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## POLITICS AND EDUCATION IN NOVA SCOTIA

NOW, THE NEW YEAR REVIVING OLD DESIRES, we are treated to the annual wrangle about teachers' salaries and to the perennial pontifications of those, and they are many, who hold strong opinions about the question. Education is everyone's business, and everyone, though not necessarily an authority on the subject, has authority to control the practice. One small-town mayor has recorded his lament over the degeneration of teachers, since in his youth girls just out of school taught ninety children of all ages for a salary of one hundred dollars a year. Another ruler of the system was heard to say: "Why should the teachers get more? They just sit on their bottoms. It's the kids do all the work." And teachers' pathetic comparisons of their salaries with those of doctors, lawyers, and engineers are no more realistic. A great deal of emotion is injected into the subject, as is usual when taxes are involved; but education is rarely considered as merely one essential part of community life, a part which must obey the laws governing such developments.

A generation ago Lewis Mumford produced a classification of technologies that has been widely used. From the cave until the beginning of the Industrial Revolution he named the *eotechnical* phase, characterized by worker ownership; wooden machinery; motive power from man, animals, wind, or water; and local raw materials. This was displaced by the *paleotechnical* phase in which the worker ceased to own the machines which now were chiefly of iron or steel, with steam for motive power, and with raw materials transported from afar by improved means of communication. We are now entering the *neotechnical* phase in which manager and worker alike are employed, machines are of alloyed steels or light metals and driven by electricity or by internal combustion, while raw materials are often reduced and reassembled chemically.

These changes, of course, have been neither abrupt nor universal. The ox-cart, the dory, and the water-mill may be found in the same area with the airplane,

the liner, and the automated factory, but the eotechnical survivals are usually marginal or interstitial, ill-paid and of little value to the community. The subsistence-farmer was once the standard citizen of eotechnical countries, whereas in a neo-technical society he is an expensive and dangerous parasite. With each technical change, social groups become obsolete and disappear. We are familiar with the decay of aristocracies that have lost both their property and their function; with the widening of opportunity, domestic servants have disappeared as if by pestilence; and coachmen and grooms had been left desolate a generation earlier. Nonessential segments of society could be preserved only by impoverishing the whole, whereas no more than retraining is needed to fit them into the new technical phase.

When we examine the history of school-teaching, we find that it has changed little since eotechnical days. This is not surprising. The other eotechnical professions, the church and the law, are not essentially different from their forerunners of three centuries ago. The law has been an essential instrument of business of all periods and so has maintained its prestige without greatly modernizing its techniques. The church and education are conserving organs of society and so tend to lag behind, with only minor adjustments to the new technologies and with salaries reminiscent of eotechnical days. Of course, if teachers teach because they like to teach, there is no reason why they should be paid for such self-indulgence. Many of our few surviving domestic servants continue in their occupation from devotion to the families of which they form part. So a few clergymen and teachers will always preach and teach, even if unpaid, from a feeling that the work is worth doing. But such dedication will never be found in the large numbers amenable to organization. All people are generous in some things and selfish in others, but one can build only upon the expectation of selfishness.

The technical revolutions are essentially urban, and rural technologies follow after at a considerable distance. This has peculiar political effects, for—it should be remembered—politics also has its phases, though Mumford did not define them. Marx pointed out a century ago that societies tend to take on the structure of their economic life. There is, however, a time-lag, and the political organization of a society is no more homogeneous than its economy.

In the Middle Ages, European society was divided into numerous interacting and conflicting *eopolitical* groups. We usually lump the whole under the title of feudalism, though that was only the military and landholding facet. By its side was the Church with its organization modelled upon that of the Roman army or civil service, which bore a distant resemblance to the modern socialist state. In the towns

were the councils of the guilds, ruled by the rich masters whose power was at times reinforced, at times checked, by the emotional and usually shortsighted mass of apprentices and journeymen. And, last, in the country there were the village courts, which—while under the thumb of the landlords—could yet mobilize a powerful public opinion.

With the end of the Middle Ages the truly feudal and Church systems were replaced by a hierarchy of wealth which derived its standards from the money-values of the towns. It was this society, becoming progressively more urban, that produced the *paleopolitical* Industrial Revolution in which the direct democracy of the small group of the established wealthy was tempered by indirect democracy in which a widening mass of the less wealthy sent representatives into the governing parliament.

Meanwhile the colonization of the eastern seaboard of America had transferred to the new lands the eopolitical institutions of England, the plutocratic ideals of the towns and the direct democratic methods of the villages. These colonies have developed into huge countries and have passed through the three phases of technological development, all of which survive in varying degree. Similarly, the three phases of political development may be found, each reflecting the need of its own technology. The rural view is still largely eopolitical, seeing life shortsightedly in terms of immediate local interest; the urban point of view is paleopolitical, its range of sympathy even nation-wide but limited to the advantage of its own economic class; the *neopolitical* is only dimly beginning to express itself and is at a disadvantage through having to function through paleopolitical institutions; but it seeks the welfare of the whole society and, perhaps, beyond that of the whole world. The debates of the federal parliament at Ottawa often voice neopolitical sentiments, but the great bulk of the action is paleopolitical and even eopolitical—"talking for Buncombe". In the provincial legislatures neopolitical ideas have no place and action is paleopolitical at best. In the municipalities we are back in the purely eopolitical.

Education is a function partly of the political organization of the community and partly of the economic. During the slow-moving eotechnical phase, education was religious and was as conservative in attitude as the parental and apprenticeship trainings in skills. In time some remarkable mathematicians, astronomers, and primitive scientists emerged, but they arose in spite of the educational system and not because of it. The Church was the chief way of escape from the drudgery of peasant life or from the futile bloodiness of arms. Most of the intellectuals turned to the endless hairsplitting of scholastic philosophy, but, as soon as mercantile life

reawakened interest in new things beyond the boundaries of the traditional, skilled minds were ready to grapple with new problems.

During the eotechnical phase, education had spread downward in society until some had reached all groups except those of the poorer labourers and peasants. The materials of education ranged from the older classical ideals of religious education to the more practical needs of the literate townsman. Children were flogged through the schools until they escaped into civil life or moved on through the university into the churches, which were still the main outlet for intellectuals.

The Industrial Revolution had at first little demand for any but unskilled labour, but its success complicated society and set up the need for many kinds of literate employees. England had three levels of school. The public (i.e. private) schools with their discipline, responsibility, and classical curriculum produced a standardized self-confident class of administrators, unaware of the technological and commercial bases of their own society but capable of enforcing disinterested justice according to their varying lights. In the middle were the grammar schools, which gave a more practical education decorated by the classics but not composed of them. At the bottom the education of the poor aimed at simple literacy, little more. In America there were only two levels of school: the common school which, like those in England, sought general literacy; and the academies, which aimed at preparation for the universities and were nearly as classical as the English public schools.

The techniques of education had changed even less than the curriculum, so that it is scarcely possible to call this paleoeducation. The characteristics of paleotechnics—the large units, the transporting from afar, the saving of time and labour by mechanization—have no part in the picture. An increasing nationalism in the social studies, a greater standardization and organization of the system, are the only paleotechnic tendencies. Classes, teachers, and methods are little altered, though women have begun to take the place of men as teachers.

Paleotechnic development owed little to the schools and universities. The basic inventions, apart from Professor Black's contribution to the reciprocal steam-engine, were the work of practical men of mechanical bent. Science was generally in the hands of dilettanti who did colossal work with the scantiest of formal training and often in their spare time. The churches and teaching were still the principal outlets for the intellectuals whom the educational system produced in small but excessive numbers; and, since the supply exceeded the demand, there was no need for changing either the wasteful techniques of teaching or the low status of teachers.

The neotechnical phase, roughly this century, has as yet had little direct effect upon education. The traditional classics are declining rapidly as the paleopolitical ideals spread; and science, taught usually as a mass of material to be mastered by memory, is proportionately rising. In society the major technical gains now come from laboratory research, which demands specialized training and often elaborate equipment beyond the reach of the amateur. The best of the intellectuals now turn towards science; then profitable business must be satisfied; the ministries and the schools must take what is left. No doubt, the dedicated of all intellectual levels are still available, but these must always be few, while the self-seeking majority demands higher rewards, better status, and a greater sense of accomplishment than can be obtained from professions still essentially eotechnic. The increasing wealth of industrialized countries has made the labour of children unnecessary and undesirable, so that today the mass of the population attends school until the age of sixteen or beyond, whether still learning or not. American high schools have often met this flood of non-academic students by providing technical courses in office work, trades, hair-dressing, and printing, and recently some attention has been given to rescuing the intellectually more capable from drowning in a flood of mediocrity. But as yet nothing has emerged that can truly be called *neoeducation*.

The characteristics of neotechnics that have made for the prosperity of modern societies and that are applicable in education, are: labour-saving devices, chiefly electric machines with a high degree of automation; few employees in proportion to the volume of material handled, and these employees specialized to their tasks and hierarchically graded, so that one does not waste an engineer on truck-driving or a machinist upon greasing; careful preparation and standardization of material to be handled. Only the faintest echo of these developments has as yet stirred Canadian education.

The cost of education is a tremendous and ever-increasing burden upon society. This is a typically human development. No other animal compares with man in the length of educable youth and in the ratio of learned to innate behaviour. What is desirable is that the education should be as efficient to its purpose and as little wasteful as possible. It is a commonplace that the students of today are the citizens of tomorrow, but it is at times overlooked that the society of tomorrow will not be the society of today. We cannot foresee the future society in detail; but we can be fairly sure that, disasters apart, it will move on farther into neotechnics and not turn back towards eotechnics. Yet in the organization of education in Nova Scotia we find

not a single political or institutional influence of which the tendency is not conservative.

Because of the heterogeneous origins of Canadians, the British North America Act found it wise to leave the function of education in the hands of the separate provinces. Nova Scotia, when first it founded a system of compulsory public education, put most of the responsibility, both administrative and financial, into the hands of local school boards. So the system was entrusted to the most eotechnical and eopolitical section of the community. At first there were also a number of private schools that prepared a minority of students for the university, and later the county academies took over much of this function at public expense. These were usually controlled by the town merchants, a group with paleopolitical attitudes. The surviving private schools and the universities have almost always been religious foundations, since this has given certain exemptions from taxation, but it has also guaranteed an eopolitical attitude in the administration. In every generation about half the young people must leave Nova Scotia for fresher woods of greater possibilities and of higher technical development; yet all the forces of Nova Scotian democracy seem united to frustrate any attempt to lift education out of the coeducational, or at best the lower paleoeducational, phase.

Nova Scotian education is copied from that of New England. Some two generations ago the grading system was introduced in a praiseworthy attempt to apply mass-production techniques to education. Obviously it is easier to teach a group which has all had the same preparation to the same level. Of course, it is not so simple as that. Some learn quickly, some slowly; some like learning, others detest it; some have homes that drive them through their homework, others must do chores until bedtime. Those who fail to reach the required level may be held back; those who learn very quickly may be allowed to skip a grade. In a large town where few parents know each other, in a paleotechnic society, this works well enough; but in an eotechnic village where everyone knows every detail of everyone else's business, democracy is outraged. Why shouldn't my child pass when the others do? School-board members are human, doing a public duty for little thanks, and they like to live in peace. So authority is usually arrayed on the side of eotechnical equalitarian democracy and against the purpose for which the grading system was founded. The ill-prepared are promoted; the well-prepared are held to the pace of the average. Democracy is satisfied, but the needs of neotechnical society for well-educated specialists are very ill served.

He who pays the piper calls the tune. In the early days of public education

in Nova Scotia, the rural school-section paid most of the piper's fee and had every right to call the tune. Today a high proportion of the cost is paid by the province, and reasonably the province calls the tune in matters of curriculum and general regulation. The handling of education, as one would expect, is better informed and less shortsighted on the provincial than on the local level; but even there wisdom is apt to be daunted by the political threat of the offended voter. A government which deals honestly with the educational needs of the province will inevitably raise taxes and suffer the penalty. How much safer, then, to avoid the thorny subject!

It is open to question whether the province's payments really give it the right to call the tune. In these days a very large part of the provincial income comes from the central government, partly as a return to the province of a share of taxes raised locally and partly as a dividend from the total prosperity of Canada. If the country is sharing justly, the local educational system should be geared to the needs of Canada as a whole, especially since Nova Scotia educates such a high proportion of its youth for the benefit of other provinces. But unfortunately the social divisions in Canada still make impracticable any planned national educational policy, so that any advance towards neoeducation will have to come from the pressures of circumstance.

Such pressures are already considerable. Two generations ago the outward flow of Nova Scotians was already an old phenomenon. Many went to the United States, many to the western provinces which were then just opening up. The eotechnic culture of Nova Scotia, combined with elementary education, was adequate preparation for work in other areas where conditions were not dissimilar, except that land was more available or employment more abundant. But the phase of land exploitation has come to an end in Canada, and the flow is now towards industrial centres in which eotechnics and coeducation qualify the outsider only for "slave labour". In Ontario one hears: "Nova Scotia? That's where they stop school in grade eight, isn't it?" It is a high price to pay for direct democratic control of education.

The costs of education are rising by leaps and bounds. Teachers in Nova Scotia now receive salaries comparable to those of civil servants and school janitors, yet still the number remains inadequate to meet the demand. The turnover of teachers is high, for many of the best qualified leave teaching for more satisfying work. It is disheartening for taxpayers who see precious money thrown into the bottomless pit of education to no apparent result. Nor is the situation spiritually satisfactory to teachers. Everyone would prefer to do good work; good work demands continuity of staff; yet the need to battle to raise teachers' salaries demands a willingness to

leave and to disrupt the organization which is incompatible with sound planning. In the land-bound rigidity of village life there used to be great value in having mobile teachers and ministers upon whom could be unloaded the spites of daily life which they, as scapegoats, could carry away into the wilderness. Today things are changing.

Teachers' salaries are rising because the wages of the whole country are affected, if not set, by the neotechnical development of industry. "The rising tide lifts all the boats." In neotechnical industries such salaries are justified by the increased production of each employee who is highly specialized and whose time must not be wasted. It is the competition with such employment that has exterminated eotechnical occupations such as subsistence farming and domestic service. Yet teaching continues on its eotechnical way, unspecialized, unmechanized, indefinite. Classes become always smaller so that individual attention may be given; the greater part of a teacher's time is devoted to coaching those unprepared for a subject or incapable of handling it. Highly qualified teachers spend their time in completely unskilled supervision, in filling out the repetitive forms inseparable from government administration, and in such tasks as carrying on sales of magazines, collecting for charities, and reading essays instigated by pressure-groups. It is doubtful if, by industrial standards, the average teacher works at thirty per cent efficiency. This is the fault not of the teacher but of the system; yet the system could be changed only over the dead bodies of our copoliticians.

It is not to the point to suggest a Utopian system to replace the present confusion. Any organization, to be workable, must be accepted without question by a majority of those who have to make it function. Our teachers have been trained in schools of education that take the present system for granted and deviate from it only towards a suspect Deweyism; our students are accustomed to the system; their parents were brought up in it; our school buildings were planned for it, so that it would be difficult to alter the system neoeducationally without extensive remodeling of the plant. To be effective, changes must be brought in gradually and experimentally, with an eye upon distant goals; yet our system is organized on a year-by-year basis.

In neoeducation certain essentials must be retained at all costs, though some desirable features of education may have to be sacrificed as too expensive for retention, much as servants and tailor-made clothes have passed beyond the means of social groups to whom they had formerly been normal. The adequately paid teacher has come to stay. Education must still be available for all at the expense



of the communities that the children can be expected to benefit. Since education is to be paid for by the community and not specifically by the parents, the type of education to be given should not be directly under the control of the parents. A neo-technical society will need a decreasing proportion of slave labour, many highly specialized technicians and engineers, and a good number of scientists, scholars, and thinkers, a group which in the past we have chiefly imported. It is likely that high schools anywhere, and certainly high schools in Nova Scotia, will be unable to cope with the innumerable special skills needed in industry; but a thorough grounding in basic skills may be possible. As the volume of learning needed in any advanced field is always increasing, we cannot afford to slow down the more capable students to the snail's pace of the average. A great deal more of the undergraduate college work will have to be available in high schools, so that adjustments will also become necessary in the universities.

This picture may suggest the housewife's ideal of "a nice small house with a lot of nice large rooms", but many apparent difficulties stem merely from assumed conditions. "A better educational system will need better teachers." At least it will need teachers understanding that system. "There would have to be more teachers." Not necessarily. Our present classes were designed for coeducational techniques which are customary but not necessary or even desirable. Classes need to be small when they are badly graded or when the children are badly brought up. But it is not desirable that the system should be geared to the exceptions. Auxiliary and remedial classes should be available for these. "The teacher could not handle the amount of homework and marking involved in such large classes." It would be possible to change the type of homework to suit these conditions, while many types of tests reduce marking to a minimum. "Teachers would not have time to compile such tests which, through quick to mark, are complex to build." There are some two hundred high schools in the province, and it would be eotechnical to have each teacher compiling tests. These could be made available by a central department and, if necessary, marked by machine. "There would not be enough teachers available to offer the subjects, such as Latin, German, or geology, which are taken by only a few, so that the intellectually competent would still be ill served." But classes need not be taught aloud or separately. Many subjects can be pooled by methods of self-instruction. At present lack of adequate and available libraries leads to a pernicious concentration upon textbooks and the spoken word. This technique arose before the invention of cheap printing, motion pictures, and tape-recordings. "But

these things cost money!" So do teachers today. The essence of neotechnical success lies in the greater investment in equipment for the saving of expensive labour.

There is no need to imagine new techniques and organizations to make such changes possible, for they exist already. But many of these aims run directly counter to the axioms of current education and politics. Eopolitical influences are still predominant, and our curricula become more and more watered down to suit the abilities of the mediocre when they should instead be speeded up to meet the needs of the country. Less and less is being taught in ever longer time; classes become smaller and we boast of it; some school-boards give preference to the less qualified teachers as being cheaper; and costs continue to rise to an obligato of howls from taxpayers cut to the hearts that too many of them still keep in their eopolitical pockets.