

KORZYBSKI AND HIS WORK

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Translator's Note: Professor Gaston Bachelard, honorary trustee of the Institute of General Semantics and professor of the History and Philosophy of Sciences at La Sorbonne, is director of the Section on Logic and the Philosophy of Sciences of the Bibliothèque de Philosophie Contemporaine, published by Presses Universitaires de France. His own works cover a wide range, as may be judged by such titles as Le Nouvel Esprit Scientifique, L'expérience de l'Espace Dans la Physique Contemporaine, Le Pluralisme Cohérent de la Chimie Moderne, La Formation de l'Esprit Scientifique, La Psychanalyse du Feu, L'Eau et les Rêves, etc.

The pages that follow are a translation of Section VI of Chapter V of his La Philosophie du Non, published in 1940, by Presses Universitaires de France.

To a person who is not familiar with Bachelard's thinking, La Philosophie du Non is a baffling phrase. It sounds like a paradox; it creates a blockage. I know it from experience. At first I understood that Bachelard was philosophizing on the non of non-Newtonian, non-Euclidian and non-Aristotelian. This is true, but his thinking goes beyond that. His thesis is, to use E.T. Bell's words, that 'finality is not sought, for it is apparently unattainable.' Or, to quote A.N. Whitehead: 'The negative judgment is the peak of mentality.' (Both quotations taken from Science and Sanity, pp. 367, 369.)

Bachelard sees philosophy as tending to build systems that are all-embracing and closed. He sees science as a pluralistic and open discipline. His philosophy of science borrows its characteristics from science; it is non-philosophical in the classical sense. It says 'no' to allness and to closure. It is a super-philosophy, encompassing philosophy and science, both of which are in evolution, systematically refusing to stop where they are. For him, the science of today negates the finality of the science of yesterday, and science-in-process must negate its own finality if it is to grow into the science of tomorrow. --J.S.A. Bois

We must make use of all the teachings of science, including the most specialized, in order to build new mental structures. We must realize that when we acquire knowledge of a new kind, we automatically remake our mind into a new thinking tool. As a consequence we must direct our investigations towards the creation of a new pedagogy. This objective has attracted us for many years. To advance further in this direction, let us take for our guide the very important work of the non-Aristotelian school, founded in America by Korzybski and so little known in France.

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In his great book Science and Sanity, An Introduction to Non-Aristotelian Systems and General Semantics (New York 1933), Count Alfred Korzybski faced courageously the psychological and even the physiological conditions of a non-Aristotelian logic. This volume of nearly 800 pages is the prelude to an encyclopedia designed to recast many sciences in a non-Aristotelian mold. It presents this radical change as

a program of healthy life and a training in alertness. Its purpose is to make rigorous thinking the prime mover of men's biological advance. Indeed, it seems evident that we cannot give too much importance to the psychological factors, particularly the intellectual ones, when we want to keep in proper balance the dynamism of a wide-awake organism. Scientific thinking is what gives continuity to human life. It has the strange power of cohesiveness in time, or, to use Korzybski's favorite expression, it is pre-eminently time-binding. Science knits together in a solid continuum the separate events that would otherwise stand in isolation. Life in its merely biological aspects does not bind time solidly. As Korzybski says (p. 298) 'animals are not time-binders'; life at the animal level does not enrich itself.

Logical thinking that is too strongly 'straight thinking' runs the risk of becoming stubbornness. It may lead the evolutionary process into a dead end. As Korzybski remarks with humor, the human brain thus becomes 'a cosmic corn'. His statement confirms Paul Valéry's

saying 'Thinking is born of pain'. The conclusion is that we must start all over again, and it is the purpose of non-Aristotelian training to ensure this fresh start.

Non-Aristotelianism, as Korzybski describes it, is nothing less than a branching off of the functions of the cortical centers. He attempts to channelize and to control the frenzy of psychic mutation that any observer of modern man can detect in a hundred ways. For Korzybski to relate thought events is to relate cerebral functions; to free oneself from certain thinking habits means to break off the determinism of the brain.

From a strictly neurological point of view Korzybski considers the child as belonging to a distinctive human order. The child is born with a brain that is not completed yet. This is in flat contradiction with the postulate of ancient pedagogy, which assumed the child's brain to be a blank. The cultural environment really completes the child's brain; it does it by means of language, education, and training. This cultural mold that shapes the growing brain may be of different patterns. The particular purpose of Korzybski's non-Aristotelian training is to mold a brain that remains open, to leave its cerebral functions capable of shifting.

To train children in non-Aristotelian open-mindedness Korzybski demands teachers who have been psychoanalyzed culturally. This psychoanalysis would have to remove the mental blockages that are so often characteristic of teachers; it would have to train them in the techniques of differentiation; it would make them realize that their allegiance to the principle of identity is an obsession that has to be treated and cured. In the preface of his book Korzybski notes that training in non-identification has a therapeutic influence even on normal adults. He describes idiots and imbeciles as people who have undergone a total loss of their power to differentiate (p. 291). 'They have lost their shifting character.'^{*} One conclusion seems to flow from this, and we had reached it ourselves in our *Formation de l'esprit scientifique*: Every teacher who sees his shifting ability go down should be retired from active duty.

* If you refer to *Science and Sanity*, page 291, you will see that the pronoun 'they' of this sentence, quoted in English by Bachelard, does not refer to idiots and imbeciles, but to higher order abstractions. However, it would be unfair to say that Professor Bachelard has distorted the general meaning of Korzybski's thesis. He seems to have read into this page of *Science and Sanity* his own thoughts, which are quite in keeping with other statements of Korzybski.

--J.S.A. Bois

It is impossible to educate by simply living in the past, even if this past was progressive at a date. The teacher must learn as he teaches, and outside of his teaching duties as well. Even if he is a great scholar, no teacher can give his pupils an experience of openmindedness, unless his mental activity keeps its shifting character.

Korzybski has already carried out successful experiments that confirm his belief in a radical transformation of human mentality. He writes (*Science and Sanity*, p. v, 1st Ed.) 'Experience and experiments show that this "change of human nature", which under verbal elementalism was supposed to be impossible, can be accomplished in most cases within a few months, if we attack this problem with the non-elementalistic, neuro-psycho-logical, special non-identity technique.' In brief, the distinctive characteristic of this technique is that it goes beyond the psychology of form by systematically training in non-formalism. Comparative psychology has shown that it is possible, in maze experiments, to establish new reflex arcs in nervous systems that are less complex than man's. The task of non-elementalism would consist in training the human cortex by putting it, as it were, through a maze-like sequence of concepts where cross-cutting concepts would give at least a two-way choice between possible alternatives. Once he has reached the choice-point, the mind would not be faced with the simple decision between a true and useful course on the one side and an untrue and useless course on the other. He would be faced with a duality or a plurality of interpretations. As a consequence no psychological blockage could occur at the conceptual level; better still, the mental construct itself would be a crossing of roads where man becomes conscious of what has been described as freedom. To represent visually this branching off in the conceptual sequence, Korzybski constructed a physical model, which he calls 'The Structural Differential'. It is made of boards in which holes are bored that can receive pegs with hanging strings. This apparatus shows how different conceptual connections are possible. At first sight the Structural Differential may appear to be a rather childish gadget. But we must take Korzybski's word when he says that he has tested its efficacy in non-elementalistic training.

For it would be a mistake to think that non-Aristotelian training is limited to high cultural levels. In fact, it shows results with young children; its main function is to keep in reserve the wealth of cultural possibilities, to develop the shifting character of growing minds. The Structural Differential is the shield of non-elementalistic concept-forming.

Further in his book Korzybski shows that

retarded adolescents and subnormals are definitely improved when they are given non-Aristotelian training. In a paper presented at a meeting of the American Association for the Advancement of Science in St. Louis, in December 1935, M. Kendig reported various improvements, almost physical and visible, obtained by the Korzybskian methodology applied to cases whose psychological development had been slowed down or blocked. In fact, the Korzybskian method sets in motion the mental functions, it really stirs up all psychological activities. This psychological awakening reacts upon the biological functions. It is a mental exercise that benefits the body itself. Conversely, we feel that an intellectual blockage is just as unhealthy as an emotional one, and this is why we are trying to introduce a psychoanalysis of objective knowledge. Whatever the level of education of a person, the human psyche must continue at its essential task of invention, of open-ended activity.

While Korzybski used the most humble means to achieve his pedagogical mission, he drew from higher mathematics the guiding notions of his system. For him the great educator is mathematical science, conscious of its freedom to construct, of its dialectical initiative. Mathematics places us from the very start in a clear bivalent position: it applies equally well to sensory perceptions and to mental activities. In its simple forms it draws its demonstrations from experience and from reasoning. 'This fact is of serious importance' - writes Korzybski - 'as it indicates that mathematics is a language of similar structure to the structure of organisms and is a correct language, not only neurologically, but also biologically. This characteristic of mathematics, quite unexpectedly discovered, made the fusion of geometry and physics possible' (Science and Sanity, pp. 288-289). It made also possible the fusion of theory and practice. Mathematics is the only science capable of self-development, of self-regulated activity. Its symbols are abstractions with all particulars included and their interplay is an autonomous logical process. From this fact Korzybski concludes: 'Mathematics is the only language which at present has a structure similar to that of the world and the nervous system' (Science and Sanity, p. 73). The conceptual links in a mathematical theorem follow one another in such a dynamic and solid chain that they present the activity of time-binding at its best. Mathematical thinking offers some of the most evident examples of time-binding in its pure form.

Among all languages, mathematics is the most stable as well as the most creative. It may be objected that it is a most difficult language and that there is little hope of ever mak-

ing it the framework of popular education, particularly when we think of its dialectical syntax in its non-Euclidian and relativistic developments. But Korzybski expects much from the advances of pedagogy and he feels that brains activated by non-elementalistic training could absorb mathematical knowledge and profit by it.

In his lectures given at Olivet College a few years after the publication of his great book, Korzybski came back to the problem of education. He claimed that sanity and health are fostered by a training in physico-mathematical thinking, because this type of thinking is vigorous, clear, objective and creative. As far as we are concerned, we do not think that our own Philosophie du non can at this stage give a new life to the art of writing. A writer who would try to make use of the notions of the Philosophie du non without an adequate objective preparation, would eventually get into a maze of quibbles. But, whatever our own misgivings, Korzybski is very definite in his views. In his seminar at Olivet College he states without any hesitation that unless education progresses in the direction of 'mathematics and physics, the problem of the neurological deterioration of the American people will remain unsolved.' His forecasts are pessimistic, indeed. He sees the American nation, and probably many other nations, threatened by an epidemic of schizophrenia. This schizophrenia would develop, some way or other, at the level of the speech centers. It would be due to the time lag between the technical advances of modern life and the evolution of language. Unless a thoroughgoing semantic revolution takes place, language will soon prove to be a completely inadequate tool. To understand this statement it will be necessary to follow us in the study of another aspect, important as it is elementary, of the philosophy of Korzybski.

He attaches great importance to the psychology of language. He holds language responsible for a certain monomania that prevents healthy adjustments to a civilization that goes through a process of mutation. To be more precise, one could say that Korzybski denounces monolingualism as an enslavement. But it would be a misinterpretation of his views to imagine that bilingualism would give us freedom. Languages dovetail with each other by translation. When we pass from one to the other we do not conquer our liberty, but we make stronger the hold that language habits have upon us. In fact, Korzybski would react against the ontology of language: for the word taken as an entity he would substitute the word as a function, a function that covers a variety of values. His new semantics makes people conscious of multiple meanings. The main directive of his method is that we should develop a consciousness of variable structures. 'To be able to consider the structure of one lan-

guage of a definite structure, we must produce another language of a different structure, in which the structure of the first can be analyzed' (Science and Sanity, p. 56).

To find examples of semantic structural variations that are well organized, we must turn again to the development of mathematics. Is there a better example of this all-encompassing dialectics than the extension of the concept of parallels from Euclidian to non-Euclidian geometry? Here we proceed from a conceptualisation that is closed, blocked and linear, to one that is open, free and multi-branched. We are liberated from the fusion of experience with primitive thinking. In the new geometries the notion of parallel lines has lost its absolute meaning; it is relative to a particular set of postulates. The word 'parallel' has lost its 'entity'; it is an instance of a particular semantic system. The notion of parallel lines went with a conditional structure. We understand it when we see that notion assuming a different structure under a different set of conditions. This is enough to prove that strict Euclidianism harboured a fundamental error in its philosophy. The pre-scientific mind had not experienced the essential

mobility of elementary concepts and it asserted their fixity and their reality. The pre-scientific mind could not evaluate elementary concepts, because it never disengaged them from their contents. It did not see that essences must be defined from ex-stances and viewed as groupings of logical conditions.

We should always distrust a concept that we have not yet been able to analyze dialectically. This analysis is prevented by the overload of contents. This overload renders the concept unresponsive to all the variations of conditions where it is intended to function. To such a concept we give too much meaning, because we never consider it in its abstract form. But if we give it too much meaning, it is to be feared that two different minds do not give it the same meaning. Hence come the deep semantic troubles that prevent mutual understanding between men. We suffer from our inability to muster our thinking powers. To be sure that we agree on a particular point, we must have gone through at least a prior phase of disagreement. Two persons who want to understand each other must first have contradicted each other. Truth is born of discussion, not of sympathy.

'FALSE' VS. INADEQUATE THEORIES

'False' theories are less dangerous than inadequate ones. The former involve commission of errors, comparatively obvious, and simply discovered. The inadequate theories are much more harmful, as they often pass superficial inspection and require creative work to reconstruct them. They do not involve erroneous commissions, but pernicious omissions by default with their inevitably paralyzing effects.

. . . these kinds of problems . . . involve socio-cultural factors affecting our most intimate private lives. 'Intellectual understanding' will not work. . . . The methods of sanity have to be organismally absorbed through self-training and practice . . . successful progress requires the individual's work and persistent efforts. Such re-training is not medical in character but educational, fundamentally preventive, and entirely general, not included as yet in our Indo-European systems of culture and education. . . . Learning must be in deed and not mere lip-service, and this is the main difficulty.

Alfred Korzybski (1945)

'A Veteran's Re-Adjustment and Extensional Methods,' American Journal of Psychiatry, July, 1946.