

SCHOOLING AND FUTURE SOCIETY

by

Johan Galtung

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Chair in Conflict and Peace Research
University of Oslo

1. Introduction

This essay is concerned with schooling and the future. As such it has to do with the future of human society, and there are some assumptions underlying the analysis that might just as well be spelt out from the very beginning.

First, it is assumed that education is rapidly becoming a key element in the general social structure. This is a somewhat trite statement and can only be given more precise meaning if it is seen as opposed to the commonly held idea, especially in classical marxism, that the economic sector (particularly the organization of production) harbors the key to social understanding and social transformation. Certainly, the suggestion here is not to substitute one single-cause theory for another, but to see education as more or less equally basic. In other words, it is assumed that changes brought about in the sector of education will have deep side effects all over society.

Second, the future of education in general, and the future of schools in particular, cannot be understood in isolation. It has to be conceived of in a social context. In much of future studies that social context is essentially taken for given - it is our contemporary liberal society - with its slow, relatively continuous and relatively balanced transformation, within a given matrix. We shall make no such assumption; rather, it will be assumed that this very society will continue to be the target of very fundamental criticism, much of which has to do precisely with the structure of education. In other words, the transformation of schools and education will be seen as a part of general social transformation, partly caused by it, partly causing it.

Third, in order to conceive of general social transformation extrapolation within the given social context is insufficient. It is assumed that there is a basic transformation ahead of us, something that has to do with a transition from more vertical, inequitable towards more horizontal, equitable societies.¹ In all probability this change is not going to be pleasant for those on top of our present social structure - not only the capitalists singled out as victims in marxist analysis, but equally or even more so the highly educated, the intellectuals, the professionals - us.

I consider this last point rather important. There has always been something artificial, even escapist in conventional leftist critique where top intellectuals more or less use marxist instruments to stigmatize and exorcise the top people in the economic sector, the rich, the owners of means of production - the private and state capitalists. It has been convenient to see the enemy on the other side of the fence, and - needless to say - this feeling has been richly reciprocated. What is presented in this paper, however, is a view complementing the view just mentioned, talking less about the sellers and buyers of labor, the underprivileged and overprivileged - and much more about the undereducated and the overeducated, well knowing that the author himself belongs in the latter category. What that means, however, is not that one has received too much education but that one is put into a social structure where this education is immediately converted into many other social benefits, one of them being power. The mechanisms by which this happens will to some extent be explored below, as well as some ideas about how this would increasingly become a social issue with highly polarizing effects and lead to some type of struggle that eventually will bring about a more basic transformation than those currently contemplated by the Ministries of Education in western, industrialized, liberal societies.

This is the background for the analysis offered in this paper. But, to gain in perspective, we want to start by contrasting Ministries of Education with a non-existing ministry - in a little parable.

2. A parable: the Ministry of Eating.

We assume that education is one of man's fundamental needs, others being food, clothes, shelter, health. However, there is a very basic difference in the approach taken by contemporary governments in the "developed" part of the world - and by implication almost everybody in the world today - when it comes to the satisfaction of these needs. More precisely, there is the difference between the government's participation in making the means of satisfaction available, and prescribing in detail how the needs are to be satisfied. Thus, many governments have ministries of food and there is even a UN Specialized Agency in that field, but no government to our knowledge has a Ministry of Eating. On the other hand, the Ministries of Education do considerably more than just making education available: they are, in fact, to a large extent ministries of schooling. So, to gain in perspective as to what this means, let us imagine the Ministry of Eating!

In doing so there is Eugene Richter's Pictures of the Socialistic Future to draw upon.² This satire, or negative utopia which we might say today, appeared in the 1890's and was used as we use it here, essentially as a political weapon (Richter was the leader of the Liberal Party in the German Reichstag). We quote from the section dealing with "The New State Cookshops":

In the State cookshops everything, even to the smallest details, has been anticipated and settled beforehand. No one person obtains the smallest preference over others. The picking and choosing amongst the various State cookshops cannot, of course, be tolerated. Each person has the right to dine at the cookshop of the district in which his dwelling is situated. The chief meal of the day is taken between 12 o'clock and 6 in the evening. Everyone has to report himself at the cookshop of his district, either during the mid-day rest or at the close of the day.

I am sorry to say that I can now no longer take my meals with my wife except on Sundays, as I have been accustomed to do for the last twenty-five years, inasmuch

as our hours of labour are now entirely different...

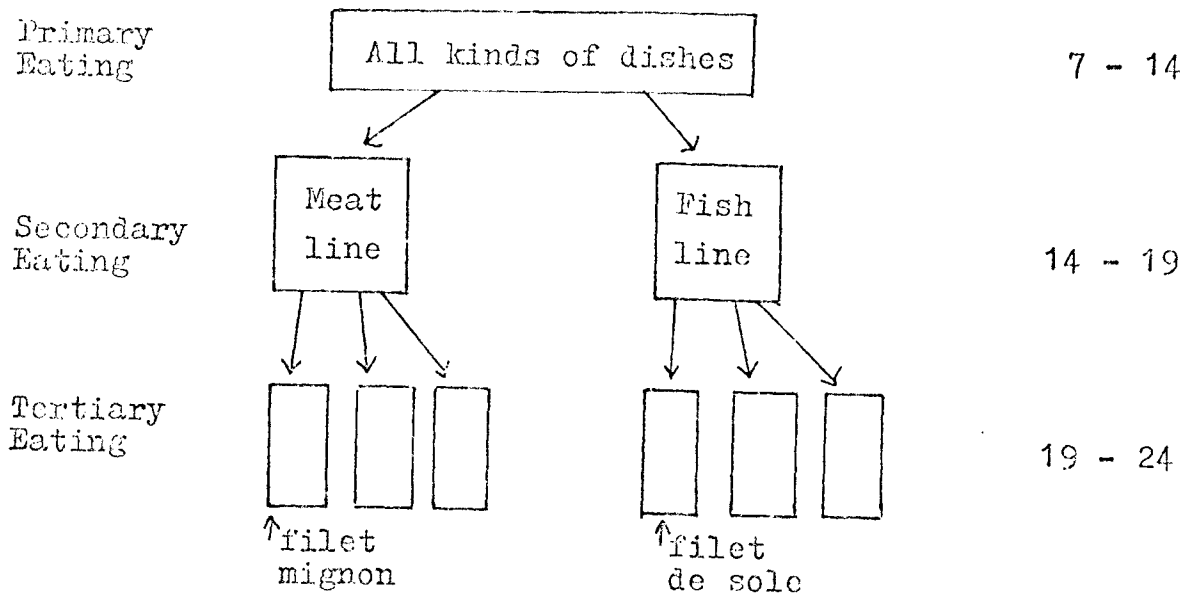
It is an inspiring thought to reflect that in every State cookshop in Berlin on one and the same day exactly the same dishes are served. As each establishment knows how many visitors it has to count upon, and as these visitors are saved all the embarrassment of having to choose from a lengthy bill of fare, it is clear that no time is lost; whilst there is also none of that waste and loss consequent upon a lot of stuff being left, which circumstance used so much to enhance the price of dining at the restaurants of the upper classes. Indeed, this saving may well be reckoned amongst the most signal triumphs of the socialistic organisation..

All the portions served out are of the same size. One insatiable fellow to-day who asked for more was rightly served by being heartily laughed at; for what more deadly blow could be levelled at one of the fundamental principles of equality? For the same reason the suggestion to serve out smaller portions to women was at once indignantly rejected.

One might now build upon Richter's parable and imagine a much more advanced Ministry of Eating than the one behind Richter's Cookshops. For instance, a Ministry of Eating with any self respect would care for the whole population; it would see to it that eating is properly done by all age groups, children, adolescents and adults. But should they have the same food? - No, that would reflect lack of understanding of how needs are age-specific, not only in terms of the quantity needed, but also in terms of kind of food. Just as people have talent they also have taste, a basic task of the eating establishments should therefore be to make people become aware of their basic taste inclination. Once that awareness has surfaced the person should make his choice, so to speak develop his line of eating, and it is the task of the state to make this line (within a reasonable range) available to him. Thus, as he and she proceed through life an increasing differentiation will take place, starting with a primary level of eating with many kinds of dishes available but at a very simple level, proceeding to a secondary level where some fundamental choices have already been made and the quality is better, and then onwards to the tertiary level of eating where differentiation has been brought to a level of

specificity that corresponds to highly developed taste, and the quality is first rate:

Figure 1. The Ministry of Eating: the Basic Flow Chart.



Of course, it is always to be foreseen that there will be people who have not come to sufficient taste awareness at the time when basic decisions have to be made: at the ages of 14 and 19. There should be a provision in the system for such people, they should be permitted to make a cross-over, subject to decisions made by a Board of Review. Also, if at the tertiary level somebody wants a specialized eating line on the other side of the board he should not have to take the whole secondary line for that purpose, the last year should be sufficient to provide a basis of a more general nature that would develop his tastes in the new direction. Needless to say, however, there is a limit to how many such changes any single person can make during his life: in general, once a line has been chosen one would expect the citizen to stick to it. Frequent changes of taste would be not only a sign of tastelessness, it would be the typical mark of a rather wishy-washy person. Such persons exist, it will be one of the tasks at the primary eating level to develop ways of locating them so that

their fundamental taste awareness could be developed as early in life as possible.

From the point of view of planning the scheme offers extremely important potentials: one would know what food to provide for how many citizens regardless of age level. This would not be subject to sudden and unpredictable changes. True, the system gives to each citizen the freedom of choice, at the ages of 14 and 19 respectively, as is natural in a democratic society, but the choices are public and there is a commitment behind them: hence a basis for planning, for budgeting--

And so on, and so forth.

So, why is it that we do not have this type of ministry? For one simple reason: one may assume that people are sufficiently motivated to eat to do so with no further encouragement, neither of the carrot, nor of the stick types. There is general trust in people where eating is concerned - they may eat the wrong things but eat they will if there is a supply and they can afford it. But when it comes to schooling there is an equally general lack of trust in people's desire to be educated, hence the need for a very elaborate machinery combining coercion to get people into the system (compulsory schooling under the law), adding promises of remuneration to make them have more of it - offering visions of prestige, remuneration, power - roughly proportionate to the number of years of schooling. Whereas eating is seen as inherently rewarding, in need of no further motivation, negative or positive, schooling is seen as badly in need of external sources of motivation.

But does this not merely add up to one simple conclusion: that the two phenomena are incomparable? No, for just as the organization of schooling may serve as a dystopia if it is used as a model for eating - maybe eating may serve as more of a utopia if it is used as a model for schooling? In other words, maybe we could learn a lot from the way we actually do take our food, in most societies, and translate it into a model for schooling?

We shall try to do exactly that, but in order to avoid that this becomes a completely empty exercise in utopia-construction a critique of contemporary schooling practices is indispensable.

3. A critique of schooling.

Schools exist in a social setting, this social setting has to be characterized. The basic social characteristics of our industrialized, western societies will for our purposes be set down as follows:

I. Social Structure

- (1) Verticality, inequality, vertical division of labor
- (2) Individualism, diversity, dissimilarity

II. Economic Structure

- (1) The Idea of Processing
- (2) The Idea of Substitutability

The two characteristics of social structure that we have chosen as a point of departure for the discussion combine together into what has elsewhere been referred to, and elaborated, as a Model II society, the liberal society.³ In this connection it is unnecessary to draw upon all of that, suffice it only to say that steep verticality and an emphasis on individualism combines into a pattern of individual mobility. The goal of life is to succeed, to succeed is to move upwards, and society is set up in such a way that it permits some upward mobility for a certain fraction of the members of society. This social formation could be contrasted with a vertical, collectivist structure where mobility is frowned upon, or even completely absent. But it should also be contrasted with a horizontal, collectivist society where interaction is set up in such a way that it is not much more beneficial to some than to others.⁴

This last point has to be delved into to become meaningful.

There are several ways in which participation in interaction may be beneficial to some rather than to others. Let us for the sake of simplicity divide them into two: those who become rich (an increase of having), those who become enriched (an increase in being). Accumulation of profits would be an obvious example of the former, mind expansion due to participation in fascinating, engaging work would be an example of the latter. Hence, one basic problem in the analysis of social structure would

be to find to what extent society is set up in such a way that interaction cycles are created with benefits of either or both kinds accumulating unevenly or evenly. Vertical society, needless to say, would be characterized by uneven accumulation.

Economic structure is closely related to this, but the way that we conceive of that concept here is more material. More particularly, we are thinking of the very useful distinction between extraction of raw materials, their processing and their distribution as well as the administration of the entire process; the distinction between primary, secondary, and tertiary sectors of production. The emergence of processing is identified as industrialization, the emergence of distribution as commercialization; if both are negated one would have a society consisting of self-sufficient units (individuals, families or groups) living off the nature, either extracting directly from it or preparing the nature in order to permit extraction. To permit industrialization the conventional production factors, raw materials, raw labor and capital, have to be brought together at one place - it is in their action upon each other that products are produced. In order to permit commercialization products have to be moved and exchanged; for that reason means of transportation/communication are for commercialization the same as means of production are for industrialization.

Underlying most industrialization and commercialization is the idea of substitutability. Both patterns are based on the idea that industry and commerce are going to continue, as much as possible in an uninterrupted flow. For this to happen there has to be a high level of standardization: raw materials, raw labor and capital are pumped into the machinery in an endless flow, but since the machinery (the means of production) is set to receive certain inputs in order to produce the desired output the inputs have to be substitutable for each other. One lump of raw material has to be as good as the preceding one in order for one finished product to be as good as the preceding one. And the same applies to commerce: it is predicated on the assumption that experience made with one product is valid as a basis for predicting what other products of the same kind will

be like. Needless to say, underlying this fundamental characteristic of "modern society" is insight into general and operative principles, in other words science and technology.

There are some variations within the societies that are based on the social structure and the economic structure just described. Thus, much contemporary political theory, particularly based on differences between the socialist countries (Soviet Union and Eastern Europe) and the capitalist countries (United States and Western Europe) centers around the factors of "individualism" and "ownership of means of production." Individualism is seen in terms of the individual's own right to choose, on his freedom of expression and freedom of impression. In other words, the focus is placed on the mechanism of differentiation rather on the differentiation itself. Thus, in the Soviet Union people are also neatly divided into all kinds of professions, high and low, as they are in the United States and probably mainly out of their free choice, but even if it were not out of their free choice differentiation with individuals as the ultimate sorting unit would still be a basic characteristic of society.

As to the ownership of means of production: there is no doubt that this is important since it affects the use to which the surplus value resulting from industrialization and commercialization can be put. It is not obvious, however, that it makes much difference in whose hands the decision-making is; at best this is one among very many conditions. Incidentally, that view also has the flaw of overlooking the important role played by means of transportation/communication, focussing too one-sidedly on the means of production.

One of the many dangers in singling out these two dimensions, done in the liberal critique of socialist society and the marxist critique of capitalist society respectively, is a tendency (certainly most pronounced in the liberal critique) to forget about the second dimension. But it is quite possible to set up a production process in such a way that the means of production are collectivized and everybody gets the same material benefits; yet some people have much more

interesting, mind-expanding jobs than others. Similarly, substitutability of one person for another in the production process does not disappear with the collectivization of means of production or salary equality; on the contrary, such transformations may even facilitate substitutability because people become more similar.

It is not our task here to go deeper into this than we need in order to say something about schooling. However, we have to justify the point made in the introduction: that education in general and schooling in particular must be analyzed in a social setting. The reason why is that we think the society with the four characteristics mentioned above is beset with some very basic problems, and for that reason is likely to undergo many sharp, discontinuous and probably also disagreeable changes in the relatively near future⁵ - from the United States through Western and Eastern Europe to the Soviet Union (it will be noticed that the analytical dimensions emphasize their similarities.)

Why? Simply because verticality is inextricably associated with exploitation of those at the bottom, in the poorest countries so much so that they do not even have their fundamental needs satisfied, in the richer countries by tying the overwhelming majority of the population to boring, even personality contracting jobs; because individualism detaches individuals from each other, even pitting them against each other in relentless competition for mobility; because processing in the way mentioned serves to move production factors to places of accumulation, thus creating steep center-periphery gradients within and between nations; and because substitutability also applies to people, making them into spare parts in the productive machinery, thus creating mass alienation. This is a rather long register of sins, by no means unknown, and it shows up in such phenomena as material and spiritual starvation, psychosomatic symptoms related to loneliness and competition, enrichment of the center and impoverishment of the periphery, basic uncertainty about the meaning of the whole thing. The system can be kept floating to the extent that it provides bread and circus for the masses: In the periphery (masses) of the Periphery, however, (countries) it does not even do that and the results are forthcoming.⁶

Obviously, with this kind of perspective on the dominant social formation of the world today and its future - with which one may agree or not - any effort to talk about "schooling in future society" would not take the form of a simple extrapolation from the present, for instance in terms of number of pupils, number of teachers, number of schools. On the contrary, future studies in this field would have to deal with the crisis of the social order depicted, and the role of education and schooling in that connection.

Our thesis is simple: schools are partly a reproduction, partly a reinforcement of the social and economic structure of society at large. Of course, by being a reproduction, by mirroring macro-society in the microcosm of the school, even of the classroom, there is already a reinforcement because the process of schooling is a way of getting acquainted with general social patterns, even to the point of internalizing them. But in addition to that schools also serve the social order in a more direct manner, to be indicated below. Thus, there are two hypotheses linking the fate of schools to the fate of society: an indirect one in terms of reproduction and a direct one in terms of reinforcement. But, referring to the points made in the introduction: we are not at all postulating that changes in the schools will come as a tail effect of changes in society at large. On the contrary, the question to be discussed in the following section is to what extent the linkage between the two can make schools more of a pivot element in social transformation.

However, to delve into this more has to be said about the two hypotheses, about indirect and direct linkage.

(1) As to reproduction: that the whole schooling system serves as an illustration of verticality is in no need of elaboration. There is ranking within ranking within ranking: pupils are ranked in terms of ability, classes or forms are ranked numerically as rungs on a ladder within a school system, the systems are ranked in terms of primary, secondary, tertiary. It is probably only the military sector of society, and some very few others, that can muster a verticality as pronounced and formalized as the school system.

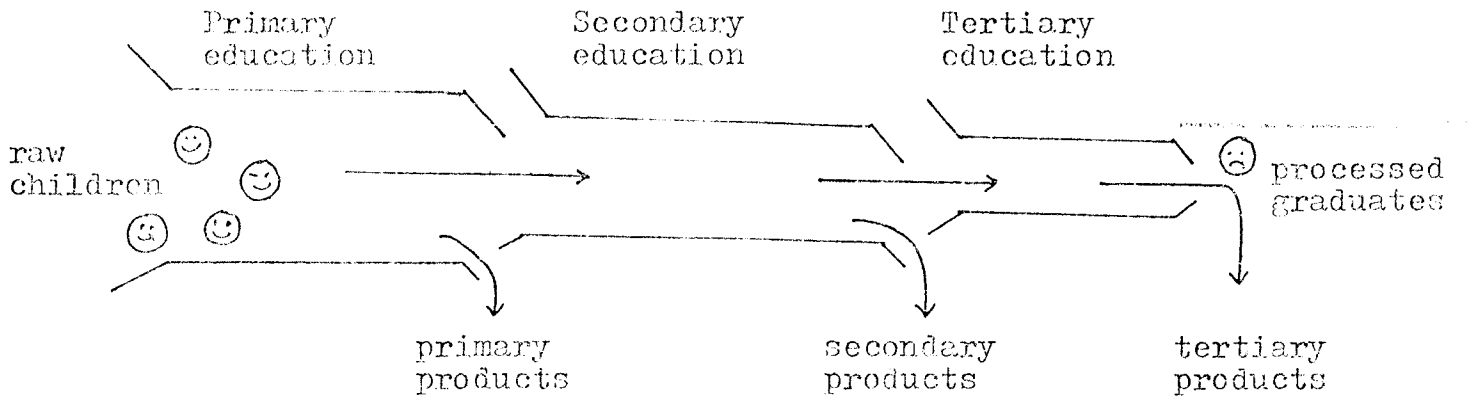
But in addition to this there is the fundamental teacher/pupil professor/student verticality. There are those who teach and there are those who learn. Moreover, this distinction is correlated with age, thereby reproducing the parent/child relation.

Individualism is not difficult to trace in the school system either, for the basic assumption is that the individual is the ultimate educational unit, the receptacle of knowledge. Knowledge does not reside in any group consciousness but in individual consciousness, and the supreme institutional expression of this is, of course, the examination. In the examination individuals are pitted against each other in a competitive race, even to the point that expressions of solidarity in the form of helping each other is denounced under the category of "cheating"; it is antithetical to the institution. This makes schooling an example of fragmentation of the underdog, although generally not so extreme as the fragmentation encountered during examinations.

Verticality and individualism together combine into patterns of structural violence⁷ when we add to these two elements the way in which the whole school system is an exercise in penetration, the systematic formation of consciousness from above, and also in a marginalization whereby pupils and students remain the second-class citizens of the institution. The way schools are set up, generally speaking, will tend to make structural violence look not as a structural disease but as the normal structure, the way society not only is, but even should be.

That the school system also is isomorphic with the economic structure is fairly obvious; after all, it is designed within the same basic social framework, the same underlying ethos, to a large extent by the same people. Essentially it is a system for the processing of raw children into processed children, at three different levels: primary school graduates that must be regarded as some type of semi-manufactured goods, secondary school graduates that to a large extent serve as inputs for the tertiary level, out of which come the finished products, the tertiary graduates. Thus, society starts with unprocessed children, and ends up with more or less finished products at three levels - total processing

Figure 2. Schooling as processing.



requiring as much as 20 years. The similarity is obvious: raw material flows through the means of production, here called means of education - schools. The output of one institution serves as the input for the next, since they are coupled in series like in any other production process. The workers (here called teachers/professors) are more skilled the closer one comes to the tail end of the process, and considerable capital is pumped into the total machinery. A school, hence, becomes a meeting point for raw materials, labor and capital just like any other factory, and tend to concentrate in bigger cities the higher the level of processing - again, just like any other factory.

Substitutability is served through standardization of the schooling process. Education is industrialized, it is mass production rather than individual attention, it is not artisanry. Like pupils should be treated alike. This is referred to as "justice": they should be comparable all over the country.

Now, if education production is as similar to economic production as we have tried to make them look in this paper, then there should also be similarities in their unapplauded consequences. More particularly, there should be something in education corresponding to such characteristics of economic cycles as ecological imbalance, exploitation and alienation.

To start with alienation: in most countries today the educational system would be one of the biggest institutions, comparable to the army, and to the biggest corporations combined, in terms of number of people involved. They cannot be compared in terms of assets since the theory and practice of economics are peculiarly poor when it comes to expressing, in monetary terms, the value of an educational investment. But the educational cycles running through ministries, professors/teachers and students/pupils are at least as extensive and alienating as economic production cycles passing through the headquarters of multinational corporations, their daughter companies and the lowest paid workers out in the fields. A pupil or student in a school does not have more control over their own situation than a worker in a factory. This does not necessarily mean

that there are others that have much more control. It may also mean that the processing cycles have become so involved, so extensive that they master people rather than vice versa, including those at the top.

Under the general heading of exploitation, or uneven accumulation, attention is focussed on a well-known problem in pedagogical theory: "vertical" versus "horizontal" learning. In general it is probably more enriching to prepare a class/lecture than to listen to the result of that preparation, provided the preparation does not become too repetitive. Potentially teaching develops teachers/professors more than it develops pupils/students; the latter probably develop best in interaction with each other. Similarly decision-making develops the subjects more than the objects of decision-making. The system of education is replete with both types of verticality.

Finally, there is the problem of ecological imbalance - is there anything corresponding to this in the education production? Without pressing the analogy too far, we think there is: if "raw pupils" correspond to "raw materials" then they can be seen as parts of nature. Through the processing that takes place in schools they are transformed, and much contemporary pedagogical critique centers exactly on the way in which they become decreasingly natural, and increasingly become artifacts adjusted to the system, rather than vice versa. There must be some limits to human plasticity, twenty consecutive years in primary, secondary and tertiary education is some kind of pollution of human nature.

And as we pollute we also deplete: there will be decreasingly many unpolluted human beings around with increasing educational growth just as there will be less and less unpolluted nature around with increasing economic growth. In fact, the insistence in several socialist countries that particularly students should break up their studies and work for some time on farms and in factories may be seen as a way of "recycling" human nature, not only as a way of equalizing conditions between students, farmers and workers. On the other hand, as a resource human beings are renewable, new ones are born every day, every second so there is always a chance to rethink, reformulate and reform the entire process.

(2) As to reinforcement: The ways in which this particular way of setting up education serves the general social order can now be discussed, and the first general heading to be used is sorting.

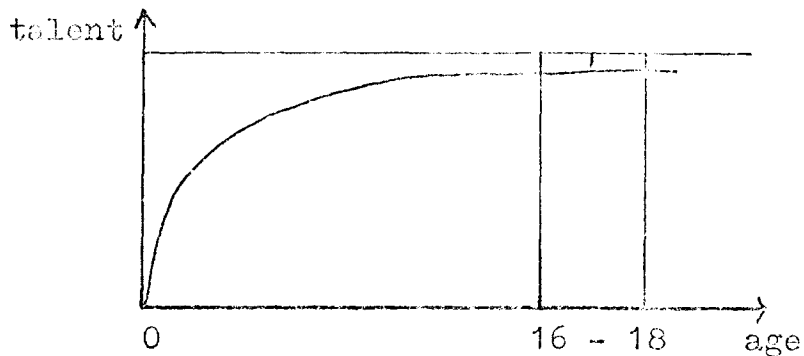
Schools serve verticality and individualism by sorting people into levels (as defined by level of schooling attained, and how well they did at the examination), and line (type of specialization). Imagine a big undifferentiated heap of children who are fed into the machinery at the same big intake and then moved forward into increasingly differentiated lines, with many branching processes, some of them forking upwards, some sideways. The net result are outputs that are already verticalized in terms of so-called talent and individualized in terms of so-called interest. At the end of each pipe the products that emerge are mutually substitutable, they are equivalent to each other. If one should pass out another one could be put in its place.

The key words here are talent and interest - the words that serve as a basis of vertical and horizontal separation. The difficulty does not rest with the latter but with the former, and here the idea that people are born unequal in terms of talent in general, and intelligence in particular serves as the underlying rationale for vertical sorting. The important thing about this rationale in this connection is not so much the three related ideas that intelligence is genetically transferred (or at least genetically conditioned), that it differs considerably from one person to another, and insignificantly throughout the person's life-span as ideas about when talent in the form of intelligence manifests itself. Here it looks as if the physiological growth curve has consciously or unconsciously been taken as a model. The idea would be that to everybody there is a certain potential as to how tall or intelligent he/she is going to be and that potential is already built into the person as a program at birth, or at the moment of conception. Ideally it should be possible to assess it at that moment, or at least prenatally; failing to do so one has to wait until the potential

has unfolded itself, been actualized. Since people are known not to grow much more after the age of, say, 16 to 18 the implication seems to have been drawn that this also applies to intelligence - more or less regardless of how it is defined.

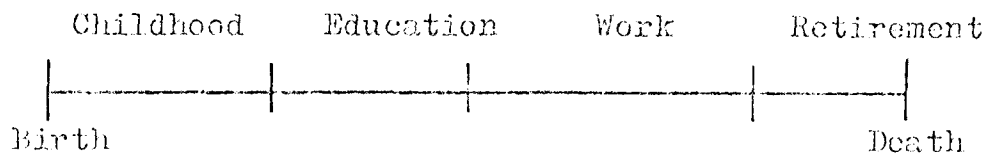
The underlying model has been something like the curve depicted in Figure 3:

Figure 3. Talent as a function of age.



Now, the point to which we want to draw the attention is that according to this type of thinking conclusive sorting can be done before the age of 18, but should not be done before the age of, say, 12 - by that time the difference between actual and potential may still be of such magnitude as to render the sorting invalid. In other words, the idea serves as a rationale for sorting the young person as a teenager. Thus, schooling enters the entire time-cosmology of society more or less saying the following: if schooling is to serve the purpose of sorting then it is necessary and sufficient that it enters a person's life-cycle at such a time that the sorting can take place when the person is in his or her teens. And this means, in turn, that education is driven in as an increasingly expanding wedge between Childhood and Work as fundamental segments of the total life cycle, as depicted in Figure 4:

Figure 4. The four phases of the life-cycle.



However, there is no compelling reason to assume that the model of physiological growth can serve as a paradigm for talent growth; rather, it looks as if talent (or intelligence for that matter) expands by being used, and that the most important use is challenge. Hence, the reason why education has been given this particular position must be found in some other social function it serves to place it at that interval: if it were placed earlier in life parents would be divested of much of their power of early influence; if it were placed later in life there would not be any age differential to speak of between teachers and learners, hence less verticality and no continuation of ancient transition rituals over which the elders have command in the form of examinations. The argument that it is useful to have education first and then practice it in work may apply to some very essential tools traditionally taught in elementary school (the three R's), but there is much reason to believe that training is best when work and education are permitted to go hand in hand, in a dialectic relationship. In other words, the counter idea would not be to place "education" after "work", but to intersperse them after a short exposure to "education only".

As the system of schooling delivers the goods to society, vertically graded and horizontally differentiated, with an underlying ideology and time cosmology. What happens then? What happens is a process of allocation whereby the output of the schooling sorting process is fed into the productive machinery of society. By and large what happens is the following: primary school graduates are put into the primary sector doing agriculture and extraction work; secondary school graduates are put into the secondary sector as skilled workers, functionaries; and tertiary graduates are put into the tertiary sector as professionals and administrators. There are very many exceptions to the rule, but by and large we assume the semantic identity between levels of schooling and sectors of economy to be an expression of a high level of empirical correlation.

How can this happen? Simply because there is a basic underlying correspondence: as one proceeds from primary versus secondary to tertiary levels of production what is being done is

increasingly abstract, decreasingly related to pure, unprocessed Nature - and as one moves upward from primary via secondary to tertiary levels of schooling the content of what is being taught is also increasingly abstract. This correspondence, however, is only meaningful if both dimensions are correlated with power, and prestige dimensions in society, and they are. More power and prestige are given to he who has more schooling in modern society, the old idea that mental work is somehow finer, better than manual work is reflected in the higher prestige accorded to the tertiary than to the secondary and primary sectors; hence the content of schooling has to be increasingly abstract as one moves along the escalator upwards. For if it were not some of the knowledge needed for a tertiary sector occupation would already be revealed to junior and senior high school graduates, and if in addition tertiary schooling should mainly consist in training the body for manual work and skills the whole system would be completely upset.

The allocation is not only in terms of sector, also in terms of level within sectors. The ranking inside the school system as a whole serves as a guide for allocation to sectors, the ranking within the class as a guide for level allocation. The experience at school can be seen as a training in getting used to structural violence, and particularly in getting used to underdog roles. Grading may be seen as a way in which those at the bottom learn to accept their proper station in life. And examinations may be seen as a way of getting used to the fundamental division they will encounter later on: between those higher up who formulate the problems, and those lower down whose task it is to tackle the problems, but according to pre-set rules. It is much more challenging to make a problem used for an examination than to solve it; just as it is much more challenging to solve the problems impinging on organizations (factories, firms, institutes, ministries) than to be those lower down whose task it is to implement the solution.

Within the class grading introduces a vertical ranking from high to low; but examinations introduce a sharp distinction between those who run the system and those who are run by it. Schooling is role training in either setting; hence, schooling is among other things a process for the manufacturing of underdogs.

4. Alternative education: an image.

The goal of education goes far beyond education in the narrow sense of schooling: as emphasized above it becomes a question of what kind of society one wants to reproduce in the institutions designed for educational purposes, and of what kind of society one wants to see reinforced. Imagine we want a society that is less vertical, less fragmented, less bent on processing people, less concerned with making people substitutable for each other. On purpose, we formulate the goal modestly, only in terms of "less" and "more" - one might also talk in terms of societal forms that are horizontal, based on solidarity, on autonomy and general participation.⁸ But let us stick to the modest formulations and speculate about what kinds of changes in education might be conducive to that kind of society. In doing so we are obviously operating on two levels: how to negate the reproduction aspects and how to negate the reinforcement aspects of the current system.

We could now have proceeded item by item, starting with the reproduction of verticality inside schools, speculating on the type of changes that might bring about the negation wanted. However, there is never any simple type of one-to-one correspondence in social affairs. A change will have impacts on more "items" than one, some of the effects may be opposite to the direction intended, and so on. Hence, we shall prefer to present a list of changes as such, and try to speculate on their effects, particularly since these changes have a certain inner logic that also has to be respected. However, we shall nevertheless start with a fundamental change that has particular bearing on verticality, processing, substitutability and sorting.

The change suggested is not structural, it has to do with ideology, one might even say "social cosmology", since it has to do with the very way in which we conceive of human nature. In liberal society individuals have to be ranked in our mind in order to produce compatibility with the vertical structure in society; and structural and ideological changes in this field have to go hand in hand - it is not true that one of them can be carried out without the other or follows as an automatic consequence.⁹

(1) A new ideology of human differentiation: taste rather than talent

A basically new educational ideology would be needed for almost any change to be mentioned to be meaningful. Could one imagine an ideology which would emphasize taste or interest much more than talent; and a society where tastes are more horizontal, and talent is considered less meaningful or secondary or ephemeral? Today talent is typically considered basic, to a large extent innate, even inherited; and tastes more secondary and highly ephemeral. Hence there is a question of viewing a person in such a way that talent is somehow downgraded and taste upgraded - would that be meaningful at all, or only artificial?

It cannot be denied that at any given point in time there are some people who do something better than others. However, when that observation is embedded in a context including

- the idea that when doing something else the ranking order may be turned around, and
- given more equal opportunities all ranking orders may become quite different

the ranking is supposed to mellow. This is about as far as contemporary liberal society has come in its critique of talent ranking: make it multidimensional and purify it through the condition of equal opportunity.¹⁰ But the latter can actually be seen as taken from the methodology of experiments: in order to compare the strength of materials expose them to the same test under the same conditions (pressure, temperature, etc.). The net result is not less but more concerned with rank, and a higher level of validity in the sorting under present social conditions, leaving those who are sorted out without offenses.

Instead of these two modifications of talent ideology one might think in terms of two other nuclei of crystallization for an ideology that could be more productive if equality and equity are the goals:

- the idea that potential talent is about the same in all, but that it has to be developed,
- that the key to the development of talent lies in its use, through challenge.

According to this position actual differences in talent would be seen as artifacts, produced by social conditions that distribute challenge and opportunity to use talent very unevenly - e.g. through patterns of fundamentally vertical division of labor. In an ideal society providing for maximum self-realization for all, talent would prove to be equally distributed according to this line of thinking.

But - imagine that the conditions of ideal society were approximated, that talent showed an over-all increase, but that increased average was accompanied by increasing dispersion in talent, or at least not by a decrease! Of course, there would be the usual argument "when prophecy fails": that the expected and desired effect would come later, that the conditions are not yet quite satisfied, etc. What, one may with full justification ask, would there then be to fall back upon?

Not an argument in terms of empirical facts, but in terms of fundamental values. One may simply declare that people are equal in talent, and see what changes this implies. A good example is the Declaration of human rights where people are precisely declared to be equal in human rights, a declaration that had profound impact on the social order, and still constitutes a basis for social change according to a fundamental value - the extension of voting rights being only one example.¹¹ Similarly, a corollary of the idea that all people are equal in talent would be equal salary to all, except on the basis of such external characteristics as seniority or position in life-cycle (since people probably need most money in early marriage, when starting a home, it may well be that the correlation should be negative with seniority - which it also partly is, retirement pay being usually lower than regular pay).

Thus, a new ideology can probably be founded on the basis of one hypothesis and one value assumption, or both - if one fails the other might still serve as a basis. It should be emphasized that they are both compatible with fundamental values of equality and optimism where human future is concerned.¹²

(2) Abolition of examinations; abolition of vertical sorting

When something similar to schooling is made use of for people who are still defined as Children, or for people who have already entered Work or Retirement, examinations are usually not included in the program - neither in the kindergartens, nor in the countless courses offered the adult population. Or rather:

if they are included they are more for pedagogical than for sorting purposes. They serve as a point of concentration for teaching and learning activity - as a way in which the pupil/student can check his own progress and the teacher/professor his - rather than as a way in which the teacher/professor (on behalf of himself and the society in general) checks the pupil/student. This pedagogical use of examinations is hardly the subject of any attack except for one thing: it remains problematic how useful they actually are for the purpose of learning. It is the old problem of the means that become an end: to be clever at examinations becomes a goal in its own right regardless of whether it furthers deeper learning or not.

The institution to be abolished would be examination for sorting, or more precisely: the graded exit diploma. An exit diploma in the form of a "certificate of attendance", accorded to all those who have attended, participated and done a reasonable amount of work generally agreed to as acceptable is not what we have in mind. In that case there would be only "pass" and "fail", it being understood that the diploma would be given to the majority of those who want it - for it would be hoped that educational institutions would attract people who simply are interested in being in it, regardless of any diploma that might come out of it.

Thus, the model would be more similar to the people's high schools found in Nordic countries than to, say, a military academy with a very finely meshed ranking system mirroring the extreme concern with rank found in military institutions of the conventional kind (as opposed to guerrilla organizations).¹³ There might be a piece of work to be made towards the end, more similar to a seminar report as known in universities, and to be evaluated in terms of pass/fail by teachers and fellow students. But it would have to satisfy some very important requirements:

- the topic should at least partly be selected by the students themselves
- the work should be performed partly individually, partly collectively, in full cooperation with others

- the work should be done over a longer period, in full consultation with all books etc.
- the work should be meaningful; a major task of the teacher/professor would be exactly to be helpful in finding meaningful tasks even the smallest school children could perform.
- the product should be criticized in a collective session, the students who produced it should be able to answer for themselves in that session without recourse to various forms of aid.
- after the criticism a revised version should be handed in and increased ability to take well-founded criticism into account would be one major goal of the whole educational exercise.

Thus, "cheating" would be meaningless, for mutual aid would already have been built into the entire educational venture. Ideally, those who leave the institution would know the challenge of a problem, would know something about how to find what they need to solve the problem, would also know something about personal responsibility and cooperation with others in that connection. In this there would be growth, and certainly not rote learning. The examination in individual seclusion, with candidates trained in giving correct responses to written or oral stimuli (and to guess these stimuli beforehand) would be out; in its place would come something much more similar to real life situations. The classical examination is only similar to one thing: itself (although it has some important similarities with court case procedures), and hence essentially a training in non-problems and fictitious situations.

It should be emphasized that the abolition of exit exams would make children/students/people more equal, as equal when they leave as when they enter school. It is quite clear, however, that the need and desire for sorting could then take the form of entrance examinations instead. To this highly complex problem this gives rise to two types of answers: that such exams are at least potentially more relevant, more geared to the particular needs of that organization or institution, and that further work towards more horizontality will have to take place within the organization itself. Schools should not be a part of social

verticality in general but should, like friendship, love, family life, leisure activities as much as possible be kept out of it. This is not only because of the agony of exams, but because of the way they transfigure pedagogical activity, because the gradient of forgetting after the exam is very steep, probably even steeper than the gradient of learning before it, and so on.¹⁴

To this it may be objected that all kinds of cram schools would emerge, like in Japan, training, even processing people for entrance examinations.¹⁵ This is an evil because it tends to have the same distorting effect - but it should not serve as an excuse for keeping examinations and grading. Rather, it should serve as a good reason for exploring the conditions under which the sorting of applicants for a vacant job could take place after they had shown their worth on the job for some time, or by constantly redesigning work so that there is a better correspondence between demand for and supply of jobs. An example of the latter would be a return to more labor intensive forms of production. But more fundamental than that approach would be the general idea of learning-on-the-job, and of shaping the farm/factory/firm/institute according to the skills and interest of those who work in it rather than vice versa.

(3) Freedom of educational choice

It is a remarkable feature of the schooling system we know that in spite of the individualism of Western societies there is relatively little opportunity of individual choice. Or more correctly: there is considerable freedom at the kindergarten and preschool levels, an unstructured activity with lots of initiatives left to the children themselves; and a pattern of considerable freedom at the college and university levels. It is at the levels of elementary, junior high and senior high schools that the processing model of schooling is most adequate: the curriculum is pre-prepared for the pupils rather than chosen by them. Not only is there little freedom of choice, but the individualism idea expresses itself as fragmentation rather than diversity.

With standardized curricula and low level of latitude the difference between the students emerging from a schooling process would be in terms of amount of knowledge acquired rather than kind. What they have studied is usually very predictable.

Having said this it is also clear that there are two empirical models available of alternative schooling processes: the kindergarten and the college/university; or rather those institutions at these levels where a high level of freedom exists. Would it be possible to combine the playfulness of a non-authoritarian kindergarten with the freedom of choice built into, for instance, an American college system and make it a viable basis for the school levels mentioned? We think so, and would like to make some indications in that direction.

The idea is very simple and very well known: let each school present a number of units or building blocks from which the pupils can pick themselves, constructing their own curriculum. These building blocks could be conceptually organized along a horizontal axis according to subjects: languages, mathematics, physical and natural sciences, social studies, humanities, various types of occasional skills, physical education and so on; and along a vertical axis according to level (elementary, intermediate, advanced). With m fields of study and n levels this would yield $m \cdot n$ units, and it would be the task of any central schooling authority to see to it that each school is in a position to offer all these units. As a matter of fact, it would probably be best if all three school levels were combined and so-called adult education was added to it - for reasons to be given below - keeping various age groups together as much as possible. It goes without saying that more "academic" and more "vocational" subjects should be offered under the same roof.¹⁶

The pupil selects and constructs his own curriculum - but there could be some constraints on his and her options. Thus, there could be the idea that the choice had to satisfy a certain rule of dispersion, for instance that vocational units, or academic units, should not constitute less than one third of the total choice.

Thus, he who is heading for carpentry would add a sizeable amount of languages, social studies, physics and mathematics - and she who is headed for architecture would add carpentry and welding, together with practice in construction work. The basic point in this requirement, obviously, would be to contribute to bridge-building between mental and manual work, making both job rotation and job reconstruction possible as transition strategies towards more horizontal societies, because of flexibility.

Should there also be a requirement as to the average level attained, and the number of units? Traditional schooling ideology would have as a very fundamental concept the idea of completing a schooling process. In a college this might be when a certain number of credit points had been accumulated, combined with attaining the highest level in one field of study (the major). In addition to that there would usually also be a stipulation of number of years, or time units, regarded as necessary and sufficient for the completion of the process. Sometimes the emphasis might be only on the number of years considered necessary, regardless of how much knowledge has actually been acquired (or skills been imparted): this would be referred to as compulsory schooling.

The most radical suggestion in this connection would be to dispense with all three considerations and simply see a school as a resource available to the citizens as a birth right, something they may attend and hopefully enjoy according to their inclinations. They pick the units they want, subject to the rule of dispersion, and might even skip some of the elementary levels after a certain maturity of study has been attained, and with the help of a little, more or less guided, self-study combined with discussion groups with other students in the same situation. One might say that the birthright would entitle them to a certain number of units, even given to them in the form of a non-transferable set of coupons that they might make use of any time during their life span. This would actually mean that most people would be in the process of education, not classifiable as having completed this or that - and that would have some important implication on the sorting aspect of schooling. For

even if examinations are abolished, as argued in the preceding point, people might still be ordered according to the school level attained, or the number of units completed for that matter. It would be very difficult to eliminate this factor completely, but a society where people at any time could add more to their educational record would make any classification less permanent than it easily becomes today.

Less radical formulas in this connection would be limited to some flexibility where the idea of "finishing school" is concerned. Instead of any rule to the effect that it should be completed, normally, after x years, one would stipulate an interval, for instance $x \pm 2$. This would permit pupils to have some of the same privilege as students have in many universities: to adjust the speed by which they are flowing through the system to their own individual needs and capacities without being stigmatized for that reason. Thus, a university student in a tolerant university system like that found in Norway would not be stigmatized if he uses seven years rather than five, but if he exceeds ten years it is likely that he would be labelled accordingly (as a "semester-elephant", "eternal student", etc).

Similarly, one could have relatively flexible rules when it comes to number of units: an interval rather than a point on the numerical scale. The important thing would be to keep the concept of "completion" vague, something like adult education institutions which people attend and leave, and nobody is very much concerned with how many courses the person completed. The focus is on the fact that the person did participate, and the field of study. And the same would apply to the idea of a "major": it could also be an interval, not the number 1; no major at all, two majors, three majors---. The person with no majors at all might become one of the key persons in our confusing society, the famous "generalist" - and the same might apply to the person with four majors.

In the idea of freedom of choice there would not only be the element of freedom of composition, but also the freedom of time order. In other words, the units should be composed in such a way that there would be a minimum of constraints on the time sequence, of the type "in order to take course B3 one has

to complete A1, B2, C1 and D1". One might leave this to the pupils to decide, maybe they would discover shortcuts, new combinations, the need for self-study, and the important discovery that freedom of choice is the freedom to make fundamental mistakes, including the freedom to learn from these mistakes.

When pupils compose their own individual curricula it is obvious, from a purely administrative point of view, that there will be holes in the agenda. The conventional model of schooling as something that takes place every week day from 8:30 a.m. to 3 p.m. (or something like that) can only be maintained under the condition of standardized processing. But there are few things one should be less afraid of than these holes since they can be used for self-study, discussion groups among pupils (and a basic condition would be that all schools would have facilities for such purposes), not to mention for out of school activities, such as work. That this should be combined with more theoretical study is obvious, and the society that has come furthest along such lines today is, no doubt, the People's Republic of China.¹⁷ In other words, what we are arguing is a much more flexible attitude with regard to time: instead of the highly concentrated, densely packed educational experience we would argue in favor of a dilution of this along the time dimension, with plenty of holes every day, week, month, year.

One way of adding to this flexibility would be for pupils to move more from one school to the other. Although all schools should offer the same minimum set of units (so as not to disadvantage pupils in more peripheral parts of the country) schools should also be encouraged to add according to local facilities. Schools should be similar enough to permit transfer of pupils as well as teachers, yet dissimilar enough to make this transfer a new educational experience.

Thus, it is felt that changes in this direction would play up to individual taste and diversity, to a non-alienated educational experience and play down any possibility of a lasting sorting of

people through the systematic use of schooling processes for that purpose. But there are deeper aspects of such changes to be elaborated below.

(4) Deschooling through deprofessionalization of teaching.

Ivan Illich has launched a slogan of "deschooling", pointing to the ritualistic aspect of the schooling experience and the discriminatory use made of diplomas.¹⁸ We would like to carry the idea a little bit further, partly by pointing out a concrete process through which deschooling could take place, partly by transforming Illich's point from a brilliant attack on present schooling to a more positive vision of alternative systems.

Just as much as examinations have no parallels in real society and only are similar to themselves, schools also exist in some type of social vacuum, being dissimilar from the rest of society except in fundamental structure - as indicated in the third section. Above we have argued in favor of the part-time pupil/student; so why not argue also in favor of the part-time teacher/professor? This would be a person who is only partly engaged in teaching and in addition to that holds some other position in society, drawing from that experience in the activity as an educator.

Complementary to that notion would be the idea of society in general as a joint educational experience. Imagine a farm/factory/firm/institute - to mention the names of organizations in the various sectors of economic activity - visited by pupils/students wanting to supplement Education with Work. For this to be meaningful a condition would be that those who work there on a more regular basis would be not only willing but also able to add a pedagogical dimension to their daily life. They would have to engage in some reflection on how their knowledge, insight and skills can be transferred to others, including not only the technical aspects of their job but also the whole culture that goes with it, the subtle web of ideas and relations spun around any type of work. In other words: teachers should no longer have any monopoly on teaching, that should be a shared

concern evenly distributed in society at large. No doubt this may be counter-productive from the point of view of some narrowly conceived norms of efficiency, but highly effective as a means of social integration.

The most important way of deprofessionalizing the teacher, however, would be to make the learner a teacher through the combined operation of self-study and discussion groups. And this is where the structure of eating rather than the structure of education comes in as a helpful metaphor: eating typically takes place in a multiplicity of forms, from the autonomy of the person who helps him or herself, via the horizontality of a family or group preparing a meal together, to the verticality of a restaurant where one picks among prepared courses and the authoritarian structure of the canteen offering only one meal for all. To introduce this variety to everybody would imply such architectural changes in our underused homes as studies in addition to kitchens, with shelves as something built into new apartments like cupboards, and so on.¹⁹ And it would also point in the direction of the educational cafeteria and restaurant where people would simply enter, singly or in groups, sit down by their table (which might even be a Stammtisch to which they would come day after day, week after week), ordering educational material from the local "teacher" whose task it would be to provide them with appetizing educational "courses" (is the kitchen storage (is the double meaning of that word intentional?)

And in a sense that would be more of a reprofessionalization than deprofessionalization of the teacher: the teacher as a person who facilitates a discussion rather than as the sender of a message to be received by the pupils, as the cause of an effect that takes place inside them.²⁰ Of course, there would always be room for classical teaching, particularly of knowledge and skills that are the answers to problems for which there seems to be only one solution - like how to conjugate German verbs. But there is little doubt that a completely new pedagogical role is in the process of formation, and that it can only be embedded in a new educational structure if it is to be meaningful - as pointed out by Danilo Dolci²¹ and Paulo Freire.²² It may be that the best course is to design the course - pupils and teachers together - like the chef who prefers cooking to eating.

(5) A more flexible time cosmology.

We mentioned in the third section that much of the current education structure is based on the assumption that Education is an interval between Childhood and Work, and that one of the rationales for this particular time order is the suggested analogy between physiological growth and talent manifestation. Education has to come late enough to serve the purpose of valid sorting, yet early enough to be a preparation for work. This preparation is not only in terms of knowledge acquired and skills imparted, but also in terms of structures to be internalized.

Above we have mentioned the idea of interspersing Education and Work, which would only mean to carry further what has already taken place in many societies with the institution of adult education or re-education. However, in Figure 4 there are also two other phases of the life cycle: Childhood and Retirement. How can they be combined with Education?

We would then define Childhood as some type of irresponsible playfulness, as simple Being, and Retirement as the same but with a much higher element of responsibility. Retirement must then be distinguished from senility which would be rather similar to Childhood, making the line in Figure 4 into a circle, an idea which may also be said to be indicated by the term "life cycle".

There are two ways of answering the question just asked: to bring Education into Childhood and Retirement, and to bring elements of what is typical of Childhood and Retirement into Education. Let us look at both.

The first would bring us in the direction of life-long education starting in early childhood and never ending - stretching way into retirement.²³ But there is a difference between what has been developed here and the standard concept of permanent education: education should not be seen as permanent, but rather as intermittent, something that comes in phases and intervals - and these phases and intervals are not contiguous, continuous. One of the most dramatic forms of structural violence built into the present

educational system must be the consecutive institutionalization of children and adolescents, for periods as long as 12, 16 years, marginalizing them by taking them out of general social circulation, isolating them in schools/universities.

But the idea of filling the gaps in an education schedule with work, indicated under (3) above, is insufficient and by far too puritan. Why not also reappearing intervals of Childhood, of playful activity, completely non-instrumental forms of being? And, more problematically, how could one build this into the educational experience itself - something that would be very different from highly non-humorous, profoundly critical, discussion groups about such topics as "the social implications of teaching arithmetics rather than graph theory in elementary mathematics courses". (The implication might be that arithmetics gives good training as a producer and consumer in a capitalist society whereas knowledge of graph theory might serve as an excellent tool in understanding social structures better).²⁴ Probably the answer to this lies precisely in spreading education throughout the life cycle in such a way that it no longer becomes a preparation for a subsequent phase in life, nor some type of alternative way of living, but simply one aspect of social life in general.

But what about Retirement? There is one good model of anticipatory retirement: the sabbatical year enjoyed by university professors. This form of existence seems to function like the recharging of batteries, but if this is the case any other member of society should be entitled to the same. School teachers should have the same right, and so should school pupils: the right to be taken out of school, with no stigma attached, and engage in some form of highly creative, self-realizing, joyful work, in other words in praxis.²⁵

Thus, the general argument would be in favor of as much mixture of these four types of social existence as possible, all the time making the structure sufficiently flexible to leave the fundamental decision making when it comes to not only composing education but one's entire life style, life cycle to

the person himself and herself. And if that were really practiced the age composition of a group of people studying together, using dialogue as a major vehicle for development, would be as diverse as the people sitting in a cafeteria: all ages, both sexes, people from all walks of life. It is in that setting that the teacher would be more of a helper and facilitator and less of a boss - and schooling less of a process for manufacturing underdogs, and more of a setting for cooperation and autonomy.

(6) Conclusion: Some Strategies.

These are far-reaching changes, and they would all work against a society that is vertical and highly individualized, and be particularly resisted by those on the top of that society: those in charge of production (private and state capitalism) and in charge of administration (the bureaucracy). Those at the top might pick some of the elements in this package but not enough to threaten the basic structure of verticality and substitutability.

Hence, it is our contention that momentum for more fundamental change will have to be taken from the periphery rather than from the center of society; there is too much vested interest at the center (not meaning necessarily a Minister of Education, but the high seat of private and state capitalism and administration). More particularly, there are two types of periphery that should be highly meaningful in this connection: the school districts in general and the more central districts in particular, and school pupils in general and the high school pupils in particular.

School districts may ask for more autonomy, for decentralized decision making. However, if the peripheral school districts are heavily subsidized from the Center of society, then they are unlikely to revolt. Also, new ideas about education are more likely to emerge close to the Center than in the Periphery; so we would assume that the central districts would be among the first to put action behind the general demand for decentralization.

One model in this connection would be to leave most of the educational planning to the districts, and to several school systems within one district. They might then apply for support, and the state budget of education might be turned into a council dispersing funds upon application, more like a University Grants Commission. Like individual scholars applying for research grants the initiative would come from below, the grant-giving agency would operate within a wide band of ideas as to what constitutes a legitimate school system, and disperse funds accordingly. The assumption, then, would be that there is more latent diversity that can be released when districts are given more autonomy than can be built into the system by any kind of

design devised from the top.

School pupils can rebel, but most likely to do so are those in the higher grades. The free university model that we have been drawing upon above applies most immediately to them (or at least so people seem to think), and can be communicated to them not only through direct knowledge of the next step on the educational ladder, the university, but also through elder siblings, further ahead on the educational track.

The most significant step high school students could take would probably be a strike against examinations. In many countries such examinations are ceremoniously prepared with standardized problems (or rather fictitious non-problems) prepared by the Ministry and circulated confidentially well ahead of time. The organized absence from sorting ceremonies of that type would shake the educational establishment considerably and stamp out vertical sorting of pupils/students as illegitimate, even immoral. No doubt the motivation for such action would vary over time and it is quite possible that it is lower today than it was at the end of the 1960's - for instance because liberal society proved itself quite capable of absorbing much of the impact of the student revolt of those days. But such ups and downs are normal in any movement, and it is almost inconceivable that pupils, even students will continue acquiescing in humiliating examinations for ever and ever.

In conclusion let it only be said that the type of persons who would emerge from educational processes of the kind depicted above are considerably less likely to tolerate the verticality and irrationality of contemporary "modern" societies. They would demand a different job structure, more compatible with the structure built into the education system. And at this point it should be remembered that even with the time flexibility extolled above many people would spend a considerable portion of their total life span in some type of education, which means that the educational structure would make an indelible imprint on them and constitute a model, even a paradigm of what the social structure should be like. For that reason changes in education structure might have both a direct and an indirect effect:

directly by forcing other sectors of society to be compatible, and indirectly through the internalization in the members of society as basic patterns of social life. To take an example: jobs have to be built much more around individuals with their peculiarities when education is made in such a way that individuals are less substitutable for each other (so that individuals could more easily be fitted into pre-defined jobs). At the same time, persons used to composing their own educational experience instead of being processed according to schemes made by others will demand something similar of the job structure in society and in doing so they would already have taken a great step towards a higher level of autonomy.

Finally, one little note on the future studies aspect of this essay. Looking at these "strategies", how do they fit into future studies? No doubt in many countries today, certainly in most, the two factors pointed to are both weak and vague. So, does this not simply mean that one picks out the trends, tendencies or factors one likes and elevates them into a prominent position, referring to the result as "futurology"? No, for "future studies" as here conceived of have little or nothing to do with predictive futurology. Rather, the assumption is that social futures cannot be predicted because it is in our capacity to transcend any social "law". The purpose of such studies is to try to locate the forces that could be unleashed, the waves on which to ride, and then use future studies consciously and conscienciously as a tool in the service of certain values. And these values have, hopefully, been made quite explicit in the essay.

N O T E S

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1. For a general presentation of this way of thinking see the authors' "Structural Pluralism and the Future of Human Society".
2. Included in a very useful reader, M.L. Berneri, Journeys of Utopia. (New York, Schocken Books, 1971) pp. 281-292. The passage quoted in the essay is from pp. 288-89.
3. The reference in footnote 1, particularly pp. 274-79. Also, see the authors' "Christianity and the Fight for Peace".
4. The type of model one would have in mind would be something like the People's Commune in contemporary China.
5. The problems we are thinking of have mostly to do with all the characteristics that have recently come to the foreground: psychosomatic symptoms caused by stress, all the consumption of pills, etc. - in other words, it has to do with mental, psychological aspects of exploitation more than the material aspects since abject poverty to a large extent has been abolished in rich European societies (but not in the United States).
6. The "results" we are thinking of here are, of course, the mass revolts that have taken place in Periphery countries in this century. More particularly, we are thinking of the fourteen socialist revolutions (nine countries in eastern Europe, four in Asia and one in Latin-America/Cuba) that all took place in the periphery of the capitalist system.
7. For a definition of this concept see the authors' True Worlds: A Transnational Perspective, chapter 3.
8. These general value formulations are being explored further in the World Indicators Project, and efforts to operationalize them are under way.
9. For ideological changes can easily remain intellectual exercises, and structural changes may become formal, lacking in content if there is no corresponding ideological development.
10. Particularly important in this connection is the work by Walter Feinberg, University of Illinois, on the Ideology of Educational Opportunity.
11. Of course, it is also an example of how one circumvents changes by making new informal structures (corporations, expertise) that may carry considerably more power than is accounted for by the commonly shared social myth.

12. The ideology here described seems to be slowly emerging, and it would be interesting to have some large scale research on the distribution of educational ideologies, cross-nationally and intra-nationally.
13. A study carried out in Norway under the leadership of Kai Pione on Systems of Grading revealed that the Military Academy was the organization with the most elaborate system.
14. It has been impossible for me to locate studies demonstrating this - which is in itself interesting since it should be a major focus of research although it might also have a devastating impact on many pedagogical myths. However, more intuitive analysis of the experiences of oneself and others seem to point in the direction indicated.
15. For a comment on the educational system in Japan see the author's "Social Structure, Education Structure and Life Long Education: The Case of Japan", in Review of National Policies for Education: JAPAN, (Paris: OECD, 1971) pp. 131-152.
16. In the current suggestion for reform in Norway this point "roof" is interpreted broadly to mean "within the same district".
17. For some impressions in the chapter on Education in Johan Galtung and Fumiko Nishimura: Learning from the Chinese, Oslo, 1974.
18. In the book Deschooling Society, World Perspective Series, 1970.
19. In a sense this argument also applies to hotels where the rooms are typically made for sleeping, love-making and personal hygiene - very rarely for study. This may reflect the values of the business and upper class clients probably by far dominating the customers, and not the values of people in increasingly educationally oriented societies. Hence, a rather safe prediction would be that changes are going to take place in hotel architecture as well.
20. I am indebted to professor Arne Næss for this particular formulation.
21. For a statement about the programme of the new school in Partinico, see Danilo Dolci, The Maieutic Approach, the Plan of a New Educational Center at Partinico, Prospect, 1973, pp.137-146.
22. In his rightly famous book Pedagogy of the Oppressed.
23. For a further elaboration of this perspective see the reference in footnote 1, particularly pp. 288-292.
24. The present author has for some years been trying to develop a text book in mathematics, based on graph theory and other mathematical schools that might make mathematics more meaningful for socially conscious pupils, and even stimulate that social consciousness. Particularly important in this regard is the important work by the French mathematician/architect Yvon Friedman.
25. I am indebted to professor Mihailo Markovic for this particular way of interpreting the term " Praxis".