The Curriculum as a Standard of Public Education

Stefan Thomas Hopmann[1]

Abstract: This contribution first searches for historical and empirical evidence for whether and how curricula act or acted as a measure of public education. The problem is explicated on account of a short history of curriculum work and distinguished in an analytical, political, programmatical, and practical discourse of curriculum work. Curriculum work always underlies the premises of planning, learning, and effects. Three models are finally developed and brought in touch with the different discourses. Curriculum work proves to be an attempt to make publicly acceptable the empirically impossible accountability of schools.

Keywords: curriculum, history of curriculum work, public education, discourses on curriculum, accountability of schools

There is a certain double meaning to the German expression "öffentliche Bildung." On the one hand, the term "öffentliche Bildung" can be used as a designation of what is called "public education" in English. In this case, the curriculum would have to be examined as a standard of what is happening in public schools. On the other hand, "öffentliche Bildung" can also be translated with "education of the public," in this case, it can be understood as a generic term or as the total of education that is accessible to the public. Both concepts are directly connected to each other.

The topic allows for various approaches. One can start from the plan of an ideal curriculum, which is then used as a standard of public education. In the Swiss context, for example, Anton Hügli has recently demanded this by taking up a tradition that goes back as far as Plato's Politeia (Hügli, 1997). One could also move to a curriculum-theoretical metalevel and come up with the question of what a curriculum would look like if it were to take up its assigned function as a standard. In the German tradition of curriculum theory, the name Erich Weniger is especially connected with this theory. Instead

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of following these traditions, I would like to understand the curriculum topic mainly from a historical and empirical point of view, i.e., as a search for theoretical and empirical indications of whether and how curricula have functioned or still function, in the double sense indicated above, as a standard of public education. I base myself mainly on two research projects: on the one hand on the historical and empirical investigations into curriculum work, which I carried out in the eighties together with Henning Haft and others (cf. Haft et al., 1986; Hopmann, 1988; Haft & Hopmann, 1990), and on the other hand on a current research project, which empirically examined the connection between curriculum planning and lesson planning in Germany, Finland, Norway, Switzerland, and the United States.[2]

A Short History of the Curriculum Work

A curriculum develops when it is no longer self-evident what should be taught. It is difficult to determine when this has been the case. Since Joseph Dolch's monumental history of the *Lehrplan des Abendlandes* (1971–3), the beginning of curriculum history has been in Greek and Roman Antiquity. More recent research indicates that there may have been similar curriculum considerations even earlier, for example, in the training of civil servants in advanced civilizations (cf. e.g., Assmann, 1995). It is certain that written evidence of reflections on curriculum problems can be found since the 4th and 5th centuries BC, and it is surely no coincidence that one of the centers of such reflection is the Republic of Athens. Its existence was guaranteed for the first time through an organized public and seemed to depend on a minimum of public education. Complex systems of interaction, like the military system of Athens or the public jurisdiction, required understanding and communication of the participants to a degree that could no longer be presupposed as natural. This has been demonstrated especially by Christian

[2] When this paper was first published, it relied heavily on not yet published material from an ongoing international research project (Organizing Curriculum Change: OCC). The project work started in 1993 with the Swiss part, the German part followed in 1995, all other parts of the project started in 1997. Since then key results have been published, e.g., in a monography by Frank Ohlhaver (2005) and a special issue of the Journal of Curriculum Studies (Westbury et al 2016).

Meier (1993). In the chapter on curricula of his *Politics*, Aristotle pointed out the loss of naturalness in teaching, which necessitates a curriculum:

> There must be educational rules and that education itself must become a public matter. But we must not forget the question, how this education should be, and how people should be educated. Because in our time we do not agree on the goals we should set and there exist different assumptions on what young people should learn to achieve virtue or the ability to lead useful lives; it is also not clear, whether education should aim rather at the development of the mind or the heart. It is not known whether one should teach young people what is of use for practical life, or what leads to virtue and great deeds. For all these viewpoints have found their advocates. (Book 8 introduction).

Aristotle supports a prescribed and fixed circle of educational goods, as in the *enkyklikos paidea*, the circle of necessary general education. In Roman times, the system of the *septem artes liberales* developed through many intermediate steps from the *enkyklikos*. It is the system of the seven free arts, with the *Trivium* of grammar, rhetoric, dialectics, and the *Quadrivium* of arithmetic, geometry, astronomy, and music, and it remains stable for a good millennium. The most well-known curriculum-theoretical work of that epoch, besides Aristotle's *Politics*, is surely the *Politeia* already mentioned, Plato's far-reaching attempt to base the state on organised education (especially books 5 and 7). From a curriculum-historical point of view, the premises on which this draft is based are of special interest.

1. To start with, there is the assumption that teaching can and must be planned publicly. This requires that teaching is organized action which is submitted to rules and can at least be brought to a planned conclusion, as is the case with a craft. The mere execution of everyday life no longer suffices; calculated intervention is necessary. In Plato's time, this concept was not least all credible thanks to the social success of the sophists. Going beyond this and differing from the sophistic tradition, Plato declares the decisions concerning the structure and content of education a public matter. This is a bit surprising from someone whose own teacher was forced by the public powers to drink from Shierling's cup because of his teachings.
2. Included in the premise of planning is the double assumption that what is known can be taught, and what is taught can be learnt. Plato has dealt with this problem in *Politeia* and in *Meno* by asking the question

whether virtue could be taught. In the concept of the maieutically influenced recollection, the difference between teaching and learning is neutralized in a discursive way; the teaching process seems to depend totally on the momentary course of learning. The cave simile, on the other hand, calls to mind that the process of learning is a difficult ascent in which no step can be left out, that one must slowly work one's way toward the bright light. No matter what is weighed more, in both cases, teaching and learning seem to be two sides of the same coin. The uniting moment is the order of knowledge, which here still appears as the one and only order, no matter whether knowledge is organised for its own sake, in connection with its public use, or for the purpose of teaching and learning.

3. The backing and coincidence are also valid for the third and most difficult premise, namely that what is learnt through teaching also corresponds in its effects to what was intended with the teaching. This, too, is a problem which is likewise dealt with in the *Meno* dialogue and is solved here as well as there with the conviction that what has been recognized as right also leads to the right action, that the learning returns and the consequences of action come together as one.
4. Finally, the connection between the three premises (the *planning premise*, the *learning premise*, and the *effect premise*) is theoretically guaranteed. This corresponds to Plato's conception of a state in which the state leadership is assigned to the philosophers as the most learned men. The three premises mentioned above belong to the mostly unspoken preconditions of the curriculum discourse from antiquity until today, despite differences between the individual parts. However, the request to leave the curriculum planning to the philosophers, a request which is shared even today by some curriculum theorists, was not well received by the contemporaries, as they did not want to leave the curriculum decisions, and even less all other state affairs, to Plato and his philosophical colleagues.

The *first* of the three premises that began to falter was the one of the *one order of* knowledge.[3] Already at the closing of the 1st century, Quintilian had fought

[3] The following reflections are based especially on Rudolf Künzli's basic study on the topic of curriculum planning (Kiel, 1986) as well as on my own papers; cf. also Künzli (1997).

for the right order of the subjects in his *Institutio oratoria*. On the Christian side, for example, around the year 400, it was Augustine who emphasized the necessity to prepare the subjects, which are determined by the canonization, according to the learning conditions and the learning history of the pupils (*De catechizandis rudibus*). The differentiation and increase of knowledge since the beginning of the second millennium finally went beyond the scope of the *septem artes*, which had been stable for many centuries. It was especially the monks of the leading monastery schools, like, for example, Hugo from the monastery St. Victor near Paris, who tried to solve the problem through a new order, through a *disciplining* of knowledge and learning which could be taught (*Didascalicon*). Thus, the order of teaching was set apart from the social order of knowledge.

In the following centuries, other premises also misted their credibility. Because of the limited space, I can only pinpoint some of the cornerstones of the later development. The third premise, namely the hope that what is learnt through teaching corresponds in its social effects to what was intended by the teaching, never had much empirical evidence to support it (remember Plato's complaint about young people not following the example and guidance of their parents and teachers). It finally faltered together with the reformation concept of educating to Christianity, which was at the heart of Luther's theology, but didn't work out as expected. The most substantial critique of the underlying assumption was brought forward from those Christian movements like pietism, which did not believe that true faith could be learned by teaching but is based on the individual experience of God. However, this is but one of many examples in the history of organized teaching, where schooling or other forms of planned instruction have hardly ever produced exactly those changes in attitudes, behavior, or social life that they were supposed to enhance.

It is more difficult to sum up the history of the first premise, namely that teaching can and must be planned publicly. In fact, reformation brought about a massive development toward public planning. In the wake of the reformation, more and more local and state governments moved actively into the field of schooling. They established committees, advisory boards, administrations, and the like, which should develop and formulate a frame of schooling, including—among other things—detailed syllabi or other types of curriculum guidelines. However, there is overwhelming historical

evidence that these syllabi or curriculum guidelines did not have much impact on what was going on in schools, except for a few schools close to the surveillance of the church or other social powers. At least there was a huge difference between what the guidelines asked for and what was possible in the everyday life of average schools. This fact was finally acknowledged by the school authorities themselves by developing a system of planning, in which the central guidelines were nothing more than very generalized tools of administrative control, leaving the factual planning of teaching and instruction to the schools and the teachers. This loosely coupled double structure of central planning and relatively autonomous local teaching was brought into a systematic fashion by the Prussian school administration in the early 19th century. Since then, and until today, most European countries follow this basic pattern.

From the mid-19th century onwards, the teachers and their organizations increasingly complained that, even this loosely coupled system of control, gave politics and administration too much influence on what they believed were pedagogical issues and which could only be solved by pedagogical professionals. This critique contributed to a new step of differentiation. The public planning was reduced to decisions on very general principles of schooling (e.g., by school laws), leaving the development of the curriculum guidelines to highly specialized expert committees (mainly dominated by the teachers themselves). As a result, in most European countries, there exists a tripartite structure of curriculum planning: At the top, there is the public discourse on education, which results in political decisions about the structure and goals of schooling. It is accompanied by the development of curriculum guidelines. However, this is done by educational experts (most of them chosen by the educational administration and most of them active or former teachers). The public has no direct access to curriculum making. In most cases, it doesn't even know what is going on inside the curriculum making. The experts must function as a kind of intermediary agency, i.e., their curriculum development must consider the public discourse and its results as well as what they believe might work in schools. The school practitioners do their own planning within the framework of the guidelines provided by the experts. In fact, there is overwhelming evidence from different European countries that teachers do not feel that these guidelines have much impact on what is going on in schools. They only relate themselves to these guidelines if

forced to, i.e., in situations where it is questioned whether their instruction is in accordance with the guidelines, which almost never happens. Thus, even though there exists a public planning of teaching, these plans have no great impact on what in fact is taught. At best, they reflect what is going on in schools anyway.

The curriculum makers of today are aware of their intermediary function in the area between school political and school practical discourse. Asked about the reasons for their curriculum reform, they point out structural changes in school, political requirements, and social changes. In fact, most curriculum revisions are evoked by political-administrative decisions. This happens on average every seven makers are asked what plays a role in their curriculum decisions, then they no longer talk about politics and society, then only specialist, didactic, and pedagogical arguments count. The extent to which the political dimension of curriculum work is recognized by curriculum makers seems to depend on the periods of time and on regional circumstances. An active minister can remind people of this political dimension. According to the empirical investigations that have been done until now, all curriculum makers agree that decisions on concrete matters must be made; they give to politics what belongs to politics, at best in the preambles. The decisions on curricula, however, remain part of the inner-didactic discourse. The curriculum makers must only be careful that the conditions which they want to prescribe for pedagogical reasons do not obviously contradict the political preconditions. That they mostly succeed can be seen in the fact that the curriculum drafts prepared by curriculum makers are only rarely changed in the process of political decisions concerning their validity.

Curriculum Work as a Division of Discourse

The curriculum discourse was eventually divided into three parts:

- A political discourse as a framework for the curriculum work;
- A programmatic discourse that develops the concrete curriculum in the interaction between the administration and the teaching staff; and finally
- A practical discourse that is responsible for the local formation of the lessons.

This division into three has not changed in essence in the German language area since the turn of the century, and at the same time, it is the predominant model for curriculum work of most European countries (cf. Hopmann & Künzli, 1994). In the history of the curriculum, there have always been attempts to resolve this division into three, either through a greater degree of detail in the political preconditions, or through a didactic detailing of the curriculum that levels out the freedom of method; but none of these attempts could hold its own in the long run. For every loss of the discursive independence of the three levels would burden every curriculum decision with the expectation of legitimacy of all three levels. How closely or loosely the discourse levels are intertwined may differ from case to case. In general, the room to move is quite large. For example, it is quite possible that the political preconditions change several times during the curriculum work without the concrete formation of the curricula having to change. Let us record some of the results of this short passage through history, which could be backed up even further by many empirical and historical individual findings (comp. for the following Hopmann, 1988):

1. *Planning premise:* The curriculum has become a public matter as was the wish of Plato and Aristotle – its actual making, however, is largely closed to the public. This is made possible through a division into three of the curriculum discourse. It leaves the dealing with general matters to the politicians and the public, and the concrete curriculum decisions to the discourse between educational administration and school experts. This discourse is open but to a few and is connected only loosely with the course of practical educational work in schools. The co-ordination between these levels occurs only negatively, i.e., each discourse sets limits to the others, but cannot determine positively what happens in the other discourses.
2. *Learning premise:* Whether what is planned is taught, and whether what is taught is learned, only becomes visible at some intersections of the educational system, i.e., in cases of conflict and in examination situations. Here, too, the principle of *negative co-ordination* is valid, i.e., it is only a question of whether the facts which become visible at the intersections remain discursive within the frame set by the other discourse levels. It is not examined whether the development of the pupils fulfils the hopes which are pinned on them through the curriculum; there is only a selective examination of whether, at a given point in time,

they are capable of school activities which were included in the expectation horizon of the curriculum. An empirical summary of whether the result of the school lessons corresponds to the sum of curriculum expectations, or to the political hopes attached to them, does not exist, and cannot exist, because there is no linear connection between the three levels of planning. Each one only opens up a discursive scope of uncountable possibilities in which all learning results, which do not obviously contradict the frame set by discourse, are legitimate events.

3. *Effect premise*: It is questionable whether the out-of-school activities or later the social activities correspond in any way with the expectations expressed in the school-political principal ideas or in the curricula. Investigations into the connection between school knowledge and everyday-life knowledge indicate that there exists a considerable distance between the two, for example, in natural sciences, computer science, or education in environmental problems. This indicates that what we learn at school has only a limited influence on what we do out of school. Of course, we acquire a basis of knowledge and skills at school, which we use later in one way or the other. In what way, however, curricula do not tell us, and there is little that can be checked empirically. When we consider that curricula last only about 7 years on average (in Germany), and that they are only one of many factors that influence the actual lessons, then any attempt to find an empirical connection that can be checked is pointless. Curricula are no good for prognosis or for an empirical standard of social knowledge and activity. The premises required by Plato cannot be redeemed, or at least their redemption cannot be proved empirically. Nevertheless, the belief in public curriculum work has not dissolved, and there are few other social planning methods that can come up with a comparable continuity that has lasted several centuries. But how can something be a standard of public education, which by and large is unknown to the public and cannot be measured empirically? To analyze the standard function of the curricula, we must see the independence and the interdependence of the three levels.
    1. On a political level, not the curriculum itself is the standard of public education, but the public discourse which relates to it. The curriculum discourse illustrates what the public expects from education and misses in education. Curriculum work is successful here when it can offer the public documents in which it can recognize itself and its problems. In democracies, this is guaranteed through

the fact that such documents can win a majority. Curriculum work on this level sums up the educational political common sense. It concentrates the complexity of the social educational system. The long-term consequences of such planning documents do not play an important role in this discourse, because the political discourse movement is short-lived. They are unknown at the time of the discourse and cannot be traced empirically at a later point in time.

2. On a practical level, the curriculum is just as little a standard of pedagogical activity or of concrete results of lessons. It only supplies the discursive frame, which allows the binding of the complexity of the pedagogically possible to a verifiable criterion, i.e., the criterion whether it is possible by means of the school practical common sense to illustrate that the facts, which always come into focus can be made legitimate in the frame set by the curriculum.
3. On a programmatic level, on which the actual curriculum is written, it is necessary to reconcile the political with the school's practical common sense. Curriculum work is successful here when it can convey the feeling to politicians and the public that it meets their expectations, and when, in doing so, it uses means which are seen as pedagogically reasonable by the average of the pedagogical profession.

Curricula are usually common sense recorded in documents—or as Peter Menck once formulated pointedly—the selection of the selected (Menck, 1989). When they go beyond this scope in the direction of the political discourse, then the difference between what is planned and what is generally accepted indicates how far the education of the public is from the education outlined in the curriculum. This can lead to fierce political battles, as in Hessen in the nineteen seventies—but they only marginally affect the actual school and teaching practice. Because of the political costs, such transgressions are very rare compared to the number of public curricula. When curricula go beyond school practical common sense, then the difference usually indicates the distance between the social expectations regarding school and what is usual and possible in a school practical sense. Seen from a curriculum-historical viewpoint, this is more often the case (even the Stiehl regulations of 1854, which were infamous because their restrictions went far beyond what was customary at schools at that time). The effect of such transgression is not immediate; it usually only has a discursive character, i.e.,

the scope of the possible changes in a certain direction. Whether and how this scope is used is not decided by curriculum work, but in the practical discourse, as it develops in classrooms and staff rooms.

According to the results of our survey, curriculum makers obviously do not believe that innovations in curricula have much chance of succeeding. A consequence of the negative co-ordination and of the connection with the existing common sense is the fact that curricula have become instruments for the securing of stability, not of change. In the rhetoric of innovation, which goes along with the making of curricula, one can easily overlook that the real margins of change are small. We do not have any precise empirical investigations in this area, but if we look at the amount of basic knowledge and skills that have become school subjects since the beginning of the last century, e.g., in Schleswig-Holstein, then we can assume that about three-quarters of the compulsory curriculum has remained. It is proved that the relative weight of school subjects has not changed much since then (cf. Hopmann et al., 1997). Recent empirical and comparative investigations into the structure of curricula and pupil knowledge indicate furthermore that this basic canon is largely identical and stable in the western countries (cf. Meyer et al., 1992; as well as the reports from the well-known Timms studies, for example Baumert et al., 1997). The short-term variations in the weighing of certain contents and aims may seem impressive to contemporaries. Seen from the curriculum-historical point of view, they are mostly only swings of the pendulum in an almost linear movement in which the traditional is enlarged in an additive manner without being touched in its substance. Even seemingly radical reforms like *education in environmental problems* and dealing with *new technologies* have their history, the history of a constant coming and going in the fringe areas of the curriculum.

Basic Forms of Curriculum Work

Seen in an international context, curriculum work is only one of several variants used for measuring public education.[4] Besides countries with a long

[4] I have developed the following considerations partly together with Jörg Biehl and Frank Ohlhaver in another paper (cf. Biehl, Hopmann & Ohlhaver, 1996). Further literature references can be found there.

curriculum tradition, there are others which have no generally binding, written curricula. However, functionally equivalent patterns of control, with which the public school system can be supervised, have usually developed in those countries. There too, decisions on the actual contents of lessons are not simply left to the individual teachers or schools, but frame decisions, structure requirements, result controls, or other codified preconditions set narrow bounds on everyone involved in the curriculum. Roughly speaking, we can distinguish four basic modes of curriculum control in Western countries:

The philanthropic model

The philanthropical model represents, as mentioned above, one of the oldest forms of curriculum work run by the state. It is based on a kind of double strategy: on the one hand, the state (or the school representative) has the right to stipulate any teaching ideas that are right through curricula or school rules; on the other hand, the state (or the school representative) has to give information on the contents and methods of lessons through models and experiments. In the language of implementation research, this is a top-down model, in which the initiative and responsibility are mainly assigned to the curriculum administration. Since its first overall use around 1800 (for example in the former duchies of Schleswig and Holstein), his model has been popular for a long time, especially in the northern European countries (for example in Sweden and Norway), and was frequently used in connection with social democratic reform strategies. It is characteristic of the philanthropic model that a unity of the planning discourse is assumed, i.e., that all three Platonic premises (planning, learning, and effect premises) and their inner connection regarding their validity are required.

The license model

This also assigns a total responsibility for the contents of lessons to the state (or the school representative), but it limits the intervention to the requirement of a frame of "subject matter" (curriculum, guideline), and leaves the responsibility for its implementation to the individual school and/or the individual teacher. The classic form for this is the systematic distinction between the planning of teaching and the planning of lessons, which gives the teacher a kind of *license* for the realization of the curriculum requirements through the pedagogical freedom or the freedom of method. This classic model, which

was first codified in Prussia around 1810/20, represents the predominant basic pattern of curriculum work in the German-speaking countries at least until around 1970. Characteristic of this model is the differentiation of levels as described above.

The examen-artium model

This can be exemplified by school development in the United States. Until a few years ago, there were no binding state curricula and no other forms of state preconditions concerning the contents of lessons; instead, there were entry controls of the respective following educational institutions, which were just as effective. The admission norms of the leading colleges have set relatively clear preconditions for the high schools, which they must try to meet in their lessons, which prepare the pupils for college, if they want their school-leavers to have a chance. The historical example of this model is the examen artium and other forms of independent entrance examinations, like, for example, the French *concours* system. Here, the result control and the teaching are linked to different institutions, and thus, the unity of the planning discourse is abandoned.

The assessment model

This could also be exemplified with the school history of the United States, especially of some west coast states, like California. Here, too, there is mostly no binding written curriculum. By means of different school leaving controls, like standardised school ability tests, the schools have precise directives on what they must have achieved at a certain point in time. In many US Federal States, the publication of the results shows how much pressure schools are exposed to if they do badly in this "school competition." Other less rigid forms of the assessment model can be found in those countries, which prescribe standardised intermediate and school leaving examinations (e.g., a central school-leaving examination), sometimes only for certain subjects, as is the case in Denmark. These basic forms are, of course, only *typification*. They rarely exist in a pure form, but mostly as a mixture. Moreover, different strategies are often applied for different school levels, as is the case in Switzerland, Norway, or Denmark. With the question, whether with or without a curriculum, and to what degree of control, these models can be systematically described as cornerstones of a field (cf. diagram 1; from Biehl, Hopmann & Ohlhaver, 1996). Moreover, there is a common ground for overlapping

models. Models that are based on a curriculum tend to emphasize the course of lessons, whereas models without a curriculum emphasize the results of lessons. Both models of direct control are more exact in their directives and in their definition of room to manoeuvre than models of indirect control, the limits of which often only become visible in individual conflicts.

If the consequences of these different basic forms were to be described for the standard function of curricula, then it would be advisable to see how the border can be drawn between the *political* and the *programmatic* discourse on the one hand, and between the *programmatic* and the *practical* discourse on the other.

The license model

On the political level, curricula or the general directives concerning curricula (like models, school laws) function, as described above, as a documentation of *common sense*. In this respect, nothing essential has changed since the 19th century; only the mechanisms of the documentation of common sense have been increasingly formalized and institutionalized. Today, there is hardly a curriculum method that can do without the preliminary work of political commissions, parliamentary guidelines, etc., and the participation of all kinds of social organizations and groups representing their interest. The relation between the programmatic work and the practical level has also been subjected to a stronger process of institutionalization. Until about 30 years ago, the work of the curriculum administration was finished as soon as the curriculum was on the table. In the license model, it is up to the teachers and schools to translate the curriculum content into local practice. Since then, however, a whole system of mediating activities and institutions has continuously moved into the space between the planning of teaching and the planning of lessons. The most striking expression of this development is the state curriculum institutions, which developed in the last quarter of the century in several European countries and developed a large field of activities from the further training for teachers to the development of recommendations and teaching models.

The philanthropic model

In the philanthropic model, the interpretation of the state directives was and still is delivered by the curriculum administration. The development

of aids for the practical work and of further training is then carried out by the curriculum administration itself or, as is the case in Norway, for example, is delegated to other instances of the educational administration, like the regional school supervision. Changes can be controlled to the degree to which teachers integrate the intentions of the directives into their local practice. Different degrees of freedom result mainly from those parts that are not regulated in the curriculum and the following interpretations. Through their linearity, philanthropic reform strategies require an immediate connection between what is politically intended and what is practically taught and its effects, a requirement which relates to enormous legitimacy costs, but cannot be fulfilled empirically. Curriculum-historically, philanthropic top-down strategies are mostly followed by a loosening, which is explicitly orientated to the license model, which reduces the state's setting of a frame to a minimal catalogue and leaves the rest to the subsequent levels (as in Sweden and Hessen at present).

The examen-artium and the assessment model

In the examen-artium model and in the assessment model, both systems without a curriculum core, the situation is different. Here, it is not a matter of translating a given frame of content discursively, but this frame must first be described and assessed in terms of its implications for lessons. Proceeding from the expectations set up by standards or tests, it is necessary to find out what the contents and the methods of lessons should be like, to meet these expectations. The most prominent expressions of this form of curriculum work are the big curriculum projects, as they were developed, for example, in the United States. The most recent of these curriculum projects is the frame curriculum for natural sciences (*Benchmarks for Science Literacy*, 1994; cf. Riquarts & Hopmann, 1994). Unlike other curricula, they are not binding on schools and teachers, but they offer suggestions as to how the expected school results could be generated. Room to manoeuvre exists mainly through the possibility to choose from the curriculum on offer. In many cases, school books and test batteries replace the curricula, both normatively and in fact. With this, an essential part of the curriculum work is handed over to the "free play of forces," i.e., the producers of such materials. The political discourse hardly deals with the translation of the contents of the given standards; it often limits itself to the vague demand for 'world-class standards'. When these

standards are exemplified, as for example in Hirsch's *Cultural Literacy: What every American needs to know* (1988), they look quite like topic catalogues of educated discourse. They are in their own way no more than attempts to document the assumed common sense. The political advantage of "national standards" is, of course, the shifting of the responsibility to carry through these standards to schools and teachers. Here one can measure immediately whether they have met the expectations complied in the test batteries. The political drawback of the public measurement is the fact that the basics of measuring are largely not available to the public, because the development and official verification of result controls are a matter for experts, not lastly for private industries.

A decisive question in this context is, of course, what kind of measurability of education these models produce.

The *license model* is based on the division of labor between the planning of teaching and the planning of lessons, as it is defined through the limitation of curricula to subject matter requirements and through the freedom of method. The amount of subject matter does not necessarily mean deprivation of personal freedom if the development profile is made possible through selection and concentration. It is also a question of the teachers' competence, whether they can make use of the difference between contents and substance of education to profile their lessons (and how far they are supported by further education, school books, etc.). Many local school innovations and movements like the reform pedagogy have made use of this division of labor: their reform proposals, which are mostly defined as methods of teaching (project, open lessons, etc.), are compatible with very different curricula. Admittedly, they destroy the division of labor to the same extent as their proposals are accepted in the curricula and thus limit the freedom of method. In the license model, school results can meet the expectations of the curriculum in many ways; they allow for a variety, which can hardly be demonstrated appropriately in a quantitative comparison of different elements of performance (as it forms the basis of international comparative studies like the TIMSS).

In the *philanthropic model*, variation is possible if the curricula administration holds itself back, i.e., if it regulates only part of the lessons with its instructions concerning subject matter and method. The development of the profile is made possible through the filling out of that part which is not regulated. This room to move is endangered in two ways: on the one hand, if the

holding back fails. When we consider that a large part of the lessons do not serve the teaching (but organizational tasks, discipline problems, etc.), then the formal room to manoeuvre quickly shrinks to a technical consideration of means alien to teaching. On the other hand, this division bears the danger of setting up a hierarchy, if the room to manoeuvre is not systematically expanded on the school level. When the non-regulated parts are left to the coincidental willing of individual teachers, and when they are not related to each other within the curriculum, as is the case in the binding part, then pupils (and their parents) would of course concentrate their attention to the "compulsory section prescribed from above" and would consider the "free section" to be a bonus for the few who were not already fully occupied by the compulsory section.

In the *examen artium model*, the freedom of schools and teachers is the greatest so far. There is no one who formally forces or pushes them into teaching anything. They can choose from a variety of prefabricated curricula or develop their own. However, a totally different pressure develops through the pupils (or their parents) who want to be qualified for certain educational sectors or periods of life. In curricula systems, lessons may be taught when they can be embedded through didactic interpretation into the horizon of the curricula rules; however, the legitimacy of teaching lessons without curricula directives is permanently precarious. How strongly this limits the freedom of decision for the teachers and individual schools depends on the balance of power between them and their social environment. In locally controlled school systems like the Danish one, this can oblige the teachers to constantly justify themselves. In Denmark, many teachers try to withdraw from this local legitimacy pressure by voluntarily using the non-binding curriculum recommendations of the Ministry of Education. There is every reason to believe that, because of this legitimacy need, the non-binding Danish curricula have a higher binding force than the binding curricula of the license model.

Assessment models bind schools directly when the measurements become publicly assessable (and that cannot be prevented in open societies) or—as in parts of the United States—when they influence the assignment of resources. A hierarchy of "good" and "bad" schools develops in the political *common sense*. But only success and failure in relation to what is measurable become visible. Other achievements or specialties of the lessons are not excluded by

this. How much room is left to schools and teachers becomes dependent on how "problematic" the measured placing becomes and on how strongly it forces an indirect hierarchy upon the various school achievements and contents. The great challenge to the European curriculum tradition is the assessment models, on which international comparative studies like SIMMS and TIMMS are based. They almost naturally start out from the Platonic premises: that what was planned is taught, and what is taught can be learned; that the learning success can be empirically and clearly shown; and that it is relevant for future development in the sense of the effect premise. These are all assumptions that are no more than doubtful empirically, but despite this, they have gained considerable political impact. Moreover, these comparative studies are paradoxical because, despite the public turbulence over the exact league tables, they show precisely the opposite of what they try to prove: although school and curriculum systems vary greatly, the performance of pupils differs only a little in the western countries.

Finally, we should distinguish who is granted the right to dispose of the standards of public education: career-orientated parents and other locally interested persons, according to their internal power balance, could profit the most from an *examen artium* model, which makes a goal-directed pre-schooling of their children possible. Formal equality can best be achieved through uniform assessment. With a high degree of detailing (as in standardised performance tests), uniform assessment limits the local freedom of forming to such a degree that actual inequalities of the chances for success cannot be avoided. Assessment systems, depending on the formation of their standards—are an excellent means to stabilize the social inequality of the educational chances. If one primarily relies on the freedom of the individual teacher to give the lessons a local forming, then this can best be secured with the license model, whereas the philanthropic model only then allows for a local forming, when the "remaining space," which is handed over to the schools, is big enough and is planned on a school level. It is not a coincidence that efforts to 'develop the organisation' in schools have been well accepted, mainly in countries with the philanthropic curriculum, like Norway. The farthest-reaching limitation of local freedom of movement finally results from mixing method-orientated and result-orientated models. This would push all those parts of lessons and school life aside that were neither prescribed nor measured (a danger, as it

exists in the expansion of the "uniform examination requirements' for the secondary level and the school-leaving examination, and which can already now be studied in England and Wales).

Of course, yet a fifth strategy could be planned, one which would radically renounce any state control and would combine this with the greatest possible freedom of structuring for each individual school or teacher. Even if one disregards the inequality in the school system, which would be unavoidable in this system, it would be doubtful whether this system could maintain itself in the long run. Why should society, represented by politicians and the public, not call its most expensive subsystem, the schools, to account? Curriculum work in its different forms is an attempt to give this empirically impossible account, so that the public can accept it. Seen in this way, the different forms of curricula control are a standard of the ability of the public, which is relevant for the making of decisions, to live with this structural incapability.

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