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ABSTRACT

A study of the implementation of a rational/bureaucratic model of knowledge in classrooms suggests that current modes of educational administration are based on control, via rational planning, of social relations, individual consciousness, and epistemology. Bureaucratic organization and professionalism enjoy a symbiotic relationship, combined with an increasingly dominant technological rationality that encourages the prescription of educational inputs and expected outcomes. This leads to a physical impoverishment of schools as well as the obscuring of certain interests and encourages the depoliticizing of cultural transmission, the denial of the validity of certain questions, and the trivializing of socialization. In addition, the development of sophisticated curriculum packages transforms the relationship between teacher and student, since teachers can now be held accountable for the mastery of prespecified goals (as in competency-based education). Teachers focus on methods of teaching rather than on purpose and content. In evaluation as in curriculum and pedagogy, administrative reliance on technological rationality appears to influence content, organization, and transmission of knowledge. (Author/WD)

THE FUNCTION OF EDUCATIONAL ADMINISTRATION IN THE PROCESSES OF CULTURAL TRANSMISSION

by

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ON THE MANAGEMENT OF KNOWLEDGE

The production, distribution and utilisation of knowledge is a key feature of contemporary society (Apple, 1979; Bates, 1979; Machlup, 1962). Moreover, the legitimation of certain forms of knowledge and the definition of others as dangerous or simply matters of erroneous belief are indices of the relationship between social and epistemological structures (Douglas, 1966, 1970). While many structures and legitimations are implicit in the common-sense understandings of individuals, recent analyses have argued that it is possible to identify and make explicit the strong links between particular structures of knowledge and particular social interests (Bourdieu and Passeron, 1977; Bowles and Gintis, 1976). Further, it has been argued that education systems serve not only to perpetuate but also to obscure and, therefore, legitimise the hidden social and economic interests of particular groups (Bourdieu and Passeron, 1977; Bowles and Gintis, 1976).

What is emerging from the debate over these assertions is a growing awareness of the links between the reproduction of economic, social and epistemological structures. So far, however, much of the debate is open to the criticism that relationships proposed are over-determined (Giroux, 1979), arbitrary (Bredo and Feinberg, 1979), or subject to an inescapable ideological relativism (Flew, 1976). On the other hand, analyses of teacher domination of the message systems of curriculum, pedagogy and evaluation, as they operate in schools (Young, 1971; Esland, 1971; Woods and Hammersley, 1977) are open to charges of failure to adequately ground such analyses in an adequate theory of class or social reproduction (Sharp and Green, 1975).

While there is agreement, therefore, that relations do exist between economic, social, epistemological and educational structures at both a general and at a classroom level, substantial problems remain in linking as well as substantiating these different levels of analysis (Apple, 1979). It is the contention of this paper that a focus on the part played by educational administrators in the management of knowledge within education systems, and their mediation of certain interests, can provide a key element in the analysis of social, economic, cultural and epistemological reproduction.

The importance of the study of the bureaucratisation and professionalisation of education was, in fact, noted by Bowles and Gintis as essential in the analysis of the means by which ~~class~~ domination of educational structures is achieved. Their comment that 'historical and contemporary research into these areas is, at best, rudimentary' (Bowles and Gintis, 1976:236) may need some slight modification, but remains largely true for the sociology of education. It is as though, in turning away from a sociology of governmental policy and practice towards a sociology of the classroom (cf. Demaine, 1980), the sociology of education has come to take for granted the administrative structures and practices which constrain both spheres of action.

ADMINISTRATION AS BUREAUCRATIC CONTROL

While it may be argued that mass education is implicitly a form of social control based upon the articulation of hidden interests or hegemonised relations, educational administration is quite explicitly a technology of control (Bates, 1980a, 1980b). The preoccupations of administrators, at

least as represented in text books and training programs, are for example with management, organisation, authority, motivation, job satisfaction, leadership, decision making, implementation, communication, co-ordination, supervision, evaluation, efficiency and accountability. The solutions to management and control problems are sought through systems such as: planning programming and budgeting systems (PPBS); program evaluation and review technique (PERT); management information systems (MIS); management by objectives (MBO); operations research; productivity research; systems research and simulations studies (cf. Wise, 1979). The language used is a clear indication of a preoccupation with control. As Wolcott remarks 'the essence of being a good technocrat is to exert control' (1977:159).

The control exercised by administrators is essentially bureaucratic in form: that is, it is related to the rational organisation of institutional life around a structure of rules, positions, relations and behaviours. Weber's classic description of the nature of bureaucracy is appropriate here, as is his assertion of the nature of bureaucracy as 'a precision instrument which can put itself at the disposal of quite varied interests in domination' (Weber in Gerth & Mills, 1946:231). Moreover, as Weber also noted, the structure of bureaucracy is admirably suited to, and has, in fact, 'frequently benefited the interests of capitalism' (Weber in Gerth & Mills, 1946:30).

The association of bureaucracy, as a system of social relations based upon principles of rational control, with the interests of capitalist and corporate attempts to control the production process is well documented (Braverman, 1974; Edwards, 1979). The translation of this form of control of social relations into education is similarly documented (Callaghan, 1962;

Vallance, 1973, 1974; Franklin, 1976).

However, the structure of bureaucracies is not only devoted to the control of social relations, but is also productive of certain forms of cognitive style, that of bureaucratic consciousness. Berger, Berger and Kellner (1973), following Weber, argue that such consciousness is constituted by (a) a sense of orderliness (related to the imposition of taxonomic hierarchies); componentiality (related to the divisions of knowledge and responsibility); arbitrariness (through the creation of structures and boundaries); justice (defined in terms of its relation to predictability); abstraction (associated with the generalisability and universality of rules); moralised anonymity (which defines relations with clients) and passivity (which defines the clients' role). Bureaucratic structure and the associated bureaucratic consciousness has been argued by Wake (1979) to be closely related to specific patterns in the management of knowledge. Relating particularly to the management of knowledge in schools, Wake argues that the bureaucratisation of schools via processes of administration brings about a particular structuring of knowledge;

> 'the major demands placed upon the structures of knowledge by bureaucratised schools are: that the knowledge be divided into components, or relatively discrete components; that the units of knowledge be ordered in sequence; that the knowledge be communicable from one person to another using conventional media of communication; that success in acquisition of part, if not most of, the knowledge, is recordable in quantifiable form; that the knowledge be objectified in the sense of having an existence independent of its human origins; that the knowledge is stratified into various levels of status and prestige; that knowledge based on concrete experience be treated as low status, but that knowledge expressed in abstract or generalised principles be regarded as having high status.'
>
> (Wake, 1979:16)

In this fashion, relationships between administrative, cognitive and epistemological structures can be proposed, and the attempt of administrators to organise the production, dissemination and utilisation of knowledge in the school can be seen to be directly related to the imperatives of bureaucracy, where the:

> 'over-riding concern in selecting, structuring and presenting knowledge ... is to facilitate the administration of an organisation.'
>
> (Wake, 1979:16)

As is apparent from Lortie (1975) and Wolcott's (1977) analyses of the actual relations between teachers and technocrats, the implementation of such a rational/bureaucratic model of knowledge in classrooms is somewhat problematic, and the success of such attempts at the bureaucratisation of knowledge in schools is an empirical matter to be determined in concrete situations. Nonetheless, the direction of analysis is fairly clear and the theoretical likelihood of links between administrative, cultural and epistemological relations in the school is established.

THE INCORPORATION OF PROFESSIONALISM

It has been argued above that bureaucracy involves the control via rational planning of social relations, individual consciousness and epistemology, and that these are integral components of the management of knowledge involved in current models of educational administration. It is important to note, however, that such systems are designed not only to control the social relations, consciousness and epistemology of lower level workers (teachers and pupils, for instance), but also to control the social relations, consciousness and epistemology of experts. For, as

Weber pointed out:

> 'Bureaucratisation of administration is deliberately connected with the ... existing groupings of social power [whose concerns are] how to exploit the special knowledge of experts without having to abdicate in their favour.'
>
> (Weber in Gerth & Mills, 1946:235)

Indeed, the exploitation of the special knowledge of experts is the other, frequently unacknowledged, face of bureaucracy: the face of professionalism.

Professional status is typically claimed on the basis of an esoteric, specialised epistemology, which is scientific and the exclusive achievement of talented men who have undergone long periods of training, and who have, through experience, developed both expertise and judgement. The claim to special epistemological status is, therefore, associated with claims to a special form of consciousness, one which is both objective, impartial and verifiable (i.e., scientific) and also practical. Moreover, these claims to special epistemological status and personal consciousness are translated into claims for special social status via the rituals of professionalism (cf. Bledstein, 1976; Lasch, 1977; Bates, 1980). Professionalism stratifies social relations on the basis of both cognitive and epistemological claims, which rely on appeals to canons of scientific practicality, predictability and control. Thus, both bureaucracy and profession contain various principles of control related to social, cognitive and epistemological structures.

THE SYMBIOSIS OF BUREAUCRATIC AND PROFESSIONAL CONTROL

The claim of bureaucracies to forms of rational organisation and planning, and the claims of professions to scientific knowledge and expertise combine in the contemporary world into a single model of technological rationality (cf. Habermas, 1976). The amalgamation of the rational planning model of bureaucracy with the scientific legitimation of such planning through the incorporation of professional experts into the processes of rational planning is brought about by a common appeal to the logic of positivistic science (Habermas, 1973; Aronowitz, 1977). If the epistemological grounds for symbiosis are compelling, so also are the integration of interests, for bureaucracies need the legitimating benificence of professional expertise and professionals are increasingly dependent upon bureaucracies, both governmental and industrial, for guarantees of control over certification, registration, entry and employment.

The growth of bureaucracy and of professionalism are not, therefore, mutually antagonistic as some have claimed (cf. Corwin, 1965, 1970), but rather mutually supportive, sharing complementary epistemological assumptions (those of rational planning and positivistic science), complementary forms of social relations (based upon hierarchical differentiation of expertise), and complementary forms of consciousness (based upon the obesience to technical rationality) (Larsen, 1977; Bates, 1980).

EFFECTS ON CULTURAL TRANSMISSION

The symbiosis of professionalism and bureaucracy and the emerging dominance of technological rationality have profound implications for education and for the exploration of the relationships between social, economic, epistemological and educational structures, which constrain the processes of cultural transmission.

Increased technological rationality is an apparently attractive proposition to legislators, policy makers and administrators, for:

> 'because education is still a relatively high public priority, policy makers cannot simply maintain or reduce spending levels. Because they cannot legislate rising costs away, they must rationalise decisions to keep budgets from rising.. This need gives rise to the demand for rational planning systems, in the anticipation that the imposition of such systems will reveal ways to control costs.'
>
> (Wise, 1977:47-48)

The economic imperative of controlling costs led initially to a specification of inputs (money, teachers, capital development) in the hope that increases in inputs would lead to the achievement of particular economic and social goals (Coombs, 1967). It became apparent during the 1960's, however, that such specification of inputs was not achieving the desired goals; that:

> 'more educational investment does not necessarily lead to more equality of opportunity, and that more equal educational opportunity does not necessarily lead to more social mobility or social equality.'
>
> (Kogan, 1979:28)

As a result, legislators have begun to prescribe expected outcomes, such as reading level, functional literacy and citizenship skills (cf. Wise, 1977). Moreover, attempts are also being made to prescribe process variables, such as individualised instruction, objectives based education and class size (Wise, 1979).

The attraction of the rational technical model in education is identical with that of the logical, scientific, technological, industrial models of systems control. For legislators, the bureaucratic model which specifies rational relations between input, components, process and output is apparently irresistible. The effects on cultural transmission are significant, for the model employs certain assumptions about cultural transmission, and attempts to constrain teachers' and pupils' actions within the epistemological, cognitive and social limits of that model.

The fundamental assumptions of the model can be identified as relating to (a) the law like nature of scientific propositions, which specify clearly relations of cause and effect and, therefore, allow the possibility of technical control, (b) the objective nature of true knowledge and its neutrality in the face of human interests and needs, and (c) a conception of education, which separates fact from value and employs models of instruction and inquiry which are functional, rather than historical or social (Popkewitz, 1979; Bates, 1980; Giroux, 1980).

The net effect of such assumptions is the construction of an administrative system devoted to the de-politicisation of teaching, learning and cultural transmission (Habermas, 1973; Aronowitz, 1977; Giroux, 1979, 1980).

Moreover, if teaching and learning are defined within the context of such ideas, then the questioning of current social, political economic relationships is precluded:

> '[Theories] ... of school socialisation that do not make problematic relationships between the reproduction of an unequal socio-economic order, practical and symbolic ideologies in school, and the construction of personal opportunity and identity, not only circumvent the analysis of education and ... society, but trivialise our notions of childhood socialisation.'
>
> (Anyon, 1979:39)

The imposition of certain legitimating ideologies of technical rationality via processes of educational administration directed towards greater efficiency in the application of resources does not, therefore, lead to simply a physical impoverishment of schools, but also to the obscuring of certain interests, which are best served by such rationality. Similarly, the model encourages the de-politicising of cultural transmission, the denial of the validity of certain questions, and the trivialisation of socialisation. Once again, the relationship between administrative, political, social, epistemological and educational categories is sustained.

THE HISTORICAL SITUATION

The particular nature of such relationships are, however, inevitably the result of specific combinations of interest and influence at particular points of time. Moreover, these patterns of influence are necessarily worked out within particular social contexts. Examples of such situations can be found in the influence of the technological rationality of administrative control on each of the message systems of the school; curriculum, pedagogy and evaluation (Bernstein, 1975). Moreover, each exhibits clear characteristics

of the symbiosis of bureaucracy and professionalism, in that the examples contain elements of both rational organisation and professional legitimation. The following sections deal, therefore, with (a) the emergence of educational administration as a profession, (b) the influence of systems theory on curriculum development, (c) the professionalisation of teacher training, and (d) the impact of administrative rationality on educational evaluation.

The Professionalisation of Educational Administration

The professionalisation of educational administration is historically located in the emergence of a discrete category of positions within an evolving bureaucracy of education during the late nineteenth century. During this period:

> 'the process of bureaucratisation within education was so thorough and so rapid because of the enthusiasm of the schoolmen themselves, who saw in the new organisational forms, the opening up of careers and a partial solution to the problem of regulating behaviour within the occupation.'
>
> (Katz, 1971-1972).

The result of this rapid bureaucratisation of education during the 1880's in the United States was firstly the clear differentiation of school superintendents from teachers, and secondly, a move to develop a distinct training program based upon methods borrowed from business and industry.

Through these mechanisms the occupational aspirations of school superintendents were rapidly translated into professional aspirations. The professional legitimation of occupational aspirations was achieved through appeal to the practicality ethic, through which the efficiency,

effectiveness and practicality of business was to become a major feature of schooling, and to an academic ethic, to be legitimised through the proposed development of a science of educational administration based upon educational applications of theories of scientific management. Such aspirations are clearly shown in the statements of the leaders of the movement. Cubberley (1915), for instance, argued that:

> 'the recent attempts to survey and measure school systems and to determine the efficiency of instruction along scientific lines have alike served to develop a scientific method for attacking administrative problems ... all of these developments point, unmistakably, in the direction of the evolution of a profession of school administration as distinct from the work of teaching, on the one hand, and politics, on the other.'
>
> (quoted in Callaghan, 1962:217)

The emergence of Taylor's thesis of scientific management was a Godsend to the educational administrators, as it matched precisely both the practicality ethic and the appeal to scientific respectability. Despite the defeat of Taylorism in the workplace (Edwards, 1979), the principles of scientific management were enshrined rapidly and widely in education (Callaghan, 1962). Professors of educational administration occupying then, as now, positions of marginal status in universities sought the legitimating benefit of a scientific theory of educational administration. The possibility of such a theory of educational administration based upon laws of organisation, psychology, sociology and economics lay before them as the final academic crowning of their claims to professional respectability.

What actually happened was that the majority of professors and administrators became preoccupied with methods of control and efficiency. Their theories were essentially theories of control and management. The pursuit of science was, and has largely continued to be, a matter of rhetoric rather than reality. Techniques of management and control were what mattered with the result that:

> 'there was more than an accidental parallel between the teachers' management of pupils through sociometry and the administrators' management of teachers through group dynamics and human relations."
>
> (Getzels, 1977:7)

A minority of academics continued the quest for a scientific theory of educational administration, and thus legitimated the activities of the practitioners and trainers. Hoy, for instance, continues to argue that:

> 'educational administration as a discipline can best preserve its own uniqueness by re-affirming its commitment to scientific research.'
>
> (1978:1)

Others have recently argued that the aim of theory in educational administration is the achievement of 'a set of assumptions from which presuppositions can be deduced by mathematical or logical reasoning' (Griffiths, 1977:18).

The quest for a scientific theory of educational administration is, in fact, collapsing under the weight of its own pretentions (Halpin and Hayes, 1977; Griffiths, 1979; Bates, 1980). The major need for a scientific theory has, however, been replaced by the need of governments for advice on the construction of more adequate (i.e., rational and technocratic) systems of control. Legitimation of professional status is now to be gained, not by appeal to scientific status but through prestiguous association with governmental attempts to construct more efficient steering mechanisms, and

more rational and complete systems of bureaucratic control.

The association of educational administration with the initial attempts to develop scientific management within industry and recent association with governmental attempts to develop rational planning systems of bureaucratic control have a number of results for the process of cultural transmission. As Giroux suggests:

> 'not only does the language of this mode of rationality conceptualise the nature and function of schooling in industrial terms (that is, schools are seen as factories, students as raw material), it also supports modes of behaviour and goals premised on the need for a form of social control dedicated to social homogeneity and group conformity.'
>
> (Giroux, 1979:14)

Moreover, the ability of such administrative rationality to exclude considerations of interest and value, to divorce itself from historical or social discourse, constitutes a technological rationality which is self-justifying by virtue of the 'social amnesia' it creates. Thus:

> 'while the interests behind the historical development of technocratic rationality are rather clear, it appears that the historical roots of its more contemporary versions have been forgotten ... this form of social amnesia not only characterises technocratic rationality, it also shapes the conditions under which it sustains itself.
>
> (Giroux, 1979:14)

If the historical development of technological rationality in education was closely associated with the occupational interests of an emerging organisational profession (Larsen, 1977), then the effects of the alliance of scientific management with rational planning and control in educational systems should show up in the central message systems of the school; curriculum, pedagogy and evaluation. This, indeed, appears

to be the case.

Systems Theory and Curriculum Development

The construction of the curriculum is clearly a matter of central importance in the management of knowledge, and one which links the processes of epistemological reproduction within the school with the social and cultural reproduction of particular groups within the wider society. Durkheim, for instance, was very clear about the correspondence between the production of technical and moral knowledge in schools with the social structures of the wider society (Durkheim, 1956). Processes of selection, organisation and transmission of knowledge in schools are central to the processes of cultural transmission and control (Bates, 1978, 1978). Moreover, these processes are highly political:

> 'Curriculum design, the creating of educative environments in which students are to dwell is inherently a political and moral process. It involves competing ideological, political and intensely personal conceptions of a valuable educational activity. Furthermore, one of its primary components is the fact of influencing other people - namely students.'
>
> (Apple, 1979:111)

The logic of technological, administrative rationality is directed towards the generalisation and legitimation of universal solutions to these political and personal issues through the institution of formal democratic principles and procedures. The effect of such a process is to effectively de-politicise the processes of control. In general:

> 'the arrangements of formal democratic institutions and procedures permits administrative decisions to be made largely independently of specific motives of the citizens. This takes place through a legitimisation process that elicits generalised motives - that is, diffuse mass loyalty - but avoids participation.'
>
> (Habermas, 1976:36)

Moreover, the logic of technical, administrative rationality is directed towards the definition of problems and conflicts as technical issues to be resolved by experts through management and adjustment of the system. Indeed, the identification of the needs of society on which curriculum is to be based, the specification of the forms of knowledge which determine the epistemological structures available in the construction of the curriculum (Hearst, 1974), and their integration into a common culture curriculum, appropriate for all children in a given society (Lawton, 1973), are regarded by administrators as matters for experts to decide and for administrators to implement or supervise. Such a model of administrative curricular relationships is so much part of teachers' thinking that it has become part of their common-sense thought:

> 'our common-sense thought in education ... tends to work in a direction quite the opposite from moral and political considerations. Instead, spheres of decision making are perceived as technical problems that only necessitate instrumental strategies and information produced by technical experts, hence, both removing the decisions from the realm of political and ethical debate and covering the relationship between the status of technical knowledge and economic and cultural reproduction.'
>
> (Apple, 1979:111)

The most extreme form of such technologisation of curriculum is clearly that of the current development of curriculum packages. The more sophisticated of such packages are, in fact, systems where the elements of curriculum specification, pedagogical practice, diagnostic and evaluative testing are integrated with each other into a comprehensive set of prescriptions for both teacher and pupil. Thus, the bureaucratic epistemology referred to by Wake is insinuated into the relationship between teacher and pupil.

The employment of such packages, along with the adoption of individual learning programs, transforms the relationship between teacher and pupil. It does this in quite particular ways. Firstly, the function of the teacher is translated from that of a knowledgeable person, responsible for planning and encouraging the cognitive, social and ethical development of his pupils to that of a systems manager. The form of engagement with the pupils is shifted from a personal to a technical level, where the teacher's function becomes that of systems manager. As a result of this transformation, the teacher is, in terms of previously required expertise in planning and designing curricular strategies for groups of children, deskilled (Apple, 1980 in press). Just as the control of managers in industry was increased by the separation of planning from execution in the productive process (Edwards, 1979), so the separation of planning from execution of the curricular process removes control of political, social and personal considerations from the teacher and locates them in the administrative structure that determines the production and utilisation of such materials.

Moreover, as Apple quotes, 'while teachers are being deskilled in terms of curriculum planning, design and instruction, they are simultaneously being reskilled in terms of improved techniques of student control' (Apple, 1980 in press). Moreover, new techniques of instructional supervision, when combined with competency based education, competency based teacher education, learner verification, behavioural objectives, and mastery learning techniques, increase administrative control over not only the content of the curriculum but also the processes of pedagogical interaction. By such techniques, teachers can now be held accountable for the achievement of prespecified educational goals.

> 'The simple accountability system holds the teacher 'accountable' for achieving prespecified objectives, but allows the teacher discretion to determine how these objectives are to be achieved. The derivative systems build from the simple system and, in their elaboration, eliminate the discretion of the teacher to determine how the prespecified objectives are to be attained.'
>
> (Wise, 1977:46)

Thus, the imposition of technological rationality on curricula structures not only transforms the content of the curriculum, depoliticising and depersonalising, but also expands the mechanisms of administrative control over both teacher and pupil behaviour in ways similar to the effects of control structures devised by industry and government (Edwards, 1979).

In order to maintain such systems of administrative control over curriculum and pedagogy, certain transformations in the role of the teacher must be implemented. These are essentially achieved through processes of preservice and inservice socialisation and selection of teachers.

On the Transformation of Teachers

The transformation of teachers depends upon the implementation of two strategies, one practical, and the other ideological. The practical strategy is one which relates both to the administrative concern with the efficiency and effectiveness of rationally planned strategies, and to the restructuring of curriculum into integrated systems of instruction and evaluation. This strategy is concerned with the development of particular skills in teachers. It is a strategy which is, moreover, also based upon the logic of technological, administrative rationality. Competency based

education displays the logic of the strategy most clearly.

In competency based education, the competencies required of the student are prespecified so that both teacher and student know precisely what is to be achieved. As a result of the implementation of competency based instruction in schools, only teachers who have been trained in the implementation of such programs are hired. Moreover, as the school system increasingly adopts CBE procedures, both preservice and inservice teacher education programs are required to be certified and their products to be certified as competent CBE teachers. The competencies of teachers which will allow them to develop the required competencies in students are presumed to have been identified and promoted through CBE procedures in college and a generalisable system of procedures is established. As Wise (1977) points out:

> 'by this process the range of teacher behaviour will be narrowed to the point at which the method of achieving student objectives will be prescribed. The operation of a general accountability system and its derivatives ... have determined what and how the teacher is to teach.'
>
> (Wise, 1977:47)

The major effect of such procedures is to focus on methods of teaching, leaving the purposes and content of what is taught largely out of consideration. Moreover, the research upon which much teacher training is based is of a similar character.

> 'The technical definitions of educational problems and the procedural responses of reform in teacher education is legitimated by much of the research in the field. Most research tends to view teaching as the most efficient way to provide new recruits with the specific behaviours and attitudes of the people who practice teaching.'
>
> (Popkewitz, Tabachnic & Ziechner, 1978)

Psychological research, focussed on the manipulation of single variables, is appealed to in order to increase the achievement of specific outcomes. Sociological research is appealed to in order to facilitate the socialisation of teachers and pupils into the workplace of the classroom. The result is that in both the teacher training procedures and in teacher education research:

> 'the conduct of schooling, the systems of status and privilege of the occupation, and the social and political implications of institutional arrangements are obscured through a process of reification. Teaching and teacher education are treated administratively.'
>
> (Popkewitz, 1979)

Such administrative treatment defines teaching as a technical process in which the major considerations are not content, volition and justification, but efficiency, effectiveness and communicability. Thus, the practical orientation towards method also obscures and takes for granted definitions which are to be imposed on new recruits.

> 'What is ignored are the ways in which teacher education imposes workstyles and patterns of communication which guide individuals as to how they are to reason and act in the setting of schooling. The language, material organisation, and social interactions of teacher education establish principles of authority, power and rationality for guiding occupational conduct.'
>
> (Popkewitz, 1979:2)

Thus, teacher education both pre-empts a technical rational definition of teaching, and legitimises that definition by appeal to a reified set of behaviours and norms presented as inherent in the nature of teaching. Moreover, the appeal to objectivity and science based research findings on teaching:

> 'not only fails to reveal how knowledge is culturally bound, it also serves to buttress normative and intellectual support in teacher education programs for the ethos of 'professionalism' [through which is developed] a cult of experts and professionals who become avatars, trained to guard as well as transmit

> the sacred knowledge and language to prospective educators, who in turn, make their expertise available to members of the public.'
>
> (Giroux, 1980:19-20)

The effects of the professionalisation of teacher education within the context of the technical rationality of administrative control is not necessarily the expressed goal of increased competence but can be directly tied to the symbiosis of the occupational interests of teachers with the administrative interests of bureaucratic control. Within the context of an organisational profession, as Lasch (1977), Bledstein (1976), Edelman (1977), Erickson (1979) and Bates (1980) have pointed out:

> 'the growth of professionalism in education has done little to benefit the public and a great deal to serve the narrow interests of educators themselves. The latter interests include: increased hierarchical differentiation in the teaching profession, a growing standardisation of school practices; and an increasing call for the legitimation of the value of 'certified' knowledge.'
>
> (Giroux, 1980:20)

Thus, the co-optation of teachers into the bureaucratised profession of teaching both serves the administrative demand for increasing rationality, predictability and control and offers the occupational rewards of legitimacy, hierarchy and security. In the process, the objectivisation and reification of schooling occurs, which excludes questions of value, interest and domination by instantiating technological rationality in the service of administrative control.

On Technical Evaluation

If the logic of technological rationality can be seen in the administrative structuring of curriculum and pedagogy, it can also be seen in the development of techniques of evaluation. In evaluation, as elsewhere, the technologisation of reason is evident. In particular, three models of evaluation express this process. They are identified by Kemmis (1980) as the engineering, the organisational and the ecological models of evaluation. The engineering model of evaluation is derived from attempts to assist 'curriculum builders to check on how well their intentions have been fulfilled in educational performance' (Jenkins et al., 1979:111). Explicitly, the model involves five stages, the third of which is concerned particularly with educational evaluation: 1) secure agreement on aims, (2) express these aims as objectives, (3) devise and provide appropriate experiences, (4) assess the congruence of performance with objectives, (5) vary the treatment until congruence is achieved (cf. Tyler, 1934, 1949; Jenkins et al., 1979).

This model is, once again, indicative of the limitation of thought imposed by technological administrative rationality:

> '... the engineering model of educational development and evaluation represents a 'technologisation of reason': it limits our thinking about these matters to technical and procedural dimensions, it routinises the quintessentially human process of education, so that it becomes more subject to technical management.'
>
> (Kemmis, 1980:9)

The organisational model extends this technologisation of evaluation to the level of organisational or institutional evaluation. Here, the purpose is that of information management, whereby the institutional managers seek specific information related to the planned trajectory of their organisation. As in business (Edwards, 1979), access to such information is critical to educational management. As Wolcott points out, in his discussion of the impact of the school planning evaluation and communication system (SPECS):

> 'SPECS' primary technocratic appeal was that it was a data generating system; the data were to provide a basis for improving effectiveness (control) throughout the educator ranks.'
>
> (Wolcott, 1977:159-160)

The model of organisational evaluation based upon data collecting systems has been powerful in school and school system evaluation. The model is:

> 'one of rational management, the image supported by cultural values of scientific rationality, economic efficiency and consensus about an institutional mission ... it is a mechanism for subordinating those involved to institutional goals which are expressed at a supra-individual rhetorical level.'
>
> (Kemmis, 1980:10)

Once again, the objectification and reification of goals and interests is directed towards the process of technical administrative control - a function of which the teachers in Wolcott's study were well aware (Wolcott, 1977).

The third model, the ecological model (Bronfenbrenner, 1976; Brim, 1975) is an attempt to relate a variety of systems and account for the ecological effect of different levels, goals, functions and systems on each other. The image which underlies it is that by which social life can be seen to be 'not just a set of interacting variables but as organic, structured and functioning' (Kemmis, 1980:12). As such, the ecological model is one further step in the reification of systems and the obscuring of meanings, interests and purposes under the rhetoric of natural interactions and systems influences.

These three models of evaluation which are currently widely employed in educational evaluation are alike in several respects; their claims to objectivity, neutrality and their service of technical interests. As Kemmis points out:

> 'these approaches manifest most clearly the technologisation of reason, making critical self understanding subordinate to program goals, bureaucratic organisational imperatives, or the 'life' of the program as understood from a non-participatory (non-empathetic) perspective.'
>
> (Kemmis, 1980:12)

In evaluation as in curriculum and pedagogy, the administrative technologisation of reason appears to influence the content, organisation and the transmission of knowledge in schools, thus, once again, providing evidence of the influence of administrative imperatives on social, cultural, epistemological structures as these are incorporated into schooling.

CONTRADICTIONS

It may well appear from the above arguments that the administrative rationality of the organisational pro[illegible]ions incorporated into the bureaucratic structure of education is not only a dominant but also an overwhelming feature of education systems. It has, in fact, been the purpose of this paper to make a strong case for the study of such administrative influence on the interrelated structures of social, cultural, epistemological and educational activity. However, what is equally clear is that there are both contradictions and resistances to the imposition of such administrative rationality. While it is not intended to cover these contradictions and resistances in detail in this paper, a brief sketch of some important elements is in order.

Firstly, as Habermas (1976), following Marx, points out, the crisis of over-production characteristic of capitalist societies threatens the rationality of the idealised relations between schooling and work. This crisis leads to contradictions where the system cannot rationally or politically meet the ideological commitments needed to maintain legitimacy. The result is the crisis of legitimation (Habermas, 1976). One example of this is the very efficiency of the education system in producing technical knowledge (Apple, 1979), and an over-abundance of highly educated workers (Braverman, 1974; Noble, 1979; Asheneden and Gallagher, 1980), which presents a crisis of articulation between the education system and the productive system (Kogan, 1979). As the rational planning model is shown to be ineffective in dealing with this crisis, the legitimating ideology of the meritocracy is challenged (Carnoy and Levin, 1976; Bates, 1979; Husen, 1979). Moreover, in key areas of

administrative theory (Bates, 1980; Griffiths, 1980; Erickson, 1979), curriculum theory (Apple, 1980; Giroux, 1980; Whitty, 1980), evaluation theory (McDonald, 1976; Kemmis, 1980), the scientific language of the organisational professions with its assumption of neutrality, its axiomatic systems based upon observable laws, is under attack as simply disguising the entrenchment of particular interests through procedures of reification (see also Aronowitz, 1973; Bourdieu and Passeron, 1977; Grace, 1978; Greene, 1978; Apple, 1979; Mulkay, 1979 and Giroux, 1980).

Currently, this crisis is producing further contradictions through demands for more effective bureaucratic, professional solutions in the form of further technical rationalisation of relations between education and work (Callaghan, 1978; Williams, 1979; Apple, 1980), and in the rationalisation of inter-sectoral planning and co-ordination between government agencies and the economy (OECD, 1977). At the same time, the limits of rationalisation are also being realised (Kogan, 1979; Wise, 1979), and rational planning models are becoming differentiated and less predictive in the face of demand for regionalisation, localisation and participation (Archer, 1978; Kogan, 1979).

Within education, there are strong pressures towards the greater rationalisation of administration, curriculum, evaluation, teacher training and finance. At the same time, there is an increasing recognition of the failure of such programs to alter the relative outcomes of the education system (Husen, 1979; Jencks, 1979; Halsey, Heath and Ridge, 1980), and a growing recognition that demands for accountability within hyper-rationalised systems cannot be met (Apple, 1980; Wise, 1977, 1979).

Again, there is a contradiction between the demands for accountability channelled through the centralised legitimating systems and the ability of such systems to meet locally and sectionally based demands (Habermas, 1976; Archer, 1978; Pusey, 1980). On the other hand, the alternative of decentralised control leads to substantial problems of articulation with other sectors of governmental activity (OECD, 1977; Kogan, 1979), or with the structure of work in the corporate economy (Braverman, 1974; Feinberg and Rosemont, 1975; Bell, 1976; Edwards, 1979; Williams, 1979; Ashenden and Gallagher, 1980).

EDUCATIONAL ADMINISTRATION AND THE CRISIS OF CONTROL

Education is increasingly recognised as a system of cultural transmission and reproduction which serves to simultaneously maintain, disguise and legitimate the interests of particular groups within the social system. Studies of the perpetuation and legitimation of specific forms of social relations via curriculum, evaluation and pedagogy are developing into a convincing picture of individual components of the process. As yet, however, studies tend to focus either on an overdetermined view of the relations between schooling and economic structure or on a limited account of teacher/pupil transactions. What is missing is any thorough analysis of the processes and structures through which the wider social relations of production and control are articulated with classroom practice. The purpose of this paper has been to suggest that the study of administrative structures, processes and ideologies from a critical perspective might provide such a link. Moreover, the specific impact of combined bureaucratic and professional strategies within administrative structures needs to be explored for its relation with specific social and economic interests; its impact on various forms of curriculum, pedagogy

and evaluation; its legitimation of certain forms of epistemology and its integration of social, cultural and epistemological structures within educational systems which determine the nature of cultural transmission via schooling.

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