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Knowledge and Thinking

The slogan that our schools should teach how to think and not simply load the student's head with study material has been popular in our pedagogical literature for some time. It is a reasonable slogan. But it immediately confronts pedagogy with a question the solution of which goes far beyond the bounds of its own competence: what does it mean—to "think?" What is "thinking"?

It is by no means a simple question. Would every pedagogue be able to explain clearly to himself and to others what he understands by this word?

It is not so difficult to make out that the mastering of curricular material does not coincide automatically with the development of the ability to "think independently." Or to be more precise, simply to think, for thinking can only be "independent." However, understanding the difference between the two is merely a first step in the right direction. The second step—much more important and much more difficult—is to overcome this difference, that is, to stop regarding the "mastery of knowledge" and the "training of the mind" as two different tasks. "Different" means that each task can and should be accomplished separately, independently of the other, and, correspondingly, by "different" means and methods. This is impossible by the very nature of things, by the nature of knowledge and thinking, and the entire problem is to construct the process of mastering knowledge in such a way that it should be at the same time a process of training the mind, the ability to think.

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Translated by Stephen D. Shenfield.

Yes, but do we really not encounter at every step what appears to be the opposite situation—people who "know" but who are unable to "think creatively (independently)"? We do encounter such people, and much more often than it may seem to us. But in such cases it would be more correct to say that here there is no trace of real knowledge, but rather something else that is called "knowledge" only through misunderstanding. For it is impossible to "know" in general; it is possible only to know something in particular, this or that object, and truly knowing an object means being able to handle and understand it *independently*. But "thinking" is nothing other than the ability to deal with each object intelligently—that is, in accordance with its own nature and not in conformity with one's fantasies about it. Thinking **is** really functioning knowledge.

And when people say (and they say it quite often) that someone possesses knowledge but is unable to "apply" this knowledge to reality, they are making an essentially quite absurd statement, half of which completely cancels out the other half. How can anyone know an object—and be unable to relate this knowledge (knowledge of the *object*!) to the object?!

In actual fact, this paradoxical situation arises where a person does not really know an object, but knows something else. What? Phrases about the object. Words, terms, formulas, signs, symbols, and stable combinations thereof deposited in science, mastered (memorized) in place of knowledge of the object—as a special object that exists above and outside reality, as a special world of ideal, abstract, phantom "objects."

It is here that an *illusion* of knowledge arises, followed by the insoluble task of relating this illusory knowledge to reality, to life, of which the person knows nothing apart from what has already been expressed in meaninglessly memorized words, formulas, and "rules," in "semiotic constructs." And when he tries to connect this illusory, purely formally mastered "knowledge" with life, with reality, he is unable to come up with anything of value for either knowledge or life.

To the conception of knowledge *sketched* above there corresponds a very widespread and philosophically false conception of thinking.

This conception deceives people all the more easily for seeming, at first glance, quite obvious and psychologically acceptable; it also has the power of a thousand years of tradition. "Thinking" here is understood as something like "inner"—dumb—speech, something like a silent monologue soundlessly whispered for oneself that if necessary can be turned "outward" for others in spoken or written form. The advocates of this view therefore both understand and investigate "thinking" above all in its verbal manifestation, as "language thinking." The very ability to think is, naturally, equated more

or less consistently with the ability to manipulate words, signs, symbolism of any kind—with the ability to combine and divide these signs in accordance with known "rules" and perform acts of "calculation of utterances," that is, to carry out procedures for the transformation of one sequence of combinations of signs into another such sequence. The "rules" governing these actions are assigned the status and name of "laws of thinking"—a status and name to which they are not entitled.

It is easy to see that on the basis of this conception it is difficult to train a real ability to think—that is, to achieve awareness of the essence of a matter, of a situation in real life, in objective reality. In place of the ability to think in the sense given this term by the materialist theory of reflection, the ability actively trained here is at best refined linguistic dexterity, oriented not toward an objective situation, not toward objective truth in its true—materialist—sense, but toward success, utility, consensus, considerations of the "simplicity and elegance" of semiotic constructs, and so on and so forth. Not infrequently this conception is combined with talk about the role played by intuition, irrational and subconscious motives, moral and esthetic "values," and other purely subjective factors that surreptitiously guide "semiotic thinking," activity in language and with language.

It has to be said that the understanding of thinking sketched above currently enjoys the support of the most influential currents in Western philosophy namely, neopositivism and existentialism—and exerts the strongest influence both on science and in the field of education. These influences also penetrate our country, and this circumstance needs to be taken into account. Under these conditions it is very important to counterpose to alien philosophical influences dressed up in the fashionable attire of "modern philosophy of science" a clear and principled dialectical-materialist understanding of knowledge and thinking, and of the connection of both with language. But above all—with real, objective reality, with life in the process of its development, which, in its decisive aspects, does not depend on language, or on the ability to use language, or on the ability to make "semiotic constructs"—on everything that is wrongly called thinking. Or even on real thinking—on the ability to achieve awareness of the true situation in the world around us, although some very important things in life do depend on this ability.

The highest forms of thinking—including scientific-theoretical thinking, the foundations of which our schools are obliged to teach—are, indeed, closely connected with language. What I say above should certainly not be read as an argument in favor of ignoring the problem of this connection. Fluent mastery of language, including the so-called language of science, is a very important condition of thinking, although it would be more correct to put it the other

way around: real thinking is an indispensable condition for the fluent mastery of language. A person who does not know how to think independently does not have mastery of language; rather, language has mastery of him, of his consciousness. His thinking (his "inner speech") remains in a permanent state of slavish dependence on verbal stereotypes, on meaninglessly memorized semiotic constructs, on "rules," stipulations, instructions, prompts, and so on—and precisely here lies the secret of the shaping of the dogmatic mind, of dogmatic thinking—a very bad kind of thinking. Dogmatism does not necessarily find expression in the vacuous repetition of the same phrases; it is sometimes marked by a very refined linguistic dexterity, by the ability to force life into the procrustean bed of dead formulas. And there are real artistes at this business. But dogmatism remains dogmatism in essence; it flourishes wherever a set formula obscures living reality in its development, in its tense dialectic.

Teaching how to think means, above all, teaching dialectics—in the most serious meaning of this word, the meaning given it by the greatest Marxist of our era—Lenin. But dialectics is above all "the doctrine concerning how opposites can be and are identical (how they become identical), under what conditions they are identical, transforming themselves into one another, why the human mind must understand these opposites not as dead and frozen but as living, conditional, and dynamic" [source not given in original, presumably Lenin].

People may ask whether we are not setting ourselves a utopian task when we dream of teaching the school student things that far from all professors in the world as it is are able to understand and master. Is this not hare-brained scheming? Is it not better to teach the child elementary truths and leave the subtleties of dialectics until later, for undergraduate and graduate studies? Is it not dangerous to demonstrate to the immature mind the "contradictions" contained in things and in their verbal expression (in the language of science)? Will this not lead to skepticism, to distrust of science? Is it not safer and more correct to act in the old-fashioned way—that is, to teach the student only firmly established truths, the tried and tested formulas of knowledge?

Safer? Perhaps. But in that case we need not set ourselves the goal of teaching how to think at all. We need only load the student's head with study material, as though it were a container, and not bother to do any more. Such is the alternative; there is no third option here. This, incidentally, is precisely the dialectical problem of contemporary education—how, finally, to combine the process of mastering the solid foundations of modern science with the process of training the mind, the ability to think—that is, independently to develop

these foundations, to correct them, to bring them into correspondence with new data, with the changing conditions of real life, with the world around us (which is not dead and frozen but undergoes constant dialectical change).

Yes, this is a very difficult task—to combine these opposites, the process of mastering established knowledge and the process of developing the ability to seek out knowledge oneself rather than mastering it in set form. But this difficult task can be accomplished. On one condition—provided that from the very start, not putting it off until later, the student is shown in each and every case how a truth that now appears "set" was born as an answer to a difficult problem that arose for people from the midst of life, from its contradictions. Each and every "set" truth that a person can now accept as a guide "without thinking about it" is a contradiction that was resolved at some time in the past, a contradiction that has been overcome. In mastering the set result of people's thinking together with the process by which it was obtained, the student will at the same time also master the mode of thinking by means of which this result was obtained and by means of which it may be obtained again if it is forgotten.

For those who seriously want to construct didactics on a dialectical-materialist basis, I offer as food for thought some profound observations of Marx that directly concern pedagogy, the process of the teaching and mastering of knowledge:

Roscher undoubtedly has a considerable—and often quite useless—knowledge of literature, although even here I seem to discern the Göttingen alumnus rummaging uneasily through literary treasures and familiar only with what might be called official, respectable literature. But that is not all. For what avails me a fellow who, even though he knows the whole of mathematical literature, yet understands nothing of mathematics? . . .

If only such a professorial schoolboy, by nature totally incapable of ever doing more than learn his lesson and teach it, of ever reaching the stage of teaching himself, if only such a Wagner were, at least, honest and conscientious, he could be of some use to his pupils. If only he did not indulge in spurious evasions and said frankly: "Here we have a contradiction. Some say this, others that. The nature of the thing precludes my having an opinion. Now see if you can work it out for yourselves!"

In this way his pupils would, on the one hand, be given something to go on and, on the other, be induced to work on their own account.

But, admittedly, the challenge I have thrown out here is incompatible with the nature of the professorial schoolboy. An inability to understand the questions themselves is essentially part and parcel of him, which is why his eclecticism merely goes snuffling round amid the wealth of set answers. (letter to Ferdinand Lassalle of June 16, 1862)

Of course, the reconstruction of didactics on the basis of dialectical logic is very far from a simple matter. It can be accomplished only by means of the friendly collaborative efforts of philosophers, psychologists, and pedagogues—teachers of concrete-scientific disciplines directly engaged in training the student's thinking. We cannot make do here with general philosophical (logical) considerations alone. But nor can we achieve anything without the most serious competence in philosophy. I would like to remind pedagogues of this.