

*Boudon, Realism, and the Cognitive Habitus:
Why an Explanation of Inequality/
Difference Cannot be Limited
to a Model of Secondary Effects*

ROY NASH

*Massey University College of Education
New Zealand*

ABSTRACT: Boudon has distinguished between the primary and secondary effects of socialization as a cause of social disparities in education. His explanation of secondary effects, which rests on an analysis of decision-making within opportunity cost constraints, has attracted support from realist sociologists. The empirical evidence, however, suggests that primary effects, largely the result of cognitive socialization in early childhood, may be a more important source of variance than Boudon recognizes. Some implications of this for a general theory of inequality/difference are examined with reference to the character of social explanation and in the context of the realist discussion on the structure-agency problem.

KEYWORDS: Boudon, realism, secondary effects, social differences in education, social explanation.

Introduction

Inequality/difference in access to education might be regarded as the defining problem of the sociology of education (Halsey, Floud, & Anderson, 1961). There is some evidence that class disparities in scholastic attainment, and in relative chances of entering higher education, have not altered greatly for at least half a century (Shavit & Blossfield, 1993). It is arguable that sociologists of education have been about as successful in constructing an adequate explanatory theory of inequality/difference – to introduce a term somewhat more neutral than “inequality of educational opportunity” (IEO) – as have policymakers in developing strategies to interrupt the social processes that generate it (Nash, 1999). A realist explanatory narrative of the processes that

generate social disparities in education would have to show what actions by what people in what organizations have what effect on the overall difference. Such an account, needless to say, cannot be offered in a single paper, but the argument presented here may contribute to that objective. The aim of scientific enquiry is to investigate the nature of reality and describe the causal mechanisms of the processes and events for which an explanation is sought (Bhaskar, 1993). The sociology of education should thus be engaged in the construction of explanations of inequality/difference that reveal the complex generative mechanisms responsible for its production. It is widely acknowledged that inequality/difference has multiple causes, but how these causes are to be conceptualised and included in a scientific model, particularly where this requires their quantification as distinct factors, is a matter on which no consensus has emerged. The situation is further complicated by the fact that the problem is not one that falls only within the professional sphere of sociology. That inequality/difference may be defined in terms of relations between social groups does not mean that its causes are restricted to those within the domain of sociology. On the contrary, the sociology of education has been engaged since its emergence as a specialized discipline in an undisguised contest with psychology, and specifically with psychometric theory, for explanatory power and professional influence. An extant tradition in the sociology of education actually includes intelligence as a measured variable within its quantitative models (Jencks & Phillips, 1998), but this approach no longer dominates the discipline. In this context, where alternatives are increasingly sought, Boudon's (1973) attempt to model inequality/difference as a secondary effect, has gained increasing recognition by sociologists.

Boudon's decision-making models are designed to partial out the contribution of cognitive and non-cognitive individual properties that may be attributed to socialisation (class values and "cultural capital"), and to explain only those social differences that arise as a result of students with similar educational attainments making different decisions about their optional courses and post-school destinations. The classic example is the tendency of working-class students to select tracks leading to occupations with a lower status than those selected by middle-class students, even when their school qualifications are the same. This evidently cannot be explained by reference to differences in educational performance and, in the sense that the variance in cognitive ability associated with class socialisation is assumed to be controlled, this outcome may be referred to as a *secondary effect* of class position. The *primary effects* of socialisation on IEO, those due to classed

environments, are thus distinguished from the secondary effects, which can be attributed to the outcome of decision-making within differential opportunity cost structures. In this manner, Boudon leaves the origin of group differences, irrespective of their degree of genetic and environmental determination, to the sphere of general psychology, and claims for sociology the residual variance after these are controlled. This theory has attracted influential support and, although far from being orthodox, has been offered as a general explanation of inequality/difference (Goldthorpe, 1996). Interestingly, many of Boudon's theoretical assumptions, notwithstanding their association with rational action theory, have been adopted by the emerging critical realist school of sociology (Archer, 2000, 1995; Bhaskar, 1993). This unexpected convergence makes it all the more important to interrogate the nature of the explanation offered.

The extent to which large secondary effects are, in fact, a significant feature of contemporary educational systems is crucial to the relevance of Boudon's approach. This is a matter to be determined by analysis of empirical datasets, and it will be appropriate in the context of this paper to examine the large Canadian PISA sample. The Programme for International Student Assessment (OECD, 2001) studied the attainments of 15-year-old students in 32 countries. The Canadian sample, in order to allow comparisons between its states, is the largest available, and might be considered representative of trends in developed states. As the evidence suggests that the secondary effect is not particularly strong, and certainly not as important a contribution to inequality/difference as the primary effect, some serious consideration must be given in a realist framework to the causes Boudon's approach seems to exclude from sociological investigation. The most problematic of these causes are, in fact, likely to be differences in cognitive habitus due to early childhood socialization in classed familial environments. The implications of this for the sociology of education, and for educational policy, must be faced squarely.

Boudon's Approach to Secondary Effects

Boudon's sociology rests on individual foundations, and his application of decision-theory to this area is intended to provide an alternative explanation to class value or socialised habit theories. The strength of secondary effects, Boudon argues, is not due to preferences derived from distinctive class values, but is the product of a decision making process that can be modelled in the terms of cost-benefit analysis. He suggests (1981, p. 191):

The subject's class of origin (or the class to which a family now belongs) will crucially affect his choices of one or the other option. If their current success is mediocre, the family unit will consider itself 'satisfied' if the child has reached an academic level enabling him to aspire to a social status equal or higher than his own, even if this status is not especially high. A well-placed family unit will on the other hand strive (I ought to add: more often than not) to 'push' the child that he doesn't fail (even if he doesn't enjoy a greater success).

In essence: middle class families must encourage their offspring to enter courses leading to the highest levels of professional status or else fail to maintain their status, whereas working class families are able to accept the compromise of a lower professional destination and still enjoy the satisfactions to be experienced from the relative degree of upward mobility so conferred. The general utility of this theory rests on the validity of the assumption that secondary effects rather than primary effects make the greater contribution to IEO. Boudon is entirely familiar with quantitative methods and it is as a knowledgeable insider that he expresses reservations about the explanatory logic of correlational analysis, which disguises significant relationships apparent in tabular presentations of data, and criticises the explanatory syntax supported by the path analytic models of causal sociology. In order to explain the correlation between class position and educational achievement it is necessary, he maintains, to abandon the schema which suggests that a series of factors interpose themselves between class and educational success with a cumulative effect depending upon their variable weights. Boudon thus effectively relinquishes the attempt to estimate the contributions of different variables on which quantitative sociology is founded. These factorial models, he proposes, should be replaced with decision-making models, in which agents with different social origins are recognised as likely to find in their class position a point of reference from which the advantages and disadvantages of deciding on one educational course or career rather than another are taken into account. Boudon's approach has been criticized on several grounds (Lynch, 2000). The most fundamental objection is to the analytical distinction between primary and secondary effects itself. To suppose that differences in educational attainment at an arbitrary point may be the product of primary socialisation can seem like an expression of "deficit theory" (Bourdieu, 1974). This is all the more likely if the index used to control attainment is presented as a test of ability or intelligence, which can provoke vigorous criticism. These objections, however, do not invalidate the conceptual distinction or the method of identification. A primary

effect does not necessarily have its causes in primary socialisation. There is no reason why the school rather than the home, for example, should not be responsible for a primary effect noted at a given point. Nor does it matter what tests of attainment are used for the purposes of identifying a secondary effect. A more fundamental reason for rejecting the distinction may be derived from the realisation that primary and secondary effects need not have different causes. The accepted position in the sociology of education, what might be called the standard narrative, maintains that differences associated with social groups do not exist at birth (because there is deemed to be no genetic variance), and that the gap between social classes and cultural groups emerges and widens as children move through the educational system. To discover, therefore, that at the age of 15, for example, working-class children have different attainments may be interpreted simply as evidence of inequality of educational opportunity, and whether this is because the school excludes students by failing to recognise their habitus as cultural capital, or because it merely allows them to withdraw on a well-justified belief, which the institution does nothing to discourage, that educational success for people like them is at once improbable and too expensive to attain, is entirely a matter of detail. Within this theory, to distinguish between primary and secondary effects can seem both theoretically unsound and politically ill-motivated. The suspicion that primary and secondary effects might have the same causes could well be the correct, but this does not negate the validity of the distinction. It could be important to know, in the general and in the individual case, whether the decision to withdraw from education is due to an effective disposition of mind – some specific intellectual competence or cultural preference – or to a more or less rational decision made in consideration of the relative costs and benefits involved. But if these particular criticisms can be answered, there are others somewhat less easy to deal with.

There are two more serious problems. First, there is no good reason to believe that secondary effects are a more important cause of inequality/difference than primary effects and, second, the models do not allow the basic assumption that differential opportunity cost structures, rather than class ideologies, are derived from class socialisation to be tested. It will be useful to give a narrative account of the processes of leaving school that will show the nature of these problems. Let it be supposed that, as a matter of fact, the differential tendency of working-class students to enter higher education is sometimes due to a classed preference for a life style associated with

forms of labour and sometimes due to decisions based on relative opportunity costs. It is entirely possible to imagine, for example, that the differential tendency is such that, when students have similar school qualifications, 60% of those with middle-class origins and 40% of those with working-class origins proceed to higher education. Now suppose, further, that half of the 20% of working-class students whose actions in aggregate reveal a secondary effect decide their future on the basis of classed values ("I prefer working with my hands") and half because the option of additional education seems not worth the cost ("I'm concerned about the debt, and not sure how I could repay it if I don't get the job I want"). Although this state of affairs can be described in straightforward terms, it is surprisingly difficult to express all this in a quantitative model.

It might seem that an ordinary two-factor regression equation would give a reliable model in which half the variance would be allocated to an indicator of class values and half to an indicator of estimated opportunity costs. There are, however, several problems involved, not the least of being the difficulty of constructing appropriate indicators. Although indicators might be constructed for classed preferences, the difficulties of specifying and quantifying opportunity costs are inherently more difficult. Classed preferences, for example, might be indicated by future aspirations, which are relatively simple to obtain and interpret. A preference to remain with friends, however, is not only a value, that may or may not be associated with social class, but a state of being, a disposition, that might be given a different weight according to relative class position. The opportunity cost of losing contact with friends is higher for working-class students (most of whom do not enter higher education) than middle-class students (most of whom do). But whether an individual decision rests on a cultural preference or on a consideration of opportunity costs is difficult to ascertain, and may not be known even to the individual concerned, and if this is the case for individuals it is also the case for groups. Moreover, as it might well be the case that such a preference is associated with class *and* has differential opportunity costs, the difficulties of quantification become impossible to resolve with any confidence. It should go without saying that the distribution of educational qualifications to students with different social origins shown in tables does not provide evidence in itself that secondary effects are caused by opportunity cost decisions rather than class values. The significance of these remarks will become more evident in the discussion of the empirical evidence on the extent of primary and secondary effects in Canada.

*Primary and Secondary Effects in the
Canadian PISA Data*

PISA is a characteristic product of the international educational research community. The basic purpose of such studies is to provide policy-makers in different states with comparative information on the performance of their educational systems. Such studies can be criticized on many grounds, some of them quite cogent, but they are carried out with a high degree of technical competence that cannot be taken for granted in educational research. PISA investigated the attainments of students near the completion of their secondary education in 32 participating states (OECD, 2001). The principal focus of the study was on reading, but mathematics and science literacies were also assessed and the research provides valuable data on the academic attainments of students close to the minimum school leaving age. Information was collected on a range of variables including gender, SES, family resources, aspirations, self-concepts, learning strategies, and attitudes towards school and teachers. The data files are made public and secondary analysis is encouraged. The analysis presented in this section is fairly rudimentary and will examine the evidence for a secondary effect, and suggest by a simple arithmetical model that it is relatively minor when compared with the primary effect.

Table 1. SES, Reading Attainment and Percentage with High Aspiration

	High	High Average	Average	Low Average	Low
SES 1	44	30	34	31	24
SES 2	41	36	29	25	23
SES 3	41	36	28	21	17
SES 4	37	31	30	23	14
SES 5	38	32	23	21	14

Note: Sample N. = 24,214. Aspirations are given by students' expected adult occupation. High aspirations are those in the upper 30% of the International Socio-Economic Index.

Table 1 reveals a secondary effect of SES on aspiration in as much that proportionately more SES 1 than SES 5 students expect to be employed

in occupations in the upper 30% of the distribution. The expectations of middle-class students, moreover, are consistently higher than those of working-class students at every level of attainment.

Table 2. SES and Reading Attainment (Percentages)

Reading Attainment Quintiles					
	High	High Average	Average	Low Average	Low
SES 1	35	24	18	13	9
SES 2	26	23	21	17	13
SES 3	20	20	22	20	17
SES 4	14	19	23	22	23
SES 5	9	15	20	26	31

Note: Sample N. = 28,703. SES given in quintiles derived from a principal component factor score including Highest International Socio-economic Index, Family Wealth, Number of Books in Home, and Mother's Educational Level. Socio-Economic Index.

Table 2 shows that 35% of SES 1 students are in the upper fifth of the reading distribution and only 9% in the lowest fifth. These proportions are broadly reversed in SES 5, with 9% in the upper fifth and 31% in the lowest. It may be interesting to note that the correlation between SES and Reading Attainment is 0.31, and SES therefore accounts for less than 10% of the variance. The assertion that SES is of relatively little importance, however, needs to be set against the fact that such a distribution sees almost four times as many SES 1 students than SES 5 students in the upper fifth of attainment.

It will be noted that Table 1 demonstrates a classic secondary effect. It shows that students with reading attainments in the upper fifth of the distribution are more likely to maintain high aspirations when their social origins are high than if they are low. It is by no means the case, however, that secondary effects are more important than primary effects, at least in accounting for the overall distribution of school qualifications. In fact, the suggestion that secondary effects are more important than primary effects in an account of class differences in school achievement is almost certainly misguided. Some simple arithmetical models will serve to make the point:

Step 1. Calculate number of students in 1000 for SES 1 and SES 5 in upper fifth of attainment distribution:

Reading:

$$\text{SES 1: } 1000 \times 0.353 = 353$$

$$\text{SES 5: } 1000 \times 0.085 = 85$$

Step 2: Calculate secondary effect:

$$\text{SES 1: } 353 \times 0.444 = 157$$

$$\text{SES 5: } 85 \times 0.381 = 32$$

Step 3: Calculate secondary effect on SES 5 using SES 1 value:

$$\text{SES 5: } 85 \times 0.444 = 38$$

Hence, difference between SES 1 and SES 5 due to attainment:

$$353 - 85 = 268$$

Difference due to secondary effect:

$$38 - 32 = 6$$

Level of success achieved by 1000 students from each SES, taking into account only those in the high attainment quintile, on the assumption that their aspirations are realized:

SES 1: 157

SES 5: 32

The analysis shows, therefore, that if one considers 1000 students there will be 157 in the top fifth of the Canadian reading attainment distribution with high aspirations from SES 1 and 32 from SES 5. If the secondary effect were eliminated the number of successful students from SES 5 would rise by just 6. In the terms of this model 268 SES 5 students fail, in comparison with SES 1, for want of attainment, and of these only 6 will fail, in comparison with SES 1, due to causes associated with the secondary effect. This should make it very plain that in contemporary Canadian society differential decision-making is actually a minor cause of class differences in educational attainment. The implications of this for the construction of a realist scheme of explanation must be considered.

*Boudon and the Realist Approach to
Structure and Agency*

The PISA evidence suggests that a general explanation of inequality/difference theory cannot rest on a model designed to reveal secondary effects. It is true that Boudon's models were never intended to explain the causes of primary effects, which were left to psychology, and their value was held to lie in the assumption that secondary effects made a greater contribution to educational inequality than primary effects. If this is not actually so, in contemporary developed states, then a realist sociology will need to take more seriously the need to incorporate cognitive and non-cognitive dispositions in a model of inequality/difference.

The origin of Boudon's models in rational action theory has led to their adoption by sociologists who argue that it is opportunity costs rather than cognitive and non-cognitive dispositions derived from class socialisation that account for inequality/difference (Goldthorpe, 1996). The interest shown in Boudon's work by critical realists is particularly significant in this connection. It might seem unexpected, given the sharp attack on the colonizing tendencies of rational action theory (Archer & Tritter, 2000), that realist social theory should allocate a central place to differential opportunity cost structures. At least as important, however, in this context is Archer's rejection of the opposed structuralist forms of argument. She flatly dismisses the "monumentally deficient sociology of education associated with the dominant ideology thesis," sharply criticizes Bourdieu's (1990) account of the "logic of practice," with its barely concealed reference to practice as an agent of social reproduction, and insists that for real people, reproduction is never "merely a matter of routinization" and, "far from being an account of routine or habitual action, often entails reluctant resignation, strenuous exertions against the odds and a bitter failure to meet the costs of overcoming situational constraints" (Archer, 1995, pp. 207-208). If it must incline one way or the other, then it seems that its realism will bend towards rational action theory rather than towards structuralism.

Archer's view that intentional action in response to perceived opportunity costs should be central to an account of social action is therefore one she shares with Boudon:

'Society' forces nothing, but the differential opportunity costs for the same course of action constitute reasons for it being adopted differentially – for middle-class children tending to take the main route to university, whilst additional education for the working

class tends to involve a lower absolute price, be known and closer to home, shorter and surer in its vocational returns. (1995, p. 207)

In this theory, to say that social classes have differing opportunity costs is simply to say that they have different degrees of freedom and face differentially stringent constraints when contemplating the same prospect from different positions. But facing those costs, accepting the constraints they impose, is not necessarily made in a mood of self-defeat, or with the flavour of sour grapes, and perhaps only rarely with a routinized acceptance of the order of things. Thus, although critical realism rejects the non-real assumptions of rational action theory, it does accept the weak version, which is indistinguishable from its own view of intentional action within social constraints.

It might be argued, moreover, that Boudon's insistence that decisions based on opportunity costs rather than classed values are demonstrated by his models, and his clear preference for the former theory, is arguably inconsistent with his more elaborated, and increasingly realist, approach to sociological explanation. His own position, in other words, may be closer to realism than is generally recognised. In this connection, it might be noted that Boudon (1981) has never denied that normative action, the product of socialized habit, is characteristic of human societies. He does not find it inconsistent, therefore, to argue that: "confronted with a choice the 'social' agent, *homo sociologicus*, can, in certain cases, do, not what he prefers, but what habit, internalised values, and, more generally, diverse ethical, cognitive and gestural conditionings, force him to do" (p.156). (Dahrendorf's (1968) concept of *homo sociologicus* was introduced, of course, to give normative, role-theoretic, sociology a socially determined model actor distinct from the *homo oeconomicus* of economic theory.) It should also be noted, however, that even as Boudon observes that it is one of the essential characteristics of the sociological tradition to treat the "objectives and preferences of the actors as variables partly dependent upon the environment" (p.160), his mode of practising the discipline invariably directs attention away from the investigation of social structures and their several powers to influence action. The tension in Boudon's sociology, with its formal opposition to theories of classed preferences informed by the logic of practice, and an adherence to models designed to show their theoretical irrelevance, must be relaxed rather than maintained by a realist methodology. Whether this can be achieved in practice remains to be seen.

Archer's search for the middle ground, a solution to the agency-structure problem, has meant the rejection of both downward conflation,

in which practice within a set of principles that encode the cultural system more or less automatically ensures its reproduction, and upward conflation, in which all social events are explained in terms of rational actions carried out by individuals whose collective interests and unequal resource are a matter of indifference. This can be recognized as the fundamental division within social theory. This is why Archer rejects the Bourdieusian argument that agents' practice becomes intelligible as soon as one is able to construct the system of principles that they put into practice, and seeks to extend Boudon's assertion that understanding the behaviour of an actor is usually a matter of understanding the good reasons for it, with the rider that such reasons are grounded in collective interests and the availability of material resources. What is significant about this rapprochement between a sociology informed by critical realism and rational action theory is the rediscovery of a traditional form of sociological explanation. What we are offered, in fact, is a structure-disposition-practice explanatory scheme. This will require some elaboration.

Structure refers to the relations between elements comprising a system (Niiniluoto, 1999). The primary reference of structure in a realist scheme is to the social relations that comprise organisations as the kind they are, as, for example, the internal relation teacher-student constitutes a small socio-system with an educative function (Bunge, 1998). The socio-systems constituted by social relations, and thus emergent, have certain properties. These include their kind (families, firms, football teams), duration, size, organisational characteristics, and the various physical resources necessary to their functioning. All social relations require engagement in those practices appropriate to their institutional kind. In other words, we cannot write sensibly about social action without a reference to these central terms; structure (constitutive social relations), disposition (internal states of a person necessary to action), and practice (as socially recognised ways of doing things). The constitutive internal relations of social organisations can be regarded as conceptually independent of any particular individuals. A person appointed as a teacher is thus inserted into a set of social relations, required to adopt certain practices, and expected to possess the competence required for their performance. An explanation of social events and processes (a term materialists should prefer to "social phenomena") should consequently be given with reference to the properties of social organisations, the individual dispositions necessary to their functioning, and the social practices they require.

The properties of social systems actually include those dispositions of people involved in the performance of practice (they are symbolic resources) and those practices that contribute to the functioning of the system. In this complete sense, the properties of a school thus include the set of social relations that constitute the organisation, the dispositions necessary to the performance of competent practice, and the set of practices related to its educational functions. All talk of the powers of society to enable and constrain social relationships is implicit in this analysis. As Greenwood (1989, p. 157) points out, "to say that a physical or social or human particular, X, has the power to generate a state of affairs, Y, is just to say that it has the ability to do it." As to practice, there seems no reason to reject the common sense view, here expressed by Sumner (cited in Bannister, 1992), that people, individually and in groups, select ways of doing things that answer the purpose better than other ways and so, as each profits by the others' experience, folkways that "provide for all the needs of life then and there" are developed, which the young learn "by tradition, imitation, and authority", and in that way, become "uniform, universal in the group, imperative, and invariable" (p. 358). This account does not support a functionalist explanation, and contains no reference to the dubious "logic of practice" (Turner, 1994). This discussion of the agency-structure debate, necessarily brief, is abstract and directed at the nature of social explanation.

One of the many problems with the agency-structure debate in social theory is its tendency to conflate two distinct areas of enquiry (Gilbert, 1994). The first is a question about the limits of human freedom to recognise one's interests and to act in accordance with them. The second is a question about the extent to which a particular theory is one that supposes agency to be more or less determined by social structures. The conceptualisation of the agency-structure in this dual way almost inevitably suggests that social explanation is a zero-sum game. But it is an error to see the task as one of constructing a theory that gives causal powers to social entities without subtracting it from human beings. It would be a move in the right direction, in fact, to attend less to the agency-structure problem and more to the nature of social entities and their properties. It would be a further move in the right direction to think less about social theory and more about *social explanation*.

There is no need for a realist scheme to construct models of social conduct that privilege either habitual practices or rationally chosen actions when the reality, as anyone can see, is that people sometimes

act rationally (at least in many of the rather large number of senses of that word), often simply follow the accepted routines of their community without much reflection (and probably without a thought for the long term consequences of the collective effects of their actions), and more often than not behave in a way that is rather difficult to identify as either purely rational or purely habitual. We stand to lose all this common sense knowledge of real life, and the possibility of explaining it by more sophisticated and integrated scientific approaches, by adopting unreal and limited models. This is the more so when the causes of primary effects, that is the effects of more or less durable cognitive differences generated by classed socialization practices, are located not only in the school but principally in the family, and pose an intellectual and frankly political difficulty for the sociology of education it has never been able to resolve.

A theory of differential attainment need not assume a unitary principle of action. There are any number of causes of the fact that, even when ability is held constant, working class students achieve less than middle class students: they are more likely to hold views in opposition to the school; less likely to see the relevance of the curriculum to their projected occupation; less able to bear the expense of further education; more concerned by the prospect of losing contact with their friends (rather more likely for them than for middle class students); and more likely to be intimidated by the unfamiliar settings of higher education. Students act on these causes as a result of their experiences at home, at school, and in the wider community – experiences made with parents, teachers, friends, and everyone else who has an influence on them, whether personally known to them or not. When they do act they do so with various degrees of self-awareness and deliberation but, especially when they fail to achieve apparently attainable aspirations, the process is often *allowed to happen*, perhaps with a degree of unhappiness and self-recrimination, and their eventual destinations should not be seen as the result of adequately reasoned actions directed towards them. It is quite true that such list theories require an adequate, and information rich, framework within which to interpret them most competently, but the over-simplifications of rational action theory (RAT) are no help in that respect. This does not mean that this area of social reality is too complex to study by the methods of science, only that the simplifying assumptions of non-real models need to be replaced by ones with a greater level of complexity.

As for practical work with individuals: if it is necessary to counsel young people to help them reshape the frames of mind in which they act,

then it should be understood that this must involve an engagement with deep-seated habits acquired throughout their lives. But in the general model, it is not so much secondary effects as primary effects that the sociology education needs to explain, and that will require a greater attention to the nature and origins of classed dispositions, both cognitive and non-cognitive, than offered by accounts that give priority to intentional action within opportunity constraints. This approach is not so much flawed by its understanding of social action, which is more or less acceptable, as inadequate as the basis for an explanation of that large proportion of inequality/difference rooted in socialized dispositions – in what might be called the cognitive habitus – generated within classed environments.

Conclusion

Bunge (1998), whose contribution to realist philosophy is winning belated recognition by social theory, has a straightforward view on the association between family socialization to educational success: “the best school, if placed in a poor ghetto, cannot change the fact that malnourished and unmotivated children of poor, uneducated, disillusioned, and anomic parents are poor learners” (p. 347). The point is that improvements in education require not only school reforms, but a wider set of policies designed to eliminate poverty and deprivation. The specific effects of early childhood socialisation on cognitive development have been neglected by the sociology of education and Bernstein’s valuable insights remain to be integrated into a general explanation of inequality/difference. It is evident that the sociology of education must engage with the mainstream tradition, dominated as it is by psychology, of educational research. The term cognitive habitus, although clearly derived from Bourdieu, may be acceptable within broader context. Boudon himself, for example, recognises the importance of cognitive resources, all the knowledge that people have accepted and make use of in their practice, and argues for the traditional scholastic, good, sense of the term habitus as an organised collection of dispositions to act. As Hamlin (2002) explains, Boudon insists that this usage of habitus does not exclude voluntarism, is not unconscious, not fixed in content (which must be specified in appropriate concepts), not fully determined by the social, and not entirely given by the class system. These critical caveats, plainly directed at the rival sociology of Bourdieu, should not be accepted as an unbiased account, but they may indicate that grounds for a principled

synthesis do exist. The task for a realist social theory may be, in fact, to engage in that disciplined work.

The object of the sociology of education must be to provide an explanation of social disparities in educational attainment, and to do this it is necessary to know the extent of such disparities and what processes give rise to them. There are distinct agents (parents, teachers, peers), in different social institutions (homes, schools, informal groups), in possession of different resources (material wealth, social networks, information), who all engage in practices given by their interests. This is why the standard quantitative method constructs indicator variables in order to model the separate and joint effects of these variables on social variance in educational attainment. It seems important to possess such information for many reasons. The concerns of policymakers, for example, should be apparent. Those who control the educational system need to know what components of the system are functioning efficiently, where improvements can be made, by what kind of policies, and at what cost. It would be something, indeed, for ministries of education to know, for example, what were the most cost-effective policies for achieving, say, a ten per cent reduction in the attainment disparity between high and low income groups. The research evidence on that matter, in fact, is not entirely without value (Grissmer, Flanagan, Kawata & Williamson, 2000).

What is to count as an explanation of inequality/difference? What form would a model of the complex social processes involved take? There is no objection to quantification in principle. There is always the extent of group differences to be reported. Moreover, when quantitative indicators can be devised, and some properties of individuals and social entities exist to a greater or lesser extent and can be scaled, the information may be analysed in that form. One way to get a better explanation, in fact, might be to ask a better question. The standard narrative in the sociology of education bases its theories of inequality/difference on research designed to answer questions about disparities in adult income, rates of intergenerational social mobility, or the determination of the overall pattern of social reproduction. If the question is, "how does social reproduction happen?" then it might make sense to give an answer in terms of the acquisition of habitual behaviour retained in the social repertoire because it performs necessary social functions and so (and perhaps not incidentally) sustains the current order of things. But if an answer is sought to the question, "why do working-class students fail to get as much as middle-class students from the educational system?" with a model that assumes that individuals act

with procedural rationality on the basis of (unexplained) preferences to maximize their expected utilities, then a very different answer is likely to be given. There is no reason why scientific and critical realism should limit itself to either question, nor to suppose that they are equivalent, and still less to believe that the answer to one of them will answer the other. What is needed for an adequate sociological explanation is an account of how actions within social practices are shaped by social structures that generate cognitive and non-cognitive dispositions. An explanation of a complete kind will arguably have the form of a structure-disposition-practice scheme, where social structures give rise to individual dispositions, and such dispositions generate action within established practices common to a social group in accordance with its collective interests.

The authors of a recent introductory text on explaining society point out that “critical realism does not claim to develop a new method for social science” (Danermark, Ekström, Jakobsen & Karlsson, 2002, p. 74). Critical realism is not, unlike rational action theory (RAT), tied to a specific methodology, which in its economic form is actually capable of generating highly predictive models, but nor it should it reject quantitative models on inadequate grounds. If primary effects have their origin deep in the classed family practices of early childhood cognitive socialization, then it is both unreal and unwise for the sociology of education to marginalize research into this area. It is by no means self-evident that the critique of so-called deficit theory is necessarily progressive in its political consequences (Scott, 2000). For all these reasons a determination on the part of the sociology of education to *get real* about inequality/difference should strongly be encouraged.

Author's Address:

College of Education
Massey University
Private Bag
Palmerston North
NEW ZEALAND
EMAIL: R.Nash@xtra.co.nz

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