms of behavior." (pg. 8)

And of course these models resonate with Clark's description of twenty years earlier.

Why do neighborhoods matter? Although most theoretical models of neighborhood effects make the effects a primitive modelling assumption, one can identify several structural reasons which would lead to neighborhood effects as conventionally modelled. First, there is the role of local public finance. Approximately 45% of all public revenues spent on primary and secondary education are generated through local sources. Kozol (1991) provides a powerful description of the implication of this for disparities in school quality. Second, peer group influences can create such effects. If the educational effort and aspirations of one child are influenced by the efforts of his friends and peers, then neighborhoods can create powerful forces promoting or retarding social mobility. Third, role models can exert powerful influences. One reason for this is informational, as explored by Streufert (1991) and Roemer and Wets (1995). If children within a community employ the experiences of adults in assessing the economic payoff of education, children in poor communities observe biased outcomes in the sense that the observed payoff among adults in the community is lower than what the child should expect. This creates the possibility that poor children are systematically misinformed about the benefits of education and therefore make lower educational choices than are "objectively" appropriate for them. Fourth, social networks may matter for labor market matching (Boorman (1975)). It is well established that approximately 50% of all workers at a point in time knew someone at their current firm when they first took the job. As

argued by Montgomery (1992,1994a), this suggests that poor communities will be less able to generate the labor market information necessary for rapid and successful matching of community members to jobs. A final reason why neighborhoods influence individuals falls under the rubric of social norms. Neighborhoods can represent the carriers of aspirations toward economic success and family responsibility, with attendant implications for the perpetuation of poverty. Interesting theoretical models exploring this idea include Akerlof and Kranton (1999) which shows how personal identity may be endogenized and Montgomery (1994b) which shows how adherence to norms concerning parental responsibility can, through cognitive dissonance, be weakened due to the level of various behaviors within a neighborhood.

Another area where group effects have been studied is in terms of ethnicity. Borjas (1992,1995) has been the primary advocate of this approach in understanding differences in socioeconomic outcomes for a wide range of ethnic groups. For the particular case of African Americans, this has been a longstanding concern; Loury (1977) provides a model to explain persistent black/white inequality which corresponds to the memberships theory I have been describing, and indeed can be considered a major progenitor of the current theoretical literature. From the perspective of theory and model construction, the key difference between neighborhood and ethnic notions of memberships is that neighborhood memberships are endogenous whereas ethnic group memberships are of course not, although as suggested before, why ethnicity should be a salient membership is something which one would wish to explain.

A final area where memberships-based theories would seem to have application concerns the allocation of workers across firms. As studied by Kremer and Maskin (1996), the productivity of a given worker is determined by the skills of his coworkers, implying that the degree of stratification of workers by skill can have large influences on the degree of inequality and poverty. Kremer and Maskin note that an economy in which the paradigmatic company is Microsoft, whose labor force consists almost exclusively of high skilled, white collar workers is very different from one where the paradigmatic firm is Ford, which links workers of different skills and occupation types in a common production process. This type of research suggests that an important causal factor in understanding persistent deprivation is the extent to which poor workers are decoupled from the rest of the economy. While relatively little work has

been done on this question, it seems an important area for future research. It should be noted that for this case, there are no externalities involved, as firms will, in the course of maximizing profits, account for interworker productivity effects in hiring.

iii. social capital

While interest in the influence of groups on individual outcomes has received increasing attention within social science, this change is small compared to the explosion of interest in social capital. James Coleman, a key pioneer in advocating its importance, characterized social capital in (1990) as:

“The relations of authority and of trust and...norms...are forms of social capital.”
(pg. 300)

“The value of the social capital concept lies primarily in the fact that it identifies certain aspects of social structure by their function...The function identified by the “social capital” is the value of those aspects of social structure to actors, as resources that can be used by the actors to realize their interests.” (pg. 305)

In the context of poverty, many authors have tried to argue that the problems of the inner city may be interpreted as at least partially due to an absence of social capital of various types.

In my judgment, the body of substantive ideas around social capital can all be subsumed within a general memberships theory of inequality. To the extent that social capital is a well defined resource which members of some social network can access, then it is simply a version of a group influence. Its mathematical representation would therefore require that social capital be modelled as a group influence on individual decisionmaking and so presumably could be characterized by some collection of group level variables of the type I have described in Section 2.i. In fact, the original use of the term by Loury (1977) occurred in precisely such a context. What perhaps creates the misimpression that social capital is a distinct idea from interaction effects is that Coleman and others have often defined it functionally, i.e. in terms of what it does rather than in terms of what it is. As argued by Portes (1998), defining social capital functionally renders the concept unfalsifiable and vague.⁶

⁶See Durlauf (1999b) for additional criticism of social capital literature.

3. Empirical evidence

Empirical evidence of the role of memberships may be divided into four categories. First, there are ethnographic studies. Second, there are regression analyses based on observational data. Third, there exist studies which attempt to evaluate the effects of government interventions in membership on individual outcomes. Fourth, there are controlled experiments from the social psychology literature. I also describe an important ongoing research effort which has important potential in elucidating the nature of group-level influences. One important point to recognize is that there has yet to be any effort to estimate structural memberships-based models, and so the evidence concerning the theory is to some extent indirect.

i. ethnographic evidence

Ethnographic studies of poverty, such as *Dark Ghetto*, are a distinguished part of 20th century sociology and provide a rich body of evidence on the ways in which community deprivation influences individual behavior. This literature has focused in many cases on the emergence of social norms within inner cities which perpetuate deprivation across generations; classic examples include Lewis' *La Vida* (1966) and Liebow's *Tally's Corner* (1967). Stack's *All Our Kin* (1974) is an important study of the nature of social networks in poor, black communities. An important feature of this study is the recognition of how strong, positive social networks militate against the effects of deprivation even within slums. A recent important study is Anderson's *Code of the Street* (1999). Anderson's ethnographic study of inner city Philadelphia is primarily concerned with understanding the nature of violence on poor neighborhoods. Anderson's study documents how

"In some of the most economically depressed and drug- and crime-ridden pockets of the city, the rules of civil law have been severely weakened, and in their stead a "code of the street" holds sway. At the heart of this code is a set of prescriptions and proscriptions, or informal rules, of behavior organized around a desperate search for respect that governs public social relations, especially violence...In the social context of persistent poverty and deprivation, alienation from broader society's institutions,

notably criminal justice, is widespread. The code of the street...involves a quite primitive form of social exchange that hold would-be perpetrators accountable by promising an "eye for an eye". (pg. 9-10)

While much of the ethnographic literature has tried to document sources by which the socioeconomic problems of ghetto dwellers are reinforced, one should not conclude that ghetto life is a monolith devoid of positive social relations. Duneier's brilliant *Slim's Table* (1992) is a useful corrective in this regard.

From the perspective of the memberships theory, these ethnographic studies provide key examples of the sort of rich social context effects on which the theory relies. Further, the diversity of positive and negative interactions that coexist in poor communities, a diversity that is apparent from a juxtaposition of Anderson and Duneier's work for example, makes clear the need to interpret social pathologies as statistical regularities which emerge across purposeful agents; this is precisely how the new theoretical models of social interactions study such phenomena (Brock and Durlauf (2000a)). While ethnographic studies do not represent the sort of quantitative analyses which theoretical models of the memberships theory require for formal model evaluation, they are essential in evaluating the substantive significance of these theories.

ii. regression evidence

A vast literature purporting to document the influence of group memberships on socioeconomic outcomes now exists; a standard survey of older work is Jencks and Mayer (1990). This literature generally focuses on the role of residential neighborhoods on the future outcomes of children. A typical analysis of this type computes a regression of the form

$$\omega_i = a + cX_i + dY_{n(i)} + \epsilon_i$$

where, as before, individual characteristics and neighborhood characteristics are denoted by X_i and $Y_{n(i)}$ respectively. Acceptance of the null hypothesis that $d = 0$ is interpreted as meaning that no group influences exist. Individual outcomes which

have been explored by this type of regression include years of schooling (Datcher (1982), Duncan (1994)), wages and earnings (Corcoran, Gordon, Laren, and Solon (1992), Corcoran and Adams (1997)), hours of work (Weinberg, Reagan, and Yankow (1999)), and cognitive development (Brooks-Gunn, Duncan, Klebanov, and Sealand (1993), Duncan, Brooks-Gunn and Klebanov (1994)).⁷

In addition to linear regression analysis, which presupposes that the outcome variable ω_i is continuous, there has been work which focuses on binary choices in both static and dynamic environments (in the latter case, the variables are allowed to vary across time). Crane (1991), in a well known early study, finds in a cross-sectional analysis that the percentage of professional workers among parents in a community reduces the probability of teenage pregnancy and high school dropouts, once various individual characteristics are controlled for. Analogous results are also found by Brewster (1994a,b), Sucoff and Upchurch (1998), and South and Crowder (1999).

These studies typically conclude that there is some combination of contextual variables which are statistically significant, although there seems to be no consensus on which of these contextual effects are most robust. Similarly, efforts to show these effects are robust with respect to individual characteristics suggest that the evidence of neighborhood effects is in fact relatively ambiguous. For example, by using sibling data for sibling pairs which were raised in different places (which presumably allow one to control for unobserved family characteristics) Aaronson (1998) finds strong evidence of neighborhood effects whereas Solon, Page, and Duncan (1998) and Page and Solon (2000) come to more skeptical conclusions.

The best effort to date in assessing the role of variable choice on findings of neighborhood effects is Ginther, Haveman, and Wolfe (2000). This paper considers a wide range of alternative specifications of individual and neighborhood controls for three youth outcomes: high school graduation, years of completed schooling, and nonmarital childbearing among teenagers. The main finding of Ginther, Haveman and Wolfe (2000) is that richer individual controls systematically reduce the magnitude of estimated neighborhood influences, leading one to question whether findings of strong neighborhood effects in other studies are an artifact of the choice of control variables. This work suggests that analyses of group effects need to explicitly account for model

⁷Ginther, Haveman, and Wolfe (2000) provide an excellent systematic survey of empirical studies of neighborhood effects.

uncertainty, i.e. the absence of any theory to guide the selection of control or neighborhood variables. In a different context, Brock and Durlauf (2000b) discuss how to address this problem in order to develop inferences which are robust to some forms of model specification. A valuable future exercise would be the construction of specification-robust neighborhood effects.

While this vast body of regression work is very suggestive, it is far from persuasive. In order to understand this, it is useful to review some recent econometric work on the identification of interactions. This literature (e.g. Manski (1993), Brock and Durlauf (2000a)) has focused on the determination of conditions under which different types of interaction effects may be statistically identified. Following Manski (1993), it is typical to distinguish between two classes of interaction effects which influence individual decisions: endogenous effects and contextual effects.⁸ Endogenous effects refer to the effects one set of decisions has on others which are made contemporaneously. According to this terminology, peer group influences are endogenous. Contextual effects refer to feedbacks from predetermined (with respect to decisions) characteristics of a group to its individual decisions. Role model effects fall into this category.

There are several main ideas which emerge from this new econometric literature.⁹ First, linear models suffer from particular difficulties in terms of identification. Manski (1993) shows how for a particular linear class of models, these two effects cannot be distinguished. Brock and Durlauf (2000a) in turn show that for general linear models, identification of these two effects requires prior knowledge of the existence of some individual level variable whose group average does not affect individuals causally.¹⁰ Second, identification appears to be less problematic for models based on discrete or longitudinal data. Brock and Durlauf (2000a) show that the identification problem which arises in linear contexts does not arise in binary choice and longitudinal data contexts. The reason for this is that the relationship between dependent and independent variables in these latter statistical models is nonlinear, (in

⁸Notice that with reference to our baseline choice problem endogenous effects are induced by $\mu_i^e(\omega_{-i})$ and contextual effects are induced by $Y_{n(i)}$.

⁹Brock and Durlauf (2000a) provide a detailed survey of the econometric literature on interactions.

¹⁰See Moffitt (1999) for additional analysis.

the sense that various control variables influence the probabilities of alternative behaviors), which is sufficient to break the collinearity between endogenous and contextual effects which can arise in linear models.

With respect to the existing empirical literature, two main implications may be drawn from the new econometric literature. First, endogenous and contextual effects have not typically been distinguished in empirical studies, hence it is unclear how to provide any causal interpretation to findings that group effects exist. Second, any attempt to do so needs an explicit analysis of what prior information concerning the statistical model under study is responsible for the identification of structural parameters. Put differently, the standard linear, binary choice and longitudinal regressions which have appeared cannot be mapped into statements about the causal relationship between groups and individual outcomes without first, explicitly distinguishing between endogenous and contextual effects and second, showing that the statistical conditions under which they may be distinguished are plausible assumptions for the data under study.

The empirical literature on neighborhood effects is also plagued by another general problem: self-selection. Individuals are not randomly assigned to neighborhoods, of course; rather they choose neighborhoods subject to prices and income. The basic problem therefore is that when one observes a group of individuals in a "bad" neighborhood, it seems likely that they have some unobserved characteristic in common. This in turn, means that any group effect identified from data may be spurious. Now, there are ways one can deal with the effects of self-selection (see Brock and Durlauf (2000a)) which paradoxically facilitate identification, but they have yet to be implemented in any empirical study.¹¹

The major study which attempts to explicitly control for self-selection in neighborhoods is Evans, Oates, and Schwab (1992). The analysis is specifically concerned with identifying the role of neighborhood characteristics on the probability of teen pregnancy. Using a probit framework, this probability is assumed to depend on both a range of individual characteristics as well as a variable which is the logarithm of the percentage of other students in an individual's high school who are categorized as

¹¹Hauser's classic (1970) demonstration of how one can produce spurious evidence of contextual effects is actually a lovely example of what happens when self-selection is not properly accounted for when analyzing observational data.

“disadvantaged” as defined under guidelines of the Elementary and Secondary Education Act. In probit regressions which treat this measure as exogenous, this measure of disadvantaged schoolmates is shown to statistically significantly increase the probability of a teen pregnancy.

In order to control for self-selection, Evans, Oates, and Schwab propose four metropolitan area instrumental variables for their neighborhood characteristics variable. The implicit assumption in this analysis is that the metropolitan area of residence is exogenous for families, although location within a metropolitan area is a choice variable. Employing these instruments, the contextual effect found in the univariate analysis disappears both in terms of magnitude and in terms of statistical significance.

This result suggests caution in interpreting studies which do not deal with self-selection. However, the particular choice of instruments in Evans, Oates, and Schwab seems inappropriate if one thinks that memberships matter at a lower level of aggregation than metropolitan areas, since one could easily imagine it is that component of a neighborhood’s characteristics relative to a metropolitan area’s characteristics that ultimately produces a neighborhood effect. Also, a statistical procedure which explicitly models the group formation process seems more likely to produce accurate measures of neighborhood effects than one based on an ad hoc use of instruments.

Finally, there is a distinct branch of the empirical literature which attempts to identify social interactions through an examination of group-level statistics. In one such approach, spatial correlations in average neighborhood behavior, once various within-neighborhood characteristics have been controlled for, are interpreted as social interaction effects. Topa (1999), for example, finds such correlations in the context of Chicago neighborhoods for unemployment. Alternatively, one can ask whether inter-group behavioral averages vary too much to be explained by differences in intra-group individual characteristics. Glaeser, Sacerdote, and Scheinkman (1996) use this idea to identify social interactions in criminal behavior. This type of analysis seems promising as a complement to the individual-level structural modelling approach of Brock and Durlauf (2000a), Moffitt (1999), and Manski (1993).

iii. quasi-experiments

The concern over the possibility that self-selection can lead to spurious evidence of neighborhood effects is responsible for interest in the use of “quasi-experiments.” Roughly speaking, researchers have sought out cases where individuals have been reassigned to new groups (typically residential neighborhoods) due to some exogenous event. By comparing individuals who have been reassigned to those who have not, one can in principle approximate a random experiment whereby those who are moved correspond to a “treatment” group and those who are not represent a “control” group.

The most prominent example of such a natural experiment in the interactions-literature is the Gautreaux program, studied by James Rosenbaum and various coauthors in an important set of papers, Popkin, Rosenbaum, and Meaden (1993), Rosenbaum (1995) and Rosenbaum and Popkin (1991). In 1966, the Chicago Housing Authority was sued for discrimination by public housing residents on the grounds that both the location of public housing sites and the allocation of slots in these sites intentionally placed minorities in isolated inner city neighborhoods. In an agreement worked out between the plaintiffs and defendants, known as the Gautreaux Assisted Housing Program, (Dorothy Gautreaux was the lead plaintiff) housing subsidies and placement services were established for public housing residents throughout Chicago. Families who applied for assistance were randomly given a single option of moving to another part of Chicago or to moving to a suburb. (Families who declined the offered option were placed back in the pool of eligible families from which recipients of aid were drawn.) This body of work has found that along many dimensions, including high school dropout rates and post graduation wages, children from families who were moved to suburbs did substantially better than their counterparts who moved within Chicago.

While they are an important source of information on interactions effects, it is important to recognize that the Gautreaux data are not ideal for this purpose. Applicants to the program were dropped who either had poor rent paying histories or who failed a home inspection to determine whether they had mistreated their public housing. This prescreening eliminated approximately 30% of the program’s applicants

(Rosenbaum (1995)). Hence, the Gautreaux families are not fully representative of the poor communities from which they were drawn. Further, the survey efforts conducted by Rosenbaum and coauthors exhibit some sample selection problems. In particular, those families who moved to suburbs and then returned to Chicago could not be identified. Hence, the evidence of neighborhood effects obtained from Gautreaux is, while informative, not decisive. That being said, recent work such as Rosenbaum, DeLuca, and Miller (1999), by linking Gautreaux interview data to administrative data, should be able to partially address these concerns.

A second major quasi-experiment is the Moving to Opportunity Demonstration, currently being conducted by the Department of Housing and Urban Development to evaluate the effects of moving low-income families out of high-poverty neighborhoods; a detailed discussion of the program appears in Goering (1996). The demonstration randomly assigned a set of low income families who applied to participate in the program to one of three groups: 1) a group whose members are eligible for housing vouchers which provide a rent subsidy but which are only usable in census tracts with less than 10% poverty, 2) a group that is eligible for housing vouchers with no locational restrictions, and 3) a group in which members are not eligible for housing vouchers but can still receive public housing assistance based on previous eligibility. The demonstration is being conducted in 5 metropolitan areas: Baltimore, Boston, Chicago, Los Angeles, and New York City.

Preliminary results on the various experiments are becoming available. Ladd and Ludwig (1998) report evidence that those families in Baltimore that moved out of low income census tracts achieved better access to better schools as measured by a range of criteria. However, they find little evidence that the value added of these schools for the children in these families is higher than the schools used by families in the comparison and control groups. For the Boston demonstration, Katz, Kling, and Liebman (1999) similarly find evidence that the MTO program has been successful in generating relocation of families to better communities. They also find that children in both classes of families which were eligible for vouchers exhibited higher test scores as well as lower incidences of health and behavioral problems.

Like Gautreaux, the MTO demonstration suffers from a range of problems which make interpretation of the data difficult. First, the program is far from a pure

randomized experiment, i.e. an experiment where living in a low poverty neighborhood constitutes a treatment. As mentioned before, participation in the program required families to volunteer; further, many families who were eligible to move to more affluent communities apparently had not done so, at least by the time data were collected. Hence, serious self-selection problems exist with the data which together make it difficult to extrapolate the asserted findings of neighborhood effects from the program to more systematic policy interventions. Second, the findings of differential outcomes associated with residence in richer versus poorer neighborhoods cannot be interpreted causally without better efforts to control for individual-level effects which may vary systematically with the neighborhoods. For example, the finding that there is a reduction in asthma attacks among MTO children who move to better neighborhoods (Katz, Kling, and Liebman (1999)) is not compelling evidence of neighborhood effects without adequate controls for differences in housing quality across neighborhoods.¹² Third, the MTO data are associated with a sufficiently short time horizon that one must be worried about the distinction between transitory and permanent effects. It is far from inconceivable that there could, over time, be regression in the better outcomes associated with the movement of some families to richer communities. My own judgment is that the MTO demonstration complements the Gautreaux data, but unlike some suggestions to the contrary, in no way supplants it.

iv. controlled experiments

The most persuasive evidence of group effects appears to lie in the social psychology literature. In this literature, well described in Aronson (1999), many controlled experiments have been conducted which demonstrate a range of ways in which group influences matter. Indeed, many of the classic experiments in this literature illustrate group influences. One example is the work by Stanley Milgram on

¹²Yinger (2000) states that "Living in lower-quality housing implies a higher risk of exposure to lead paint or asthma inducing conditions" (pg. 27). He goes on to argue that housing discrimination, producing segregation of the poor into low quality housing, contributes to serious health risks for the disadvantaged. Hence, the question of whether housing quality is different across the groups in MTO is a serious caveat to the interpretation of health findings in general.

obedience to authority: see Milgram (1974) for an overview. Milgram's experiments were designed to see under what conditions an individual, believing he was assisting psychological research, would be willing to obey instructions from an authority figure (literally, a man in a white coat) to administer a sequence of increasingly powerful electrical shocks to a patient who began to protest that his health was in danger.¹³ The most publicized result of this work is that 60% of subjects continued to administer shocks even when the "victim" said he had a heart condition. What is less well known is that when a second individual was present, if that person refused, the refusal rate by subjects increased dramatically. A key finding of this experiment is that the willingness of an individual to reject a behavior which is endorsed by an authority is a function of whether there is a peer who is willing to do the same.

Of course, the finding of a social interaction effect such as this has no direct implications for how one thinks about the determination of poverty. On the other hand, it is clearly suggestive of why one might observe variations in social pathology rates across similar communities, since such pathologies are presumably "sanctioned" by social norms which are powerful in ways analogous to authority figures. For one example of evidence of how large cross-section differences in behaviors cannot be accounted for without some sort of interactions-based explanation, see Glaeser, Sacerdote, and Scheinkman (1996).

v. Project on Human Development in Chicago Neighborhoods

Much of the quantitative literature on membership effects suffers from the absence of any deep causal analysis of why these effects exist. Typically, a set of statistical measures of neighborhood-level characteristics, generally the means of some set of variables such as income or education, is added to a statistical model predicting individual outcomes. The statistical significance of these variables is then interpreted as a demonstration that group effects matter. However, the finding of either contextual or endogenous effects does not, in and of itself, provide much guidance as to the actual causal mechanism through which these effects occur. It is no exaggeration to say that the statistical evidence on group effects is by and large a black box.

¹³Participants in the experiment were told that the research was designed to explore the effects of punishment on learning.

An important exception to this generalization is the research being produced by an ongoing data collection effort, the Project on Human Development in Chicago Neighborhoods, which has the promise both of providing important documentation of neighborhood effects as well as some insight into their structure. Among the studies generated by this project are: Sampson, Raudenbush, and Earls (1997), Raudenbush and Sampson (1999), and Sampson, Morenoff, and Earls (1999).

The Project on Human Development in Chicago Neighborhoods is designed to produce a rich data set on attitudes among Chicago residents on a wide range of issues. In 1995, for example, over 8000 individuals were surveyed across over 300 neighborhood clusters. What is critical in the study is the rich set of information that is produced which allows for the integration of information about individual characteristics with information on individual attitudes in order to study how these relate to neighborhood outcomes.

This data set has provided insights into a very wide range of phenomena. For our purposes, one aspect may be highlighted. Sampson, Morenoff, and Earls (1999) make clear that a critical effect of concentrated poverty on individuals is to reduce their expectations that a community will assist parents in controlling children. For example, members of poor neighborhoods feel unable to rely on neighbors to report truancy or call the police in response to observing illegal activity. These types of activity are standard examples of interaction effects which can produce multiple equilibria in community behaviors. So by implication, these are the sorts of behavioral factors which can explain cross-community variation in school completion and crime rates, and hence explain causally why poverty is perpetuated across generations. This sort of finding in turn is very suggestive of the role of community institutions in ameliorating social problems and indeed fulfills the authors' objective of moving beyond the typical vague formulations of social capital.

In my judgment, this Project is an exemplar for the directions in which empirical work on group effects should proceed. This sort of microeconomic survey data is essential in understanding why and how group influences occur.

4. Implications for policy

The memberships perspective has implications for the way in which one conceptualizes and defends anti-poverty policies. Specifically, a focus on group level influences naturally leads one to ask whether the government can and should intervene in order to alter the way in which groups are formed in the economy and broader society. Durlauf (1996c) uses the term "associational redistribution" to distinguish those policies which redistribute group memberships rather than income (the more traditional objects of redistributive schemes).¹⁴

At first glance, associational redistribution might appear to be a new and unusually invasive form of government intervention. In fact, there are numerous examples of government policies of this type. The most obvious (and currently controversial) example is affirmative action, which is nothing more than an intervention into the allocation of individuals into schools and firms which occurs in the society or economy. Similarly, the once widespread programs of school desegregation through busing, which during their peak were even more controversial, are explicit examples of associational redistribution. Among somewhat less prominent examples, one can list contemporary magnet and charter schools programs as well as the location of public housing projects, the latter shown by Massey and Kanaiaupuni (1993) to have had a major impact on the observed pattern of residential segregation found in large urban areas. What links these very disparate types of programs together is that each is designed to alter the social interactions experienced by individuals by altering the compositions of socioeconomic groups.

The critical implication of the new theoretical models of inequality is that group memberships as well as income and wealth may be appropriate objects of redistribution when the achievement of equality of opportunity is the goal of such policies. Following ideas in Roemer (1993,1998), by equality of opportunity I refer to a situation where an individual's expected life prospects are independent of factors for which an individual should not be held responsible;¹⁵ as Roemer (1993) states:

"society should indemnify people against poor outcomes that are consequences of causes that are beyond their control, but not against outcomes that are the

¹⁴This discussion borrows from Durlauf (1999a).

¹⁵See Fishkin (1983), for a definition of equality of life chances which is similar to this equality of opportunity notion.

consequences of causes that are within their control, and therefore for which they are personally responsible. (pg. 147)

To be concrete, children are obviously in no way individually responsible for the quality of their neighborhoods or schools, so equality of opportunity in employment would require that a child's employment prospects as an adult do not depend on any group effects which they experience in these contexts. When this notion of equality of opportunity is an objective of social policy, it becomes obvious that one can construct a justification for associational redistribution.^{16,17}

This justification for associational redistribution most obviously applies when there does not exist any substitute for intragroup influences in equalizing expected life prospects which can be redistributed through income or similar transfers. More generally, the costs of achieving equality of opportunity without associational redistribution may prove to be prohibitive, which is one (albeit speculative) way to interpret the finding of Heckman, Layne-Farrar and Todd (1996) that effects of improvements in school quality appear to have weak effects on labor market outcomes *ceteris paribus*.

Associational redistribution of course can only be justified when one considers how the political objective of equality of opportunity conflicts with and must therefore be traded off against any possible harms created by the policies required for its achievement. One possible argument is that associational redistribution violates some right to associations, a right presumably derived from some more general notion of a right to privacy. It is sometimes argued that anti-discrimination and affirmative action policies violate rights to free private association. Loury (1987) remarks that

"Freedom to act on the prejudices and discriminations which induce each of us to seek out and make our lives among a specific, restricted set of our fellows, are for many if not most Americans among those inalienable rights...enshrined in the Declaration of

¹⁶See Loury (1978) for a related set of arguments. Interestingly, these relatively similar general ethical considerations lead me to a much more sanguine view of affirmative action than Loury. Some reasons for this are enumerated in Durlauf (1999a).

¹⁷Notice that full equality of opportunity need not be attainable through government policies, nor desirable due to the costs of the necessary policies, for the objective to represent a good towards which policies should attempt to move society.

Independence." (pg. 257)

Loury is clearly right in some cases; it is impossible to see how an equality of opportunity argument could trump the right of parents to raise their own children. However, this does not seem germane to schools or businesses, where group composition is instrumental to the group goals: provision of education in the case of schools and profit maximization in the case of firms. For these two cases, one cannot invoke a separate right to privacy argument outside of the claim that the primary goals of these institutions are violated by policies which alter school enrollment or hiring decisions.

In the case of neighborhoods, where the interaction effects associated with the composition of the neighborhood may constitute the basis on which neighborhoods form, there would seem to be a stronger argument for respecting the right to engage in private association. However, in this case there is the question of whose rights are being protected. Parental preferences are not necessarily those which best serve children. So, to the extent that parental preferences for racial exclusivity are the source of segregated neighborhoods, it is reasonable for a policymaker to reject those preferences as irrelevant because they impose segregation on children for whom it is not meaningful to assert that they share these preferences. Further, even if parents are acting as the agents for their own children, it is unclear why a right to private association would justify their hurting other children through the choice of neighborhoods, etc.

Independent of privacy issues, it seems clear that such policies differ from income-based policies in terms of the way in which they alter individual opportunities, and in this respect have different ethical consequences. To see how this argument is constructed, consider two types of school-based associational redistribution. In the first case, children with different socioeconomic backgrounds but identical native abilities are randomly assigned to schools to eliminate a correlation that would otherwise exist between socioeconomic background and educational quality. In the second, suppose (following empirical work such as Henderson, Mieszkowski and Sauvageau (1978)) that average educational achievement is increased when students of different abilities are mixed in classes rather than segregated by ability, so that a school chooses to ban tracking in classes, despite its adverse effect on the achievement

of the most able students.

My claim is that this first case of associational redistribution is less ethically problematic than the second. Why? Because family background is not a component of a reasonable definition of what is "essential" about a person in the context of education (a concept which is found in Roemer's writings (1995,1998) among other places) whereas innate intellectual ability is a component of what is essential in this context. Thus, in the case of ability tracking, it is the essential quality of ability itself which the more able students would presumably not wish to pool (if given the choice) and whose development is reduced through ability integration whereas in the former case it is the inessential quality of parental affluence which is responsible for the segregation of children into schools of different quality. If anything, in the former case, the fact that opportunities for gifted children to realize their potential might be stifled by their coming from poor backgrounds makes the economically induced segregation seem particularly unjust.

More generally, when group membership is determined by and in turn promotes the development of attributes we regard as essential to a person's self-realization, there can be compelling ethical objections to policies which promote associational redistribution. The fact that these objections can coexist with the equality of opportunity justification for associational redistribution reflects the complex interaction of our sense of justice, which requires that individual rewards correspond to individual responsibility, with our sense of the importance of self-fulfillment in making individual lives meaningful.

However, even if associational redistribution does generate conflicts with rights which accrue to persons engaged in the actualization of his abilities, the memberships theory is still very germane to public policy discussion and still speaks to the desirability of associational redistribution as a policy. So long as one's ethical position is such that it is admissible to make tradeoffs between equality of opportunity and other social goods which are reduced by associational redistribution, the presence and strength of interaction effects will be relevant to one's views on policy. Ethical judgments about associational redistribution may well require adjudication between incommensurable goods in the sense analyzed in Berlin (1968,1990), but this is the essence of politics. The development of the analytics and empirics of the memberships

theory of inequality is therefore useful in ethical debates in so far as it elucidates the nature of the tradeoffs between various social goods.

By itself, of course, the presence of group effects does not logically entail any particular justification for a given social policy. As the discussion of empirical work indicated, the evidence on the relationship between group memberships and individual outcomes is strongest in precisely those contexts where the implications for specific policies are weakest. Hence, while the ethnographic evidence that groups matter is very compelling, this tells us little about the optimal design of affirmative action policies or the appropriate ways to draw school district boundaries and place magnet schools. While I believe the memberships theory naturally leads to new justifications for affirmative action, neighborhood socioeconomic integration and related policies, there are deep issues of policy design which the empirical literature has failed to address. For example, as Brock and Durlauf (2000a) argue, if one were to expand Gautreaux and MTO type policies to attempt a massive movement of children out of inner cities (a policy advocated by Fiss (2000) on the basis of an ingenuous reading of the evidence from these programs), one needs to account for the effects of large scale programs on the composition of school student bodies and the attendant effects on the interaction structures within schools – a factor which does not come into play when only a few students are involved, as is the case in these programs as currently constituted. Does one really think, for example, that adding two disadvantaged students to a school has the same average effect on the disadvantaged as replacing 20% of the students with disadvantaged counterparts? Such an extrapolation requires very strong assumptions about the nature of friendship networks and peer group formation. Further, one needs to recognize that individuals can adapt to these types of policies in ways which undermine them. Just as school desegregation problems reduced white enrollments in districts with those programs (Wilson (1985), Wilson and Smock (1991)), one could easily imagine an abandonment of public schools in response widespread socioeconomic integration. This is not in any way to defend the likely responses of affluent families to systematic efforts to economically integrate communities; it is rather that a failure to acknowledge them is naive.

I therefore believe an appropriate next step in developing policies based on associational redistribution is the expansion of demonstrations such as MTO with the

intent of tracing out the effects of alternative government policies both with respect to the rules by which memberships are redistributed, and also by attempting to account for scale effects. (In fact, there is a vast literature on experimental design that can be brought to bear on these issues.) Broad forms of associational redistribution of the type advocated by Fiss are, in my judgment, unwarranted by the available empirical evidence on group effects and risk foundering, if the experience of previous efforts at associational redistribution, i.e. school busing for desegregation, is a guide. This is not to operationally give up on associational redistribution as a practical guide to policy, but rather to recognize that there are important issues of policy design if the desired outcomes of these policies are to be achieved.

Finally, I would like to conclude this discussion by suggesting a possible reorientation in affirmative action, one which achieves associational redistribution but may engender fewer of the objections associated with conventional affirmative action policies. Typical affirmative action policies may be thought of as “demand-side” policies, in the sense that they represent efforts to change the demand for students by schools and workers by firms. An alternative policy approach can be called “supply-side” affirmative action. By this, I refer to policies designed to alter the characteristics of students and workers in such a way that, given the demand schedules of schools and firms, an equilibrium redistribution of memberships takes place.¹⁸ What does this mean operationally? In the context of students, it would mean the assignment of additional educational resources to disadvantaged students. Programs such as Head Start or more intensive analogs such as Chicago Child-Parent Center and Expansion Program (Reynolds 1998) or the Perry Preschool Program (Schweinhart and Weikart (1998)), if targeted at certain groups, can perform this role. More exotically, one could imagine an educational voucher system in which the amount a given student’s enrollment brings to a school depends on some combination of his socioeconomic status, ethnicity, and the composition of the school as a whole. Alternatively, one could envision forms of government subsidies for on-the-job training programs which are targeted at minority employees. While each of these possibilities targets resources on the basis of race, each is a purely supply-side intervention, if the goal is to alter the distribution of groups across schools and jobs.

¹⁸Loury (2000) draws a similar distinction between “preferential” affirmative action and “developmental” affirmative action.

I do not take a stand here on the efficacy of such programs. Indeed, given the (at best) very mixed evidence of the efficacy of many current educational and training programs, especially for adults, this suggestion is neither a panacea nor will it fully obviate the need for demand-side affirmative action policies. At the same time, there is evidence of how such programs can effectively deal with some of the hostility engendered by traditional affirmative action programs. Moskos and Butler (1996) provide a fascinating study of the treatment of blacks in the military. An important issue in the military has been the differential promotion rates between black and white soldiers. Moskos and Sibley describe how this discrepancy has been addressed not through differential promotion criteria, an example of what I call a demand-side policy, but rather through a supply-side policy of providing compensatory education targeted at the specific sources of the promotion differential. These authors argue that this supply-side strategy has minimized feelings of unfairness among white soldiers, and avoided stigmatizing those blacks receiving promotions as unqualified. More generally, this example is suggestive of how creativity in policy design may make some forms of associational redistribution relatively politically feasible.¹⁹

5. Conclusions

The memberships theory of poverty really refers to a body of disparate theoretical and empirical studies, all of which point towards the same idea: the groups which define one's location in socioeconomic "space" (cf. Akerlof (1997)) play a crucial causal role in determining one's life prospects. As is true for any new research paradigm, there has yet to emerge a tight relationship between theoretical and empirical work. Hence, while there are many plausible theoretical arguments and empirical demonstrations that some sort of group influences matter, we are far from identifying many of the specific causal mechanisms which link individual outcomes to groups; such mechanisms must be understood in order to construct policies which promote egalitarian objectives at a minimum cost in terms of economic efficiency or other social objectives. At the same time, the body of statistical evidence, when

¹⁹Durlauf (1999a) and Loury (2000) also discuss the implications of the Moskos and Sibley study for policy.

combined with ethnographic studies and social psychology experiments, strongly supports the view that group memberships play an important role in the determination of individual socioeconomic outcomes, and hence are a significant causal factor in the generation and persistence of poverty. I therefore conclude that the memberships theory of poverty will prove to be an important approach for both the understanding of poverty and the design of efforts to achieve its amelioration.

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