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An interpretation of the idea of "scientific concepts" as the products of science that should supersede prior everyday knowledge of pupils is untenable and obscures the relation between learning, reflection, and morality. Instead, in this article I propose to think of scientific (or "scholarly") concepts as the products of reflection in a practice that includes choices about the future development of that praxis and are, in that sense, of a moral nature. Teaching scholarly concepts should be "genetically adequate," meaning that it should encourage pupils to reflect and interpret concepts as elements to be used in co-reconstruction of practices. In teaching, subject matter, identity formation, and the development of practices are interconnected.

EXPANDING THE IDEA OF SCIENTIFIC CONCEPTS

Carpay (1996) told the story of a boy who, in his first Latin lesson in secondary school, asks the teacher why the declension in the Latin language has only six cases. The teacher answers only that he is not to be blamed. The pupils, evidently, are supposed to learn the wisdom of Latin grammar without asking, without even thinking about it. The boy in question is not satisfied with this. He has a problem (what is the rationale behind the number of cases) and is not being helped in thinking about it. Even though such a rationale may not in fact exist, the pupil's problem is genuine and indicates reflection on his part. He has a genuine theoretical interest in the learning task. The teacher, however, prefers an instrumentalist attitude: Just learn the cases by heart because you will need that knowledge later on. In that context, his answer may even be construed as trying to reassure the pupil: There is no need to know the rationale.

This teacher's attitude is by no means an exception. The idea is widespread that schools are institutions for the transmission of knowledge and skills that are somehow "better" than those learned outside school and thus enable pupils to amass valuable "cultural capital" to be used when their "real" life begins. Inevitably, Vygotsky's distinction between everyday and scientific concepts has sometimes been interpreted as supporting this view of schooling. Indeed, Vygotsky thought that scientific concepts were better, in the sense of conveying more truth (Van der Veer, 1996). If that is how the distinction is understood, scientific concepts are equated with the (science-based) intended curriculum, and Vygotsky-inspired theories of teaching and learning (e.g., those of Gal'perin or Davydov) are understood as providing ways for facilitating the learning

process. Effect-oriented research projects, then, show whether teaching using the techniques suggested by those theories result in higher learning test scores, and so forth.

Such an interpretation, however relevant it may be, does not do justice to the full potential of Vygotsky's ideas, just as the teacher in the example does not do justice to the pupil's problem and needs. The impact of Vygotsky's ideas is not only of a technical nature. His ideas have implications for the way we think about the aims of education, about what is learned (or at least should be learned), and why. Vygotsky thought scientific concepts important not primarily because of their referential value (as a product of science) but because they "open up the gate for conscious awareness" (Vygotsky, 1987, p. 191). For Vygotsky, consciousness is an activity: becoming con-scious of something. I think this comes close to what we normally call *reflection,* except that in the context of Vygotsky's theory, the *con* in *conscious* should be taken quite literally ("knowing together"): It points to the contribution of other people in this activity.

The main question for this article is, In what ways might we understand and possibly expand Vygotsky's concept of scientific concepts in view of its importance for understanding development as related to educational aims? In the next two sections, I examine how to interpret the idea of scientific concepts and how they are made part of the teaching–learning process in light of their connection with reflection. In the remaining sections, I discuss what this means for the aims of education and for participation in sociocultural practices.

SCIENTIFIC CONCEPTS AND REFLECTION

Wells (1996) gave an account of Vygotsky's theory that showed it would be all too easy to tie the distinction between two types of concepts to what is known as the orthodox view of science. In that view, the validity of scientific results rests on the distinction between an empirical language in which (contextual) observations are noted and a theoretical language in which these observations are seen to be derived from (decontextualized) statements about natural laws (Nagel, 1961). The two languages must be distinct, because otherwise there is no way to refute a theory on the basis of observations. Neither is it possible to derive the theoretical language from the observational one: It represents a "leap" in which the level of a simple collection of observations is transcended. This latter aspect may be part of what Davydov tries to capture in speaking of "empirical" versus "theoretical" concepts.

In such a view, then, scientific concepts are the result of a specifically scientific mode of observation and reflection. They represent the best available object knowledge, warranted by scientific procedure. Didactically, the nonreducibility of scientific concepts to the language of everyday observations is the reason why they must be taught explicitly.

This view of science and its language use may have been state of the art in Vygotsky's day. However, Wells (1996) pointed out that this interpretation of the distinction, quite apart from being philosophically untenable, does not fit very well within a Vygotskian framework and is probably not what Vygotsky had intended. Contrary to Vygotsky's outlook, this interpretation represents a distinctly ahistorical view in which observations are supposed to be independent of culturally and theoretically guided interpretations. It does not interpret science as a cultural practice with consequences for the culture outside science itself. It is probable that Vygotsky, quite contrary to this view, interpreted the relation between everyday and scientific concepts dynamically and historically: Scientific concepts become "common knowledge," and changes in the general culture influence thinking in science.

In such an interpretation, science itself becomes historical, not just a straightforward growth of a knowledge base. In that spirit, Wells (1996; cf. Wertsch, 1985) suggested viewing the abstract and decontextualized register of scientific concepts as developed within, and especially important for, Western society. But if the register of science cannot be thought of as universal, scientific concepts must be thought of as the concepts that were developed and are in use within the professional practice of (Western) science. For instance, the meaning of a term like *element* is different in chemistry than in daily life. This poses the question of whether it is really a good idea to devote most of the schooling time of pupils, even in Western society, to the learning of scientific concepts taken in this sense because there are many other professional registers that might be useful to learn.

A possible answer to that is that "scientific thinking," in the sense of a decontextualized mode of thinking, prevails in our society beyond the practice of science as such. Scientific concepts are not necessarily concepts of science if we emphasize not their referential content but the logical–objective mode of thinking with which they are associated. If taken as an argument to maintain this emphasis, however, this answer poses a number of other problems. Mainly, it tries to preserve the idea that decontextualized thinking, if not universally functional, is the most important feature of Western thought. One consequence is that it denies to a lot of work in human and social studies, including much of what is done within the cultural–historical paradigm, the status of "scientificity" and by default places it in the category of everyday concepts. This becomes clear where Wells (1996) drew direct parallels between the narrative mode of thought (Bruner, 1986) and everyday concepts, and between the paradigmatic mode and scientific concepts. Another consequence, the most important in the present context, is that a syllogistic mode of problem solving is valued over a heuristic one. This is not an acceptable aim, mainly because a syllogistic mode of thinking, especially if the emphasis is on the process and not on the content, is not an adequate preparation for participation in actual cultural activity contexts.

Such problems are evaded, rather than solved, if we interpret Vygotsky's use of the term *scientific concepts* as formal and procedural. In this interpretation, the term just means "the way knowledge is acquired by the child in school as opposed to in daily life" (cf. Wertsch, 1985). Emphasis then is on the supposedly synoptic and decontextualized nature of these concepts and on the systematic and logical nature of the way they are presented, which implies that the learner's attention is drawn to the concepts and their interrelations themselves, not to their reference in reality. However, as to the referential quality of concepts, such an interpretation is not very helpful in the selection of curriculum content. It either uncritically accepts the present canon of contents (it does not ask *why these* concepts) or suggests systematicity and completeness as relevant or even sufficient criteria for selection. In both cases, the same criticisms apply as before, and we can add the comment that the reference to the reflective processes that went into the construction of these concepts is lost. The connection to reflection is limited here to the way concepts give rise to reflective processes in pupils—a subject I return to in the next section.

Il'enkov (1977) provided a different way of looking at concepts by pointing out that their meaning does not rest on the "objective" qualities of the outside world, but on the social activities in which they are developed. For him, a concept does not describe the relation between an object and a classification scheme (which is often of an arbitrary nature). Having a concept means understanding the "essence" of a phenomenon (object), which for Il'enkov is to be understood as the role it plays in human activities. "Scientific" concepts, then, by their systematic and reflected nature, reveal a deeper "truth" about the connection between object and activity. The "objectivity"

of this knowledge rests on the object-directedness of this activity. At the same time, different activities may yield different scientific concepts, as objects are endowed with human activity-bound properties and purposes. As humans always participate in different activities at the same time, this implies that there are multiple, and sometimes incompatible, ways of understanding the same objects: Knowledge is "multiperspectivic" (cf. Roegholt, Wardekker, & van Oers, 1998).

Il'enkov (1977) attached a second meaning to the ideas of the essence of objects and the multiperspectivity of concepts that derives from dialectical logic. In this case, "logic" should not be thought of as a formal calculus, but as a way of thinking. Dialectical logic (as explained, e.g., by Marcuse, 1964) refers to a way of thinking in which the essence of a phenomenon is in the tension between what it is and what it is not at this moment but should be, what it should become. The world is thus not taken "as is," but is seen from a normative and moral point of view. This is, of course, most easily seen in concepts like justice or humanity, but according to both Marcuse and Il'enkov, it is a way of thinking that pervades (or should pervade, dialectically speaking) all our thinking and actions. Such concepts, in the words of Wartofsky (1979),

> are models: representations to ourselves of what we do, of what we want, and of what we hope for. The model is not, therefore, simply a reflection or copy of some state of affairs, but beyond this, a putative mode of action, a representation of prospective practice, or of acquired modes of action. (p. xv)

Multiperspectivity, in this view, follows from the fact that there is not one prospective point of view but always several possible ones. Thus, even the idea of an essence should be interpreted in a dialogical way—as an idea developed in, and negotiable through, dialogue.

How, then, should we interpret the notion of scientific concepts? Combining the notions of activity-relatedness, dialectical logic, and dialogicity, I suggest we drop all reference to a decontextualized mode of thinking and focus instead on a more dialogical interpretation of reflection. Although by doing so I depart from Vygotsky's writings, I think the suggested view is consistent with the basic tenets of a Vygotskian perspective. In such an interpretation, "scientific" concepts (maybe we would do better to use a label such as "scholarly" concepts) are seen as the condensed and externalized products of reflection on (and often on problematic aspects of) a practice, arrived at in actual or virtual dialogue between members of the practice community–a dialogue in which, implicitly or explicitly, the direction of development of that practice (what it should become) is an issue. Nelissen and Tomic (1996) paraphrased Vygotsky:

> Reflection ... evolves from participation in sociocultural practices, a process which unfolds in the following way. In dialogues, humans are confronted with criticisms of their own ideas and work methods. Anticipating the comments of another can lead to a critical dialogue with oneself. In essence, reflection is internalized dialogue. (p. 4)

The nature of this reflection could be either syllogistic or heuristic (or either paradigmatic or narrative, in Bruner's terms) and its outcome (the concept) can vary in its degree of generality, without ever being totally decontextualized (which is a problematic notion in itself, as van Oers contends in this issue): It eminently represents "knowledge-in-action" (Applebee, 1995). Such concepts will have become a systematic part of the professional speech register of such a practice, and thus it is necessary to learn to use them to be able to participate in that practice. Because this use of concepts differs from everyday use of the same terms, learning them requires reflection.

But more important, they represent the compressed product of reflection by others and thus may be seen as the contributions to a continuing dialogue that others are offering. That is why they stimulate reflection and why reflection is necessary to understand their full meaning. Here, another side of the concept of reflection becomes important: reflection as the ability to act indirectly on one's own behavior by regarding oneself as "the other." Reflection implies decentering (and, of course, recentering). Thus, the idea that learning scholarly concepts both requires and stimulates reflection ("con-sciousness," in Vygotsky's terms) is preserved.

THE DEVELOPMENT OF REFLECTION IN EDUCATION

Learning scholarly concepts in school may stimulate reflection, but does not necessarily do so. Whether this aim is reached depends on the way the process of learning and instruction is arranged, as becomes clear when we consider the pupil who was trying to reflect on the number of cases in Latin. It also depends on the choice of concepts—that is, on curriculum content. The teaching–learning process must stimulate the development of reflection: It has to be "genetically adequate."

Most people agree that learning ultimately is not done to cram your head full of erudite but unusable knowledge. According to one point of view, it is done to be able to participate more fully in cultural practices and traditions. As Applebee (1995) said, it is about learning knowledge-in-action, not knowledge-out-of-context. Chang-Wells and Wells (1997) noted that learning not only is *about* cultural activities, but also is done *in* such activities:

> Human beings learn in the course of participating in purposeful joint activity as, with assistance from more expert others, they master the use of the material and intellectual tools and practices that mediate the achievement of the desired outcomes of those activities. (p. 147)

There is a tendency in some of the literature (e.g., Lave, 1996) to prefer learning in apprentice-ship-like situations, or learning by participating, over learning in schools, because in schools learning about a practice is dissociated from the actual participation. Thus, it may be less effective, indeed boring, and directed more toward obtaining good grades than toward putting learning to use. In such a view, knowledge (including scientific concepts) is useful to learn only in the context of practices that require its use. However, one eminent reason for having schools is that they give access to practices that are otherwise outside the reach of pupils and accelerate learning to participate in other practices, by creating "virtual practices" in which pupils may participate in an introductory and safe mode and where learning to participate is condensed. To this end, schools both provide professional "more expert others" and teach the use of "virtual experts" in the form of books and other reference sources.

If we understand schools as places where pupils are introduced to the participation in sociocultural practices, this introduction is better when the "virtual practice" as set up in a school retains the essential characteristics of the actual practice. It is not always easy to understand what, for the pupils, are the essential characteristics. But in many cases, textbooks and teachers make scant reference to such cultural activity contexts, probably because of the influence of the idea of decontextualization. This makes it difficult for pupils to attach meaning to what they are learning. Having mastered a certain register for use in school does not yet imply having learned to reflect

on an associated practice. "After all, it is only when action is meaningful that it makes sense to reflect on it" (Nelissen & Tomic, 1996, p. 18). This is what the Latin class pupil could not do. For most pupils, however, the meaning they (re)construct is related primarily to the context of the school learning activity, not to the cultural activity from which a concept derives. Thus, concepts are learned to get good grades. But knowledge that is not meaningful at this moment but is learned "because you will need it in later life" can only develop into really meaningful concepts at the moment the situation in which you need it really occurs, by which time you may have forgotten you ever learned it in the first place. This is one of the reasons educationists like Dewey stressed learning by experience.

A related problem of education (and not only of education; cf. Latour, 1987, on comparable problems in science) is that scholarly concepts, because of their "fossilized" form, lend themselves easily to losing their discursive qualities and becoming reified and, hence, to being memorized as statements of fact. If, however, concepts are presented as ready-made products (e.g., of science), pupils will not be able to perceive them as invitations to a dialogue. Memorization, or at best learning to use technical tricks, is the result. The teaching of scholarly concepts only leads to genuine reflection, and to the development of personal identity, if the dialogical quality of concepts is preserved. This is not always clear even to teachers, as the example of the Latin teacher and his ideas about learning cases illustrates.

Vygotsky himself expressed some aspects of the aim of genetically adequate teaching in his distinction between scientific and "true," or genuine, concepts (see Wertsch, 1991). The idea of a genuine concept calls attention to the active element in acquiring a concept: The scientific concepts that are offered as the content of curriculum need to be actively transformed and made into a part of the person if they are to become a genuine concept for the learner that can be used in participation in a practice. In this way of thinking, a person has not really learned something until he or she has transformed curriculum content into genuine concepts. Such knowledge functions not as a "handbook" to be consulted in problematic situations, but as a heuristic model.

A related distinction is presented by Semenov (as cited in Nelissen & Tomic, 1996). He distinguished two basic forms or aspects of reflection: intellectual and personal. Intellectual reflection "involves concentrating on the objective data of a problem, i.e., the contents of a problem," whereas personal reflection involves "attributing meanings to your own actions during the search process" (for the solution of a problem). Although most attention has gone to intellectual reflection, I suggest that personal reflection is a more important aim for education and maybe also the aspect Vygotsky primarily had in mind. Personal reflection means asking yourself: What am I doing, why am I doing it, and why in this way? But this supposes there is an "I" that is doing something. It supposes that you are able to see yourself as a source of action, as the subject of purposeful change (Lampert, 1995). So, as you learn to reflect in this personal sense, you also develop a sense of personal identity. In fact, reflection provides the developing person with a grip on his or her own development. The idea of personal reflection draws attention to the element of giving meaning to processes in relation to yourself and your position in the world. Asking yourself why you are doing something in a particular way also means that you are engaging in positioning yourself in relation to knowledge, in making concepts-out-of-context fit into your own context of action. Personal reflection is essential in the construction of knowledge-in-action that is based on the knowledge of others and that is flexible.

The motivation needed to engage in the work of constructing genuine concepts depends on being able to see what you are learning for and in what practices you will be better able to

participate. It also requires the desire for better participation in those practices and the capacity and ability to focus that desire. Litowitz (1993) suggested that even the desire to participate better in a practice has a discursive background: "the desire to move beyond (simple) participation to responsibility is itself an act of resistance, a resistance to being dependent and controlled by another" (p. 194). Once more, it is shown that the formation of personality is intrinsically connected with reflective inquiry and the appropriation of scientific concepts—if taken in the present sense.

PARTICIPATION AND THE AIMS OF EDUCATION

In the previous discussion, I assumed that schools are places where children are prepared to participate in cultural activities. It remains to be shown, however, why reflection is an essential part of participation. As I contend, this is not just a matter of explicating the nature of education itself; it implies a moral choice as to the aims of education.

What exactly do we mean by "participation" in sociocultural activities? Often, the concept of participation is understood in a technical sense. It then refers to the knowledge, skills, and abilities that are required to be able to function adequately as a member of the community engaging in an activity. The function of schooling, then, is to provide pupils with such tools and abilities (e.g., the ability and willingness to cooperate) as are required for participation in those activities considered essential to the existence of a community.

Vygotsky went rather further in stating that participation in cultural activities effects a transformation of the way individual participants function and, indeed, that such transformation is necessary to the development of the "higher psychological functions"—that is, those ways of functioning that are typically human (cf. Wertsch, 1991). However, this emphasis on personal development does not yet show clearly that participation also has a moral quality. To explicate, I summarize a theory about three different forms of participation in modern democratic activities, or different models of citizenship (Van Gunsteren, 1992). Although the discussion is limited to citizenship, I suggest that the characteristics of these models are valid for ways of participation in most if not all activities. In this discussion, I intend to make it clear that both participation and practice should be understood as concepts with both a real and an ideal element in the sense of dialectical logic, and thus they have a moral dimension. Moreover, this moral dimension can be interpreted from different points of view, as represented in Van Gunsteren's models.

The first of these three models, or (ideal) forms of participation, is that of the communitarian citizen. Here, the emphasis is on being a member of an existing community. Individual identity is derived from this membership. The adequacy of actions is determined by the boundaries of what is acceptable within this community, which in its turn is determined by the cultural history of the community. This implies that individual actions may be described as heteronomous: guided by rules that are not open to discussion or intended change. Changes in rules, therefore, tend to be perceived as decay of moral values, or at best as the product of serendipity or individual creativity. A dominant value is loyalty. Education is seen as socialization. Many discussions about moral and civic education more or less implicitly presuppose the communitarian view.

The second model is that of the calculating citizen. Here, citizens participate in society to maximize their own advantage. The individual is seen as a person who calculates which choices will be maximally profitable to his or her own particular needs and strivings. In this individualistic view, all social activities are seen as market relations that are entered into in the hope of mutually

profitable results. In such a view, individual freedom, respect, and honesty are important values because they ensure that contracts will be honored. Thinking about education as a place where the knowledge and values for operating on this market are imparted is rather popular at the moment. And where the tasks of education are reduced to the transmission of psychological tools, the individual and calculating citizen is often presupposed.

The third model Van Gunsteren terms "neo-republican." This implies that the community (in his case, the state) is seen as a *res publica*, something that needs explicit attention from all participants. The members not only participate as "consumers" or rule followers, but also take responsibility for the adequate functioning of the community itself, including the rules and interpretations that guide this functioning. Simple participation is not enough; it needs to be elevated to the level of taking responsibility for your own actions and their effects on the cultural practice. Participation thus has a distinct moral aspect: Taking responsibility is a moral act.

Taking responsibility for your actions, however, is only one side of participation in practices. It highlights personal development but does not take into account the development of practices themselves. So a second aspect of participation is the ability and responsibility to contribute to the development and (re)construction of practices ("coauthorship"; cf. Wardekker, 1992, 1996). Of course, practices change by the very fact of our participation in them, because each participant interprets the practice in their own way. But this change is unintentional and therefore undirected. Changing practices in an intentional way can contribute to making them better. In this view, then, critical thinking and acting, destabilizing a practice, can be a very responsible thing to do—even though we can never be sure of the outcome.

On one hand, individuals act as free and autonomous subjects. They are not totally bound by the rules because rules are open to critical discussion and new rules can be constructed. Participants can be "coauthors" of rules and thus create their own conditions of participation. (In fact, for Van Gunsteren the very function of a democratic nation is to empower its members to act freely in this sense.) On the other hand, this also implies that freedom is not absolute: Even in a critical discussion of the rules, actions are guided by them. Also, participants cannot change rules all by themselves: Rules are always co-constructed and subjects are always coauthors, acting in cooperation with others and using ideas and guidelines that are part of a cultural heritage. In that sense, the term *autonomy* is slightly misleading, because it stems from an individualistic view of society. Reinders (1996), using theological ideas formulated by Zizioulas (1975), pointed out that living in a community implies that the members in fact "owe their existence" to the other members (which is what Vygotsky's theory is all about), so that we can never equate identity with individualistic autonomy: Being dependent on and sensitive to others, giving and receiving care, is as much a part of our existence as autonomy is. Thus, both autonomy and care or relatedness are essential values in this model.

It is important to note that the reconstruction of practices, too, is not only an intellectual challenge but also a value-laden enterprise. Which practices are reconstructed in which direction is a matter of value-driven choices. By the reconstruction of practices, our world can become a better place in which to live, but it may also be dehumanized, even though we may consciously strive for the good. This is one of the central themes of critical theory, both in its older European and in its present American forms (cf. Wardekker & Miedema, 1997). Intellectual and moral education cannot be kept separate; intellectual issues have moral implications that must be clear if genuine partnership is to be achieved.

PARTICIPATION AND REFLECTION

In what follows, I discuss the question of the function of reflexivity in the three models and the question of how such reflexivity is related to the idea of scientific concepts.

It seems clear that the proponents of the communitarian view will not attach much value to critical reflexivity. Rule-following can ordinarily be done, and indeed is easier, without much reflection. Instead, adherence to rules and values tends to be enforced. (Even in the first decades of the 20th century, school education for the "lower classes" was sometimes thought dangerous for the status quo because pupils, having learned to think for themselves, would no longer be content with their assigned social positions.) Conversely, where reflexivity is not given emphasis in education, the result may well be heteronomous behavior. This seems a serious problem for those advocating a restructuring of school along the lines of an apprenticeship model (e.g., Rogoff, 1990). Of course, as Wells (1996) warned,

> it must be emphasized that there is more to apprenticeship than simply reproducing the achievements of the past. For the ultimate object must be that the apprentice should become a master craftsman, who creates new artifacts and adds to the cultural resources of skill and knowledge. Transformation of society as well as of the individual learner is therefore an intrinsic aspect of this conceptualization of schooling.

However, the model does not seem to have a provision for ensuring that such transformation is based on critical co-construction instead of individual serendipitous creativity, and thus it under-conceptualizes an important aspect of education (cf. Hedegaard, this issue). This does not mean, of course, that the apprenticeship model is all wrong: The central issue that learning always takes place in practices also underlies my argument.

Both other models emphasize critical reflection, though in different forms and to different ends. In the "calculating citizen" or market model, the goal of using reflection is personal benefit, and the existing rules and values of a community are seen as the conditions under which this end is to be reached (in some instances, by bending or evading them). Reflection takes the form of calculation of possible gains and losses for certain projected courses of action. Being able to foresee the consequences of one's actions is the most important element in such calculations. Therefore, knowledge and logical reasoning are foregrounded. The model thus emphasizes what has been called technical rationality.

In the "neo-republican" or autonomy model, however, critical reflection aims at the improvement of common practice, which is at the same time a condition for further personal development. Reflection takes the form of critical and cooperative inquiry. Such reflexive thinking uses knowledge of the world and logical reasoning, but I imagine that it often proceeds more in a heuristic or narrative than in an syllogistic way (cf. Bruner, 1986). Finding a new way is seldom a question of logical certainty.

EDUCATION AS A MORAL ENTERPRISE

To conclude, we should see schools as places where the reflection of pupils (and teachers) is stimulated. This means that pupils should be encouraged to reflect on *what* they are learning and

why. Schools should not just be places where pupils are prepared for being able to perform the operations their future bosses require of them, or where a general and decontextualized foundation is laid for participation in whatever practices. It is essential that schools have a different time perspective and a different focus than apprenticeship situations. Schools should teach pupils to enter into a reflexive dialogue with others who are present only in the form of texts, of scientific concepts. But this can only be done fruitfully if the relation to actual practices is not completely lost. This should probably mean that pupils learn to relate concepts to multiple contexts.

This implies that curriculum development is a moral and political enterprise as well as an intellectual and psychological one. Furthermore, we should not see intellectual development in schools as separate from identity formation and emotional and moral development. Because of its dialogic quality, the (re)construction of genuine concepts is an important element in personality formation. Therefore, schools are agents in the emotional and moral development of pupils, whether they want to be or not. In this postmodern age, this is an especially significant terrain to explore.

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