Rather than concentrating on similarities, it would seem far more profitable to search for ways in which schools are unlike other organizations or the models we have of these. It was suggested that we need to begin building images of schools that are congruent with their reality. This paper attempts the first stage in the task by identifying major generic characteristics of schools in general and public schools in particular. The generic characteristics of schools in general are pupils, classes, instruction, teachers, curriculum, and authorities external to the school itself, which is located on specialized premises. Ideal-type public schools are distinguished by external authorities that form part of a hierarchically organized administrative structure in a sovereign state and compulsorily enrolled pupils that are permanently resident within the territorial jurisdiction of the state. Comments are restricted to two implications for administrative theory and two possible uses in organizational analysis. (Author/MLP)
AN IDEAL-TYPE MODEL OF THE PUBLIC SCHOOL

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"
Christopher Robin was going away. Nobody knew why he was going; nobody knew where he was going; ... But somehow or other everybody in the forest felt that it was happening at last ... Christopher Robin, who was still looking at the world with his chin in his hands, called out "Pooh!"

"Yes, Christopher Robin?"
"I'm not going to do Nothing any more."
"Never again?"
"Well, not so much. They don't let you."
"How do you do Nothing?" asked Pooh after he had wondered for a long time.
"Well, its when people call out at you just as you're going off to do it. What are you going to do Christopher Robin? and you say, Oh, nothing, and then you go and do it." (Milne, 1963:162 & 178)

There has been what Banks (1963:13) has called "a very considerable neglect of the school as an organization," and her more recent review of the situation (1976:190-226) provides little evidence to alter that verdict. The pertinent literature is either somewhat dated (Waller, 1961; Bidwell, 1965; Corwin, (1965a) developed within a particular sociological paradigm (Dreeben, 1968; Becker, 1971; Shipman, 1975; Stubb, 1975), or tightly focussed on particular facets of schools (Lortie, 1975; Corwin and Edelfelt, 1977). Furthermore, much of this literature falls within the domain of the sociology of education and only be being particularly generous can we include some of the more salient works within the discipline of educational administration.

This curious state of affairs seems to have evolved through a reliance on what may be called the fallacy of misplaced congruency. Rather than building representative models of schools and then attempting to relate these to other bodies of knowledge, the practice in educational administration appears to have been to rely upon extant models and theories of organizations to provide an understanding of schools. Thus there is a danger of a kind
of conceptual reification in which schools become bureaucracies or open systems and we attempt to understand them as such, rather than as schools. This follows naturally from seeking ways in which schools are similar to other organizations; but rather than concentrating on similarities, it would seem far more profitable to search for ways in which schools are unlike other organizations or the models we have of these. In a previous discussion of this state of affairs, it was suggested that we need to begin building images of schools that are congruent with their reality (Allison, 1978:5). This paper attempts the first stage in that task through the development of an ideal-typical model of public schools.

Problems of Procedure

There are three problems associated with the study of schools as analytical phenomena in their own right; they relate to the two themes of ubiquity and variety.

In the first place schools appear to be an amazingly varied social species found throughout cultures and times, and even if we restrict attention to the recent mutation known as the public school, then there are many empirical variants, including open schools, elementary schools, technical schools, comprehensive secondary schools and so on, and these run the gamut of size from one classroom to a hundred or more. This variety suggests that no one simple model can be representative of all (Corwin and Edelfelt, 1977: 3-4). However, the ideal-type construct seems particularly suited for modelling phenomena that exhibit many empirical variants.

Ideal-typical models. These "theoretically conceived pure types" form the mainstay of Weber's (1947) Economy and Society, and he is regarded
as the major proponent of their use. As explained by Weber (1947:103,90) an ideal type is "an analytical accentuation of certain elements of reality ... that is, a pure mental construct, the relationship of which to the empirical reality of the immediately given is problematical in every individual case." He (Weber, 1947:89) notes that ideal types do not attempt to represent the "average or approximate" nature of a phenomenon, thus they are not 'conceptual averages' such as might be obtained through statistically based enquiry. Neither are they based on a single empirical instance as would a model derived from a case study. Ideal type models are abstractions from reality in which selected generic features are exaggerated to a logical extreme so as to make them clear and subject to subsequent analysis. Hence these features appear in ideal types in a manner which will rarely, if ever, be found in their empirical referents. These selected and exaggerated features are then related in logical fashion to present a coherent and recognizable image. Ideal types are not intended to be exhaustive, nor are they meant to include all features of the subject. They are intended to present a clear specification of features of interest. Their validity lies in whether or not the image presented appears congruent to the reality portrayed. These particular features of ideal-type models suit them well to accommodating phenomena that seem to vary greatly along a few empirical dimensions. A researcher can concentrate on the features that do not appear to vary as greatly from instance to instance and in doing this is forced to abstract characteristics at a highly generalizable level. Both the models developed below are ideal-types. They do not purport to be analyses of any particular school or class of schools, but attempt to identify major generic characteristics of schools in general and public schools in particular.¹

¹It must be noted that the employment and use of ideal type models has been severely criticized by such authorities as Parsons (1947:13,89), Friedrich
Ubiquity. The second major problem in studying schools is their commonplace nature. All of us, and many who have gone before, have taken the rite of passage from child to adulthood on which Christopher Robin was about to embark. Hence, there is considerable amount of folk knowledge relating to schools, and many of the general statements that can be made about their nature appear 'obvious'. A major delimitation of folk knowledge is, as Boulding (1966) remarks, its limitation to the experiences of the owner. Furthermore, because a thing is 'obvious' seems all the more reason to subject it to scrutiny, for it is likely, by definition, to be characteristic. This paper discusses many obvious features of schools, but this is seen as both inescapable and necessary.

The third problem relates to the available literature. As noted, much of this has either a very broad or a very restricted sociological base, and it appears to present a confusing, and at times contradictory, melange of emphases and paradigmatic alternatives. Commonplace attributes of schools (1952) and Selznick (1943,1948). However, both Eldridge and Crombie (1974) and Mouzelis (1968) point out that most critics fail to take stock of and understand the particular nature of ideal types and the uses to which Weber intended them to be put. Mouzelis (1968:43) begins his defense of Weber by noting that "Many criticisms ... are irrelevant as they make the assumption that the ideal type has the same logical status as a simple classificatory type," and he repays reading in full, as does Weber (1947). It is perhaps unfortunate that ideal-types have fallen under suspicion and into disuse. They offer a particularly useful, parsimonious and at times elegant method of exploring phenomena when they are used within their limitations, and they have the great advantage of offering clear and recognizable images that can serve well in initial analysis. Weber's extensive use of them makes his work highly consistent and provides for much insight, but also illustrates their susceptibility to unrealistic criticism which pushes them beyond their intended limitations.
are rarely treated explicitly and many contributors seem content to concentrate on particular empirical variants. For these reasons, much of the literature dealing with schools was of little value here and is ignored. Two exceptions are the historical and anthropological works of Myers (1960), Ballard (1971), Watkins (1963), Beck (1965) and Aries (1963) and the works of Waller (1961), Katz (1964), Carlson (1964), Bidwell (1965), Corwin (1967) and Lortie (1975, 1977) that contain attempts to identify characteristic attributes of schools. Both these bodies of literature were drawn on in the initial work from which the following models were summarized, and have influenced the final models extensively. An important delimitation imposed on the use of this literature and in the development of the models relates to the main purpose of the paper and should be noted. The models are developed to clarify the organizational nature of schools and thus there is an emphasis on goals, structure and technology. This results in a somewhat stark treatment of schools which deliberately ignores humanistic nuances and philosophical considerations. For this reason, the models may be seen as unrepresentative by some. Nonetheless, it is held that a realistic structural mapping of schools is a priority. Furthermore, particular philosophical and humanistic concerns can be grafted on to suit other approaches with little modification to the essential characteristics.

Types of School and Their Purpose

There would appear to be three ideal-type variants of schools:

(1) Privilege schools in which enrolment is restricted by the controlling authorities to students meeting criteria of ability, social class and/or wealth, and in which a restricted and protected body of knowledge is usually taught.
(2) Vocational schools which teach established skill, trade or professional knowledge to students who enrol of their own volition to gain marketable qualifications.

(3) Compulsory schools in which all members of a particular social subsystem are forced to enrol by the controlling authorities.

It is unlikely that any actual instance of a school will be congruent to any one of these ideally conceptualized types, most empirical cases embodying aspects and characteristics of two or more of these types. Nevertheless, certain more or less illustrative cases are observable. Contemporary private schools and prestigious universities are primarily privilege schools and schools in earlier civilizations whose graduates automatically assumed positions of power and government could be taken as type cases. The Emperor Mohammed's Grand Seraglio (Ballard, 1971:26) is an example. Examples of vocational schools are currently evident in private training institutions, community colleges and schools of medicine and dentistry, although these latter forms also embody elements of the privilege school. The compulsory type includes public schools and other state operated schools which enrol particular segments of the population such as military training establishments in nations where compulsory service is required. Church operated schools which prepare members for sacraments also qualify.

Purpose. Each of these types of schools appears as a special purpose intermediary social system located between lower and higher status positions in its environing society or sub-community. In this respect, they serve as bridges between being unqualified or qualified for any number of social positions and statuses such as dentist, engineer, welder or adult in our society, and warrior, decision-maker or priest in some earlier times.

In this sense, schools have two major missions. The first is that
of recreating a body of general and/or specialized knowledge in the minds of pupils. Machlup (1972:7-22) makes a clear distinction between "socially new knowledge" which is "that which no one has had before" and "subjectively new knowledge" which is only new to the learner. Schools are explicitly concerned with subjectively new knowledge that is considered important in their host societies.

In addition to their knowledge production function, schools are also expected to socialize their pupils to the future roles to which they aspire. This involves the modelling and the acquisition of new behaviors, norms; values, attitudes and self and other concepts in addition to the subjectively new knowledge specified in the formal curriculum. Some of these learnings may be deliberately encouraged by teachers and the external authorities, and some may be a result of unanticipated consequences of school structure and process (Dreeben, 1968).

The Generic School

Each of these three ideal types of school evidences a set of common characteristics in addition to similar social functions. These characteristics serve to define the generic form of this kind of specialized instructional system. They are: (1) pupils, who are aggregated into one or more (2) classes for the purposes of receiving (3) instruction from (4) teachers in a body of knowledge defined in a (5) curriculum. The establishment and operation of these schools is undertaken by (6) authorities external to the school itself which is located on (7) specialized premises. Each of these seven features requires some comment.
Pupils and classes. James Garfield apparently asked for nothing more than a log with himself on one end and Mark Hopkins on the other as the ingredients of an ideal educational system (Greer, 1971:3 and Mayer, 1963). Such an arrangement may be ideal, but it does not constitute a school. It does, however, embody the dyadic structure common to all teaching-learning systems (Hodgkin, 1976). The three commonest manifestations of such structures are (1) the face-to-face single teacher and single learner situation which is Garfield's ideal and best described as tutoring; (2) a remote teacher(s) and a single learner as in someone learning from a textbook or structured environment or a computer; and (3) a single teacher and a group of pupils. This latter case is characteristic of the teaching-learning system known as the school, where teachers instruct classes of pupils through face-to-face interaction. The other types of teaching-learning systems may find some use in schools, but the dominant method is always class teaching, for it provides for valuable scale economies of effort.

In the smallest schools, the school is the class; in larger schools, classes form the major structural units. Lortie (1975:28-9) comments in the context of American schooling:

The basic building block of schools and school systems has been the single classroom in which one teacher works with a group of students. Growth has been 'cellular' through the addition and limited specialization of such units ... The units have been graded and in the secondary schools they have been further subdivided by subject, but throughout the entire period, schools and school systems have assigned particular students to particular teachers for an academic year at a time.

School classes are formed by what is best described as an initial aggregation of pupils into a suitably sized group on the basis of one or more homogeneous characteristics. Mayer (1963:6) reports that "By universal agree-
ment, the ideal class size is twenty-five ..." and that there is "... a prescription to (this) effect in a book of the Talmud written in the fourth century." Pupils are aggregated to represent homogeneity on a variable such as age, sex, ability or subject to be studied, or, if number of pupils and prevailing philosophies permit, all of these. It is characteristic that for the most part pupils are assigned to their classes by school authorities, and/or by the structure of the curriculum. Thus, in most situations, pupils have little or no control over the composition of the peer group within which they will be schooled, nor the teachers who will instruct them.

Within schools, pupils have the lowest status of all members and are required to be compliant to the instructions and requirements of their teachers. Their task is to learn what is taught and, as Parsons (1975:220-1) observes, this entails "relatively systematic evaluation" of achievement, which serves to encourage competition between individual pupils. Where pupils are children, their low status is reinforced by social norms and structures external to the school. When pupils are adults, their low status in the school setting remains, but may be cushioned by differential levels of achieved or ascribed status in other settings. While pupils have the lowest status in the overall school body, newly enrolled students or those within the initial stages of the curriculum have the lowest status of all, which may be marked by special terms, tasks or denial of privileges enjoyed by more senior students. Handy (1976:135) provides an extensive quote from Dornbusch which describes the mortifying situation faced by new cadets at a Coast Guard Academy, where informal 'traditions' were enforced by senior class members, and which exemplifies this differential status within the pupil body.
Teachers. Wilson (1975:309) notes that the specialist occupation of "school teacher" tends to exist only in societies where "the diffusion of knowledge is an accepted social goal." In societies, or sectors of societies, where knowledge is more jealously guarded by elites, and privilege schools are common, then schools are usually staffed by the chosen few who are well socialized, middle status members of the elite in question. These persons, be they priests, warriors, academics or physicians, are likely to view themselves not as specialist teachers, but rather as members of the elite first and teacher's second. Hence, even though schooling is a common vehicle for education and socialization into such elites, the teachers in these systems will differ in some ways from those in other schools.

In non-privilege schools the teachers are usually characterized by their appointment by the external authorities on the basis of competence and exemplar character, their relative autonomy in the classroom, their generally middle class status and their lack of a clear career in their vocation (Allison and Renihan, 1977).

In his description of the petite écoles of sixteenth and seventeenth century France (a system which was transplanted to Canada by early French settlers) Aries (1964:293) gives this account:

Thus at Castillon, near Bordeaux, in 1759, 'the community gathered in due order', listened to its attorney declare the school vacant and decided that it was necessary to 'obtain immediately a schoolmaster who would be able to teach reading, writing, arithmetic and book-keeping.' There was a candidate for the post: a certain Laroche, 'a sworn master-scribe of Bordeaux.' The aldermen and jurats (the notables of the community) satisfied themselves as to his orthodoxy and morals and 'having seen his writing and questioned him about the rules of arithmetic and book-keeping', decided that he was a suitable person to fill the post 'subject to the approval of His Grace the Archbishop and His Lordship the Administrator.' On the other hand, in a village in the Lower Pyrenees in 1689, a candidate for a similar post was rejected because he was incapable of deciphering the village charters.
This pattern of teachers being employed on the basis of subject competency and moral acceptability appears common to most schools, as is the appointment of teachers by bodies external to the school itself, who are in turn accountable to superordinate bodies. An emphasis on good moral character as a qualification for employment is a control mechanism to help ensure that teachers will be suitable role models for pupils. Waller (1961: 40) remarks that school teachers in egalitarian societies are "paid agents of cultural diffusion." This process also contributes to the generally observed middle class, middle-status characteristics of teachers (Elboim-Dror, 1973; Lortie, 1975). Within their classrooms, teachers are accorded relatively extensive autonomy and discretion in the fulfillment of their duties (Katz, 1964; Becker, 1971) especially in respect to making decisions regarding the placement, progress and future school career of their pupils (Cicourel and Kitsuse, 1963). They are also accorded substantial authority over the conduct of pupils, their major authority bases appearing to be a higher education, and a relatively higher status which is bolstered by tradition and the active support of external agencies including parents and established authorities. This dynamic increases the "social distance" between pupils and teachers and the community and the teacher, and serves to entrench teacher autonomy in the classroom.

Instruction. Functional autonomy in the classroom and an authoritative position are both adjuncts of the instructional process in schools. This process is dominated by the structural feature of class instruction and the specification by external authorities of the knowledge sets to be taught.

The objective of all instructional activities in schools is the
recreation of subjectively new knowledge in the minds of the pupils. This may be achieved in a variety of ways, but the dominant technology in teacher-class settings rests heavily on formalized and stereotyped behavior planned, directed and dominated by the teacher. The teacher "broadcasts" knowledge by lecturing or talking to the class and augments this with questions. This knowledge is then reinforced and applied through "the imposition of a common set of tasks" (Parsons, 1975:220).

The knowledge taught in this fashion is extracted from the school curriculum by the teacher usually being adapted in the process for the class in question through teacher perception of the pupils' abilities and the available resources such as text books and other artifacts. This knowledge is then arranged into a number of sequential and hierarchically ordered curriculum fragments called lessons. Hence the actual teaching process in schools is one in which individual lessons are taught to the class by the teacher in a serial and logically ordered progression, with individual pupil progress being monitored from time to time within the context of overall class performance and against the knowledge as defined in the curriculum. In the process of disaggregating and fragmenting the curriculum to form lesson content, teachers are commonly accorded considerable latitude, although a general expectation is held that the total curricular knowledge will be 'covered' during the time available, although informal norms may modify expectations. One of Becker's (1971:121) respondents observed:

... you have to be on your toes and keep up to where you're supposed to be in the course of study. Now, in a school like the D____ (slum school) you're just not expected to complete all that work. It's almost impossible. For instance, in the second grade we're supposed to cover nine spelling words in a week. Well, I can do that up here at the K____ (better school), they can take
nine new words a week. But the best class I ever had at the D was only able to achieve six words a week and they had to work pretty hard to get that. So I never finished the year's work in spelling. I couldn't. And I really wasn't expected to.

Curriculum. Knowledge that constitutes the curricula of schools is perhaps the single most useful indicator for differentiation between different variants. In highly differentiated and complex societies where schooling is used extensively, several parallel and sequential, hierarchically branching levels of curricula may be evident from primary through secondary and tertiary to graduate with provision for occupational and vocational specialization within the higher cycles. In less sophisticated societies, school curricula may include folk knowledge and tradition as well as vocational knowledge. An example can be taken from the privilege schools of Ancient Egypt (c3000-500 B.C.) where the forming and reading of hieroglyphics was a necessary skill among the religious and administrative classes. The sub-title of The Teaching of Duaf (Myers, 1960:305) is instructive: "Teaching that a man named Duaf composed for his son when he went up to the capital to put him in the school of the Books among the children of the great."

Because of their mission to teach what is only subjectively new knowledge to their pupils, all schools in literate cultures will be "schools of Books", and thus first cycle instruction will of necessity concentrate on developing pupil literacy. This in itself provides a logic which ensures that several cycles of schooling will be the norm in complex literate societies, with pupils gaining "basic" knowledge in first cycle schools and more specialized and differentiated knowledge in subsequent curricular levels. Hence the process of being schooled is likely to extend over a subjectively extended period of time. In our present society this can translate into twenty-five
or more years of continual school attendance for those who aspire to higher status positions.

In addition to literacy skills, schools offering what may be termed a general education commonly evidence similarity in the subjects studied. Yee's (1973:1) description of a contemporary Chinese middle school describes a curriculum that would not be unfamiliar to many present-day Canadian, American or British high school students. Furthermore, the classic cycle of school studies defined by Cicero and Quintilian, the foremost educational authorities of Ancient Rome, would not be alien to modern curriculum analysts:

... a course of study divided into two parts, one which the Romans called the quadrivium (elementary level of schooling), composed of the study of arithmetic, geometry, astronomy (religious significance) and music, the other, a secondary level consisting of the study of grammar, rhetoric and logic, called the trivium. Physical education was not included by name but was taken for granted. The quadrivium and the trivium made up the seven liberal arts, as they came to be called, which made up the curriculum of European education for a thousand years to come. (Beck, 1965:17)

Tradition appears to have particular importance in defining school curricula especially in so called academic subjects. But schools seem rarely to be entirely restricted to teaching academic knowledge. In the medieval village school, some considerable emphasis was placed on contemporary "practical" concerns: "... the examples of writing given to the school boys to copy were business forms, receipts, bonds and so on. It was proposed to school them in the affairs of the age." (Aries, 1964:243)

But the inclusion of subsets of specialized vocational knowledge in schools preparing students for general adult roles can often be problematic. Aries (1964:297) offers an instance from the time when village schools were becoming popular in France and the ability to write well and count accurately
were highly marketable trades:

The division of labour between school masters and scribes was a difficult problem, which even the magistrates to whom it was submitted found impossible to solve. Thus an edict of the High Court issued in 1661 states that the scribes may have printed books or texts to teach spelling but they must not on any account teach reading! ... It can be seen that reading and writing, which are now considered to be complementary, were for a long time regarded as independent subjects to be taught separately. One being associated with literacy and religious culture, the other with the manual arts and commercial practice.

External authorities. Decisions with regard to who may be taught what and by whom and where this shall take place are typically determined by authoritative bodies external to the schools themselves. In the matter of reading and writing noted above, the legal system was the arbiter. In the bush schools of West Africa, the curriculum was defined by tradition and specified by the "grandmaster or namu", who was considered to be "endowed with wisdom and mystic power in a superlative degree" and in whose charge the school was placed (Watkins, 1963:43). In the medieval school, the master appears to specify the curriculum. However, as Aries (1962) notes, the subjects taught were derived from Graeco-Roman tradition and specified in classical texts. Throughout the medieval period, pupils in all the European countries with a Romance heritage studied similar classical curricula, frequently from translations of the same classical works, which the teacher had mastered through his socialization to this culture.

In contemporary times and cultures, school curricula appear to be defined by tradition, practical politicized presses and legitimated formally constituted authorities such as governments and university and school boards. Sanctioning curricula is a logical extension of the task that the external authorities have in the provision, operation and supervision of
the schools they operate. Through their influence on curriculum, power to
appoint teachers and the ultimate power to establish or discontinue a
particular school, these bodies, be they local jurants, a council of bishops,
a university senate or a local school board, effect control over the
operation of their schools, and thus the molding of aspirants to the roles
of which they are the guardians.

Specialized premises. Almost invariably, schools are housed in
specialized premises. The West African bush school is no exception. Watkins
(1963:430) tells us that:

    The sessions of this school are not held in the towns or villages
proper, but a permanent place is selected in the forest not far
distant from the principal or capital town of a chiefdom or district.
This special section of the forest is ... never used for other
purposes, although all the structures are burned at the close of
each term. Every district or subchiefdom has its own school and
special reserved forest for the purpose.

So it tends to be in all cultures and times. Schooling takes
place in places set apart from the community which are frequently reserved
for this sole purpose. In contemporary times, schools appear as highly
visible and central structures occupying relatively large tracts of land
in central locations and surrounded by glacial of asphalt or grass. The
"eggcrate" architecture of many modern schools promotes what Lortie (1975:13-
17) describes as a "cellular" structure. These insulated classrooms provide
the arena in which teachers and pupils forge, modify and act out their
reciprocal roles.

Summary

As described here, schools appear as special purpose and relatively
ubiquitous phenomena observable in many societies and times. They serve as
extensions of societies and sub-communities, established, operated and regulated by appropriately constituted authorities to prepare pupils for their occupation of higher status positions. This mission is accomplished through the teaching of a delimited and authoritatively sanctioned curriculum to aggregates of students by specially engaged teachers considered to be adequately knowledgeable and suitable exemplars of community values and ideals. While schools are only one form of specialized instructional system they are differentiated from others by this grouped instruction of pupils engaged in the study of a relatively extended curriculum and by their regulation by external authorities.

THE IDEAL-TYPE PUBLIC SCHOOL

Contemporary public schools are compulsory schools which evidence all of the characteristics of the ideal-type generic school discussed above. They are relatively recent mutations of the generic type brought about as part of the adoption of social policies designed to develop human resources and socialize young residents into complex, highly differentiated consumer societies. They are distinguished from other types of school by two particular characteristics:

(1) they are established and operated by external authorities that form part of a hierarchically organized administrative structure, the jurisdiction of which is conterminous with the territorial jurisdiction of a sovereign or semi-sovereign state;

(2) the compulsorily enrolled pupils in these schools constitute all the non-exempted non-adult and non-infant persons permanently resident within the territorial jurisdiction of the state.

These two features require some elaboration before a cursory discussion of the manner in which they modify the characteristics of the generic school.
The External Authorities

The ideal-type public school is never an isolated occurrence. Networks of these schools are established and operated by a three-tier structure of external authorities between which there is a characteristic division of powers.

The sovereign authority. All public schools are established and operated with legal parameters enacted by a sovereign or semi-sovereign government that has appropriated or been accorded jurisdiction in this policy area. In the ideal typical case, this is achieved through enabling legislation which creates and apportions powers between two subordinate authorities, both of which remain accountable to the sovereign power. Among other things, this enabling legislation specifies the criteria determining who shall be compelled to attend public schools.

The central authority. This body is constituted as a government ministry or department headed by a Cabinet Minister of senior rank. Its primary tasks include: (1) the specification of the qualifications required by teachers and principals employed in public schools; (2) the awarding and removal of credentials symbolizing these qualifications; (3) the approval and promulgation of the formal curriculum taught in the public school; (4) the specification of the credentials to be awarded to different types of public school graduates; and (5) the establishment of procedures to ensure the adequate provision of public schools throughout its jurisdiction. This latter task normally involves the establishment of a scheme to equitably distribute public funds voted or otherwise provided by the sovereign government to ensure an equalized standard of schooling, as well as the powers of inspection and general supervision which may include the testing of pupils.
The local authority. The actual establishment and operation of the ideal type public school will be effected through a local authority composed of regional residents elected by tax payers and accorded territorial and operational jurisdiction over areas defined by the central authority. The public schools within such delimited geographical regions constitute a school system. This local authority will normally be accorded the tasks of establishing public schools within appropriate areas, hiring and deploying the necessary teaching and administrative personnel and obtaining other required resources. In addition the local authority is normally accorded power to make or approve minor curriculum modifications without the approval of the central body. Local taxing powers may or may not be delegated to the local authority, but if they are, they will be restricted to a tax on property within its territorial jurisdiction. This body may be authorized only to establish and administer public schools, or may be accorded or have appropriated, other municipal responsibilities.

Comment. Public schools appear as the lowest stratum of a statewide schooling structure established under the authority of the sovereign power. The three constituent levels of school government embodied in these structures constitute the external authorities relevant to public schools and they retain the powers and functions characteristic to the external authorities of other types of schools. Both the central and local authorities normally employ a full time staff of administrative officials to supervise the operation of the public schooling structure and to enforce law and policy. The most numerous of these officials are the principals assigned to each public school.
The Pupils

All pupils enrolled in the ideal-type public school receive their schooling at no direct cost to themselves or their household, the financial burden of providing public schooling structures being borne by public funds administered by the authorities.

Compulsory attendance. Weber (1947:151) provides a pertinent comment on compulsory organizations:

The type case of compulsory organization is the state, along with its subsidiary ... groups ... The order governing a compulsory association claims to be binding on all persons to whom the particular relevant criteria apply - such as birth, residence or the use of certain facilities.

In public schools the relevant criteria for the imposition of compulsory attendance are age and residence. The enabling legislation in the ideal-type instance stipulates that all non-exempted persons aged six to sixteen shall attend public schools and legal sanctions are provided to ensure compliance. Exemption may only be obtained for children who are certified by an administrative official to be receiving a suitable education elsewhere, or for those who are considered to be incapable of learning in a public school classroom. Thus all non-excused permanent residents of the state within the stipulated age cohort form the bulk of the pupil enrolment in public schools.

Voluntary pupils. In addition to the pupils who are compelled to attend, the ideal type public school also enrolls children who are over five years old and whose parents elect for them to attend. In addition, free attendance at public school is offered to all permanent residents who have not attained the age of majority. This over-sixteen age cohort is of particular interest, for, while the compulsory attendance age lasts only ten years,
it is a characteristic of the ideal type public school that the formal curriculum requires twelve years of study for completion. Hence, only those pupils who remain in voluntary attendance after the age of sixteen can complete the full curriculum and gain a public school completion credential. This is important, for such credentials are always a prerequisite for entry to higher privilege and vocational schools that provide entry to higher status positions in the host society.

Discussion

The two distinctive and definitive characteristics of public schools that set them apart from other types of schools have some impact on the generic features discussed previously. Space denies a thorough discussion at this time, but for most purposes the features characteristic of all schools appear in a reasonably undistorted fashion in the public school. Pupils are instructed in aggregated classes although the sheer size of the operation considered on a system or structure wide basis allows for much variety in how pupils may be grouped. Furthermore, the existence of a state established and publicly funded administrative structure with local extensions ensures matters of pupil grouping will become political issues. In the matter of teachers, the size and political nature of the public schooling enterprise further ensures that the teaching body will evidence divisity in specialization, training and competence. Aspects of hiring and status will remain as discussed but teachers within the state will likely form a representative political association to influence policy and working conditions at both the central and local levels. A major goal of this group will be to preserve traditional teacher autonomy in classrooms.
The technology of teaching will also be little affected apart from a susceptibility to political and philosophical fashions which are a direct result of the large size and massive public investment associated with mass compulsory schooling. Due to obvious pressures to economize the employment of public funds, the economies of scale built into schools will be capitalized on in public schools and thus class sizes will remain about or above the long established standard of twenty-five pupils. The relatively greater ease associated with effecting compliance of younger pupils, the elements of privilege schooling evident in the final two years of the curriculum together with the informally higher status that will accrue to the teachers of older children ensures that class size will likely decrease in the higher curriculum levels.

Curricula in public schools are perhaps the elements most affected by their particular structure. As noted the full curriculum will extend beyond the years of compulsory attendance and in the ideal-typical case will evidence a branching in vocational and specialized academic knowledge sets around the tenth year. The academic branch will provide preparation for entry into higher level privilege schools, the vocational branch preparation for low status occupational positions in the environing society or entry to middle level vocational schools. The elements of external sanction and prescription of curriculum common in the generic school will be evident in public schools, these being effected through the central and local authorities. In the ideal-type, pupil progress through the curriculum will be highly correlated with age and the curriculum sequentially graded to provide programs of study for each pupil age cohort. There will be a major division into elementary and secondary curriculum cycles based on the
tradition established in the quadrivium and trivium and which will, in the ideal-typical case, occur after the initial six years. In an ideal sense, public school curricula only really appear in the remaining three or four years of study which correlate with the upper limit on compulsory attendance age, the remaining additional years of study being modified by aspects of privilege and vocational schooling associated with voluntary attendance.

In the establishment of public schools, the local authorities will be guided by the principle of geographic entitlement. Schools will have to be established as dictated by economic and demographic considerations and modified by local political forces. The local authority may elect to establish public schools specializing in particular curriculum levels and indeed this may be required or encouraged by the central authorities to gain additional economies of scale. If this is the case, and empirical observations suggest it is, then a logical division is that between elementary and secondary curricula. Where the authorities establish schools specializing in the highest two or three years of the curriculum, these will, as a consequence of the nature of the total curriculum, appear as corresponding to privilege or vocational types of school and be publicly subsidized variants of these.

Some Implications and Uses

A thorough enquiry into the implications and possible uses of the models developed here is prohibited by space and time limitations. Comments will be restricted to two implications for administrative theory and two possible uses in organizational analysis.

Implications for principals. In the models developed, school classes appear as the most characteristic and crucial elements of schools.
Public schools can be regarded as conglomerations of classes, the size of the conglomerations being dictated by demo-economic and philosophical-political forces. Principals, as the representatives of the external authorities in public schools, have dominion over the whole school, but are severely restricted in their influence and control of teacher behavior in classrooms by virtue of the cellular structure and a tradition of teacher autonomy, confirmed by the political influence of teacher associations. This suggests that the most crucial school decision areas through which principals may have an impact on school effectiveness are those relating to the assignment and regulation of teachers and other resources to classes and the formation of these units. Apart from teachers, the other key school resource is time allowed for instruction. In the ideal type public school, instructional time is normally regulated by the central and local authorities through the promulgation of minimum and maximum time allocations for the teaching of subjects within curriculum levels. Nevertheless, some latitude is commonly available to principals for the provision of remedial instruction and the like and the authorities usually proscribe rather than prescribe the curriculum time allocations. Furthermore, the assignment of teachers to classes is normally within the principal's sphere of authority. Hence the two operational areas through which public school administrators may be able to influence organizational effectiveness could be teacher assignment and class scheduling. Relevant questions would appear to be: are the structural couplings between teacher and classes justified by what is known about teacher and class abilities, and is the best possible use of available teaching time being made? These are both resource allocation questions and imply that in seeking the best deployment of resources, effective principals will almost certainly be spending
much time and energy in acquiring the most appropriate resource mix from the local authority executive, from whence all major resources flow.

The second selected implication relates to the training of public school principals. The structural environment of the public school ensures that principals are the lowest status administrative members of a state wide schooling structure\(^2\), and the only permanent members of this structure within the school. As teaching experience in public schools is one of the appointment criteria universally mandated by the central authority, then it seems inevitable that principals will experience role conflict and role ambiguities. Such problems will be exacerbated by training programs that stress identity with teachers rather than socialization to the administrative hierarchy. This suggests that an emphasis on leadership in training programs provides poor preparation for principals. Aspirants to the position of principal could be better prepared if they are schooled in matters of management, law and prudent followership. A suitable curriculum would probably place emphasis on development of effective communication techniques, motivational strategies suitable for resource-scarce environments and techniques of conflict resolution. Furthermore, the model suggests that upwardly mobile persons who aspire to the superintendency or the post of assistant deputy minister may make better principals than those who are firmly oriented to a vocation of teaching. In passing we may note that school administration only appears as a specialist occupation in public schools. Administrators, as

\(^2\)Vice principals and department heads are best seen in the ideal-type model as assistants to the principal. These are positions that provide pre-socialization to the principalship for upwardly mobile personnel and for prestige and monetary rewards for selected teachers. They are of only operational and political importance in public school and public systems and essentially irrelevant in most analytical considerations of public schooling structures.
opposed to principals or head teachers seem unnecessary in child enrolling schools that are not of this type.

Using the models in organizational analysis. The first major use we may note, and the use for which the models were developed, is that of estimating the congruency between schools and other organizations and schools and the available analytical models of organizations. In attempting this, an appropriate procedure is to seek a match between the characteristics of the ideal-type public school and the features incorporated into models of organizations. This seemingly simple procedure can produce interesting results, one of which is the peculiar way in which the cellular structure of the public school matches the bureaucratic, open systems or technology models. Major observations must be left to a subsequent paper, but we may note in passing that it is the age-grade curriculum structure of the public school that defines workflow while the actual technology is that of classroom teaching. This gives a situation in which the main production unit of public schools is the "batch" of pupils in each class. However, the overall sequence of lesson to lesson, class to class and year to year workflow seems to appear as a process technology. In the Woodwardian (1965, 1970) technology models, this implies that two control structures will be evident in public schools: a "personal" system to handle unit and batch production in classrooms, and a "mechanical" system to manage the overall process at school, system and structure levels. These seem evident in the close, often affective, relationship between teacher and pupils and the more remote and production oriented approach characteristic of the external authorities and the principal. Hence, the professional-bureaucratic conflict in public schools could be partially understood as a consequence of two overlapping technologies. Analysis of conflicts between teacher autonomy and administrator regulation such as that
offered by Corwin (1965b) could profit by considering this technology aspect. Technology is more firmly related to school structure which in turn seems a more substantial basis for explanation than the more usual approach which is based on variant ideologies, although there appears an obvious link between the two.

The final organizational use of the model selected for comment here relates to policy. Viewed as conglomerates of classrooms in which the production process is only partially controllable by the external authorities and their executives, then aspects of school size appear as a much more indeterminate variable than is commonly assumed. The recent practice of attempting increased economies of scale through larger aggregation of classrooms can be seen as a very risky business for any scale economies realized in this fashion will depend on depreciating the cost of the large premises required over a considerable time. The possibility of this is, of course, entirely dependent upon the population density and fertility rates in a given geographical region. Once enrolment begins to subside, then the scale economies resulting from an aggregation of classrooms will obviously be cancelled out by a lowering of class sizes. Class instruction provides in itself the scale advantage that has ensured the popularity of schooling, as opposed to other teaching-learning systems, throughout cultures and times. Hence structural arrangements in school systems which allow for class sizes to remain reasonably constant regardless of minor fluctuations in pupil flow, would appear to offer the most economical arrangement. This would seem to suggest that large schools, that is larger aggregations of classrooms, represent false economy in geographical regions that do not offer the prospect of steady or increasing school enrolments over, say, a twenty to forty year time horizon. This is especially so when a large aggregation of classes in a
single school is effected to accommodate a total school age cohort in a reasonably large geographic area. Large schools are very sensitive to demographic variation.

A preferable alternative to putting all ones pupils in one basket would be to put fewer pupils in many baskets. A flexible network of smaller schools may be much more economical than a single large building, especially if additional classrooms can be coupled and decoupled as required through some temporary and easily transported type of accommodation.

Furthermore, the model suggests that, as a public school is an administrative unit of classrooms, then there seems little structural reason why all these classrooms need be connected to each other in the same premises. Perhaps an ideal public school system would approximate a network structure wherein neighbourhood schools of two or so classes were coupled through modern communication technology to other such units, with "batches" of these being administered by a peripatetic principal. Necessary specialist units could also be disaggregated in small centrally located packages.

Conclusion

There has been little room to discuss possible implications and potential uses of the two models at any length and the four short discussions above were selected from many that appear from a consideration of the models. They do suggest that there is a place for models of schools in the literature of educational administration. Those offered here represent an initial experimental contribution and are less than fully developed. In addition, the high level of generalization and abstraction offered by an ideal-type construct has been partially demonstrated. Extension of the models into other formats could be a profitable exercise.
In closing, we note that the two models developed stress that schools and public schools are different but similar things. Schools are not a recent invention, but public schools are, and it is within public schools and their attendant schooling structures that the discipline of educational administration has its justification and domain. We could do well to remember this. As Lewis Carroll (1970:271) put it, to quote another contributor to the realm of childhood and thus school literature: "You see, it's like a portmanteau - there are two meanings packed up into one word." School does not necessarily mean public school; the differences are significant.
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