

THE TYRANNY OF PREMISES

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IT has been observed that common sense and science are practically synonymous in the early days of a culture, but that as scientific investigation begins to peer beneath the surface of things, a gap develops between these two fields of knowledge, a gap which increases in geometrical ratio as time goes by. Today, as the sciences, especially the natural sciences, utilize non-aristotelian languages to an ever greater extent, while the 'laymen' continue within the narrower limits of the old aristotelian system, the gap is widening faster than ever. In a democratic society such a condition is dangerous, especially in those fields of knowledge most immediately effecting everyman—politics and education.

An example of how lack of up to date knowledge and lack of an adequate language may produce confusion is contained in a comprehensive article on education in *Fortune* magazine of July, 1943. The author writes:

What we want—judged in terms of what we most seem to lack—are graduates capable of independent thinking, graduates willing to participate in civic life (willing, that is, to sacrifice personal convenience to group welfare), graduates with an understanding knowledge of the country and the world.

If these are our aims, we shall know what to decry. We shall decry any form of education that treats the student as an organism that needs to have its reflexes conditioned with a dosage

of facts and suggestions. Indeed, too much of our schooling aims at having the proper emotions run in the students' well conditioned minds when they hear slogans and catchwords. The participation of people in their government has no point if they are incapable of independent thinking; if human beings can only react to outside stimuli, if they can only think what they are told to think, then we should frankly admit that democratic ways of life are without sense and should make no pretense of trying to educate children for them. . . .

The author of the article then goes on to suggest a desirable program of education:

We shall face the task of training the student to think critically and to act civically. One of the most foolproof ways of training him to think is to introduce him to ordered units of thought; indeed, the best way to learn how thinking should be done in the present is to study the way in which it has been done in the past, to study, that is, the great writers, the great mathematicians. . . .

The child needs to be introduced to men who have written and acted in terms of ethical values. . . . Citizenship is more a matter of inclination than of information. . . . The school . . . can give him a discipline of mind that enables him to understand and to retain what he sees and what he reads.

The author sets up a bad and a good kind of education. The bad sees a student as 'an organism that needs to have its reflexes conditioned.' The good believes in 'introducing' the student to certain examples of thinking so that he will 'think' in the proper way. The bad wants to evoke the 'proper emotions' ('proper' used ironically, presumably) in a well-conditioned mind. The good would train the student to 'think critically.' The bad would have human beings react only to outside stimuli; the good would make citizenship 'more a matter of inclination than of information' (the 'inclination' presumably arising from within). The bad 'doses' the future citizen with 'facts and suggestions'; the good gives him a 'discipline of mind.' If the bad type is the only one, then democracy is a vain dream.

Let us look closely at these either-or statements. The 'bad' education gives doses of facts and suggestions which operate to produce the proper emotions as the ringing of the bell produced saliva in Pavlov's dogs. The 'good' education is not so much interested in information as in disciplining the 'minds' to have the correct 'inclination.'

Both types look pretty much the same through this verbal fog. The outside stimuli to which alone the products of the bad type would react—what are they outside? From the point of view of the organism-as-a-whole-in-an-environment, where does inside end and outside begin? And what is the difference between the 'inclination' of the good student and that-which-does-the-reacting-to-outside-stimuli in the bad? Or perhaps the good student does not react to any outside stimuli (a pretty picture of catatonic dementia). Since only the bad type 'doses' the student with facts and suggestions, perhaps the product of the good type does not know

enough of the outside world to react to it, but dwells, like some of his examples of great thinking, in his own verbal world. Yet the 'discipline of mind' he 'gets' enables him to understand what he 'sees.' If, as modern epistemologists agree, what we see is dependent upon the nervous system of the observer as well as upon what is outside the observer's skin,* then the good type of education gives the student the ability to understand what he has been disciplined to understand. This is known as 'independent,' non-conditioned thinking without which democracy is a vain dream! One might add that such talk makes any science of education a vain dream.

There are four terms here that do much to foster the confusion: 'reflexes,' 'conditioned,' 'thinking,' and 'emotions.' The terms 'thinking' and 'emotions' are aristotelian, elementaristic terms which split verbally what can never be split on the non-verbal level—the evaluating human organism. Uncritically following the structural implications of an outmoded terminology, the author (who is far from being alone in his error) believes that bad education deals with the 'emotions' mostly; the good with 'critical thinking.' Under the circumstances it is hardly to be wondered at that his conclusions turn out to be meaningless.

Plainly, there can be no 'thinking' without 'feeling' nor 'feeling' without 'thinking'; but the notions of conditioning and reflexology, with the underlying problem of determinism are less simple and less apparent. We gather that the author of this article believes that all reflexes are on the low level of the patellar reflex and that all conditioning produces reactions in a one-to-one ratio. Furthermore,

* As Walter Lippman more neatly puts it, 'For the most part we do not first see and then define, we define first and then see.'

he believes that to give a student 'discipline of mind,' to train him to 'think critically' by introducing him to ordered units of thought is not to condition him!

It is interesting to observe how so many people in America proceed on the unconscious assumption that a man can do almost anything he wishes to do, that the conditioning environment is almost completely ineffective. From rags to riches, from log cabin to White House! Whether a man succeeds or fails is his responsibility and quite within his power to determine. Our penology was founded on the idea that threats of punishment to the individual rather than adjustment of crime-breeding social conditions is the answer to the problem of wrong-doing. The notions of conditioning and determinism seem to be repugnant to us. Hence, when even so enlightened a person as a writer for *Fortune* speaks scathingly of 'reflexes' and 'conditioning,' but approvingly of 'disciplining,' 'training,' 'introducing to ways of thinking,' we realize vividly how well conditioned he is to current verbal taboos. We realize also how cabined, cribbed, confined he has become through the lack of an adequate language of relation and structure.

The author has been forced by his linguistic environment to evaluate in the old behavioristic ways of formulation. If our author had utilized a vocabulary of order such as is offered in general semantics before he started writing, he would not have fallen into the confusion exhibited above nor would he have led his readers to suppose that having their children disciplined by being introduced to the Hundred Best Books in our established schools and colleges was going to enable them to sit down in an environmental vacuum and summon up a host of completely original ideas.

Korzybski has formulated the notion

of different *degrees of conditionality* which include all orders of living things. He regards all activities of living things as responses or reactions to stimuli in the plenum of the organism-as-a-whole-in-an-environment. These reactions are capable of varying *degrees of adjustment* (and hence are called 'conditional' rather than 'conditioned'), and may be arranged on graduated levels of complexity and conditionality. The arrangement is made from observations of the reactions of plants, animals, undeveloped, 'mentally' ill, and sane human beings. Concerning the language used to describe these relationships, he writes:

We can extend the vocabulary of conditional reactions to humans in all their functions. . . . Otherwise we find ourselves saddled with a vocabulary which does not correspond in structure to the well-known elementary facts concerning *human* responses to stimuli, and we relapse into the old 'behaviorism,' which is structurally insufficient. . . .

With this structural verbal [multi-ordinal] extension, we can easily be convinced that everything that we call 'education,' 'habits,' 'learning,' etc., on all levels is building up acquired or conditional semantic reactions of different orders, as one of the differences between 'man' and 'animal' consists in the fact that humans can extend their symbolism and responses to indefinitely high orders, while with animals this power of abstracting and response stops somewhere.

What is true of animals is also true of 'mentally' ill persons whose reactions exhibit an abnormal degree of persistence and *unconditionality*. Apparently what the *Fortune* writer meant may better be expressed thus: the 'bad' education tends to produce automatic, animalistic re-

sponses, reactions of a low degree of conditionality, while the 'good' type is one which will condition people toward the ideal of infinite-valued and potentially fully conditional reactions of higher orders. All the way up the ladder of orders of reaction, the results are obtained by a conditioning process in a deterministic world.

And here we touch upon the final and most fundamental point of correction. A denial of higher order, infinite-valued reflexes and conditioning and a holding to the notion of 'independent thinking' implies assumptions of indeterminism. This is a serious flaw in any set of premises of a supposedly serious statement. Determinism is essential for scientific investigation since predictability and the search for structure depend upon this assumption. As regards the individual, Freud has shown how our reactions have either conscious or unconscious 'causes.'

The notion of indeterminism exists fundamentally because we lack knowledge. If we understood the colloidal interplay between the impalpable and the palpable aspects of a human being, if we knew every element that had some relevance in producing a given attitude or action, we should see the wonderfully complex causal matrix of that attitude. As Korzybski writes:

— If we abandon the problem of the two-valued 'determinism' in connection with such a fictitious isolated individual, and apply infinite-valued determinism to an actual, non-isolated individual, we see at once that the whole situation is different. If parents and society accept infinite-valued determinism, they realize their own *responsibilities* toward the individual, and understand that the actions of parents, society, etc., are to a large extent, responsible for the future development

of the child on quite deterministic psychophysiological grounds.

The relevancy of this point of view to education and the applicability of this non-artistotelian vocabulary to discussions of the subject seem to me crucial. If we are to expect to reach scientifically valid answers to our problems, we must start from scientifically acceptable premises. And if we are to make sense within our own nervous systems and to those around us, we must use a language which is similar in structure to the world which it represents.

We know¹⁹⁴⁴ that protoplasm has certain functions, that nervous systems in plants, animals, and human beings react in certain ways in which there is a hierarchy of degrees of conditionality of reaction, from the completely automatic on up. In Korzybski's words:

The suggested extension of the reaction vocabulary would allow us, at least, to apply a uniform physiological language to life, *man included*. We should have a general language for life and all activities, 'mind' included, of a structure similar to the known protoplasmic and nervous structure, not excepting the highest activities. 'Mental' ills would be considered as arrested development or regression to one-, or few-valued semantic levels; sanity would be in the other direction; namely, progression conditioned by larger and larger flexibility of conditional and semantic reactions of higher order, which, through infinite-valued semantics, would help adjustment under the most complex social and economic conditions for man.

Substitute for the term 'mental' ills 'bad education' and for 'sanity' 'good education' and you have here a terminology that can be used meaningfully by anyone.

I recommend it especially to the author of the *Fortune* article under examination.

Finally, to discard determinism is to reject the possibility of ordered human progress. We hear today a great deal of talk about freedom of enterprise from those who want freedom from social control. The Italian, German, and Japanese industrialists have great freedom in such a sense when they cooperate with their puppet bullies who wield dictatorial control over their societies. They are the 'independent thinkers' in their countries. But the well-being of the vast majority of us lies in the acceptance of the determinism of the scientifically measurable palpable world. Professor Thorndike stated much the same idea in 'Science and Values' (*ETC.*, I, 11):

If and as the world is determined, there is hope of controlling it in the interest of human values. Every regularity or law that science can discover in the consequences of events will be a step toward the only freedom that is of the slightest use to man. . . . If values did not reside in the orderly

world of nature, but depended on chance and caprice, it would be vain to try to increase them.

Whether we like it and believe it or not, all education, in the widest sense, is the result of conditioning, the result of the impingement of the environment, including hereditary factors, on the individual. If we call methods of education which we dislike by such terms as 'dosing a well-conditioned student,' and if we speak of 'introducing the student to ordered units of thought' when we refer to the type of education which we think supports our social point of view, then we are exhibiting symptoms of either intellectual dishonesty or befuddlement. We are introducing darkness rather than light. And we are illustrating how effectively conditioned we have been, *malgré nous*, by our social prejudices and our linguistic environment. Indeed—to end upon a paradox—the more we are convinced that we 'think independently,' that we are not determined, the more do we become enslaved by our unconscious premises.

Once I was riding on an omnibus, and it stopped for a stoplight. A man stepped off the back platform. A boy in shorts, about 13, jumped from the platform and grabbed the man by the shoulder and yelled, "This is no bus stop. Come back." The man looked at him in amazement, and when he saw the boy was in earnest, he said, "Take your hand off me, or I'll . . ." The bus started to move. The boy tugged at the man, saw he couldn't drag him back, and at the last minute jumped aboard the bus platform. Tears streamed down his face. He looked at the rest of us on the platform and said defiantly, "It was no bus stop. It was no bus stop."

STEPHEN LAIRD, 'Nazi Germany after Two Years of War,'
Life, August, 1941.