THE NEOPOSITIVIST TREND
IN THE FINNISH SCHOOL OF PHILOSOPHY

Mihai D. Vasile
Mihai D. Vasile
e-mail: mdvasile@yahoo.com

Abstract:
Ars cogitandi is not the monopoly of a school, a people or an age, but it has crossed over the centuries and cardinal points, from the Platonic Academy of Athens to the Finnish University set up at Turku in 1640 and set down for good and for all at Helsingfors (the ancient name for Helsinki) in the year 1828. Ars cogitandi as philosophy got here as a distinct brilliance following the classical Anglo-Saxon tradition of empiricism, represented at that time by Edward Westermarck (1862–1939), who was professor of practical philosophy in Helsinki and professor of sociology at London School of Economics from 1907 until 1930. The Finnish School of Philosophy acquired its decisive acknowledgement by Eino Kaila, great scholar and chief of the school, who brought over to Finland the modern logic and the philosophy of the Vienna Circle

Key words: empiricism, neopositivism, the Finnish school, ars cogitandi, Eino Kaila.

Eino Kaila (1890–1958) is one of the essential members of Finnish philosophy, as he is the one who directed it to a new direction. Although he made his first appearance as a psychologist, Kaila was interested by the vanguard sciences, such as physics and biology, and on account of this was sympathetic to the Vienna Circle and to the logical neo-positivism that adopted a mathematical logic as an instrument for philosophical analysis. Kaila’s work is characterized by an unceasing endeavor towards philosophical syntheses. His first papers in epistemology dwell on probabilities, work that will become the reference topic for the Philosophical School of Helsinki. He considered the contingency principle as central to the philosophical problem of reality and an integrant part of the two coordinate principles, probability and causality, with the same importance in the metaphysical construction of reality. Under these circumstances, human cognition finds its appropriate expression in the form of scientific theory, understood as a system of rational and idealized invariables, governed by the principle of the maximum “economic”. The main element of the scientific meta-theory is, according to Kaila, the empirical and formal theory of truth. The influence of logical empiricism is obvious in the philosophical theses formulized by Kaila about reality as an object of scientific research, namely:

a) the assertions “the statement L is analytical” and “the statement L is a priori” are equivalent;

b) the observation principle such that every statement on reality must have a real content, i.e., must have as consequence a knowledge of reality, either this knowledge can be or cannot be verified or falsified;

c) the real description principle for defining the notion of physical reality: the real description of a certain field is the description of the highest degree of invariance, i.e. the highest degree of generality.

As it can be observed, the measurement theory is the essential element of the scientific meta-theory, drawn up by Kaila on empiricist grounds, because

the measurement presumes, from his point of view, certain empirical regularities.5

As a founder of a philosophical school, Kaila was supported by a number of scholars: e.g. Uuno Saamio (1896–1977) proving special results in classical and modern logic; Erik Stenius (1911–1990) providing valuable works on logic, epistemology and philosophy of language; Oiva Ketonen (1913–2000) who was remarkable for his work on the mathematical foundations and the philosophy of nature. Among all of them, Georg Henrik von Wright (1914 – 2003) has come to be one of the most prominent representatives of contemporary philosophy as he is now considered a logical ma
termind.

Von Wright studied at the University of Helsinki where he got the titles of master and doctor of Philosophy under Kaila’s guidance. In 1939, in preparation for his Ph.D. dissertation, he studied at Cambridge with Ludwig Wittgenstein with whom he became lasting friends, becoming his nearest scholar and the successor of the philosophy chair after Ludwig Wittgenstein resigned.

Thus is established the most important and the most renowned philosophical triad of the century: Bertrand Russell, the initiator of logical positivism through his monumental work Principia Mathematica (in co-operation with A. N. Whitehead), who had as his scholar and successor Ludwig Wittgenstein, whose Tractatus logico-philosophicus constituted the theoretical groundwork for the Vienna Circle, who had as his scholar and successor Georg Henrik von Wright, whose Essay in Modal Logic, published in 1951 and merely 90 pages, has been the basis of the work of a host of philosophers from then until now.

G. H. von Wright got his doctorate in 1941 with the topic The Logical Problem of Induction. After his appointment as Docent in 1943, he was asked to become holder of the professorship at the chair of philosophy in Helsingfors University (1946–1961) and chairman of the philosophy department at Cambridge University (1948–1951). After 15 years of professorship, he withdrew from university education and dedicated himself to fundamental research as a professor researcher at the Academy of Finland. From 1960 until 1970 he was visiting professor at several universities in the United States of America, especially at Cornell University. In the period 1963–1965, he was the President of the Section of Logic, Methodology and Philosophy of Science within the framework of the International Association of History and Philosophy of Science. In 1971 he visited Romania as a guest of the Bucharest University at the IVth International Congress of Logic, Methodology and Philosophy of Science (Bucharest, on the 29th of August – 4th of September, 1971), where he gave a lecture entitled On the Logic and Epistemology of Causal Relation, in the Vth Section: General Problems of Methodology and Philosophy of Science, chaired by Wolfgang Stegmüller.

After Wittgenstein’s death (1951), von Wright was charged, together with two British colleagues E.G.M. Anscombe and R. Rhees, with the legacy of the unpublished manuscripts of the dear departed. In over 50 years of research, professor G.H. von Wright succeeding in making the texts speak, restoring and writing down facts about lives that are present in so many legends.

Von Wright’s main fields of research are: the theory of induction; the probabilities calculus; modal logic; the influence of logic on ethics and law; inquiries on the concepts of time, change, causation, action, purpose, preference, explanation and understanding.

The starting point of von Wright’s philosophical investigations is the language distinction between many different kinds of sentences. The philosopher is not concerned with many of these distinctions. The philosopher is concerned only with those distinctions among sentences which are associated with distinctions between kinds of facts expressed by the sentences (this is the main principle of the Vienna Circle). Thus, e.g. the philosopher is not concerned with a classification of sentences into direct, indirect, subjective, predicative, Romanian or English. Some distinctions among sentences are very important to the logician and even to the philosopher, because some distinctions among sentences are associ-
ated with distinctions among the kinds of facts expressed, as for example, the Kantian distinction between analytical and synthetic, *a priori* and *a posteriori* sentences. Further, some distinctions among the kinds of words which make up sentences are important to the philosopher, namely those which are associated with different fictions among the elements of the fact expressed, because these sentences are proper for science which is concerned with natural facts covered by natural laws. But every scientific law is concerned with causation and we cannot define a scientific law as a fact concerned with causation. For a fact about a particular event that is caused by another particular event is not a law of science. This is because each of two facts, though causal, is not universal. Each is particular since each is concerned with the causal relations between one particular event and another. An event is always particular in that it involves the state of certain things throughout a certain region of space, throughout a certain period of time and the subsequent poverty involved in the observation by a particular observer (usually named "scientist") at that particular time and place.

On the other hand, a law of science is universal. For, though it governs events, it never mentions any particular event, any particular thing (or person), any particular place or time, but only classes of events, of things, of places and times. A law of science is a universal causal fact. A universal causal fact is a fact to the effect that every event of such and such a kind, no matter what particular thing, time, place or observer it involves, always causes an event of such and such another kind. A law of science is a generic universal causal fact. Even when the scientist has learned a number of universal causal facts, he is still dissatisfied, because he wishes to find generic universal facts from which special universal facts may be predicted. A law of science is an exact general universal causal fact and the scientist who has found causal facts which are not only universal but also generic can express in a scientific theory the highly generic universal causal fact that material things, e.g., approach one another, only as an approximation to the exact law that material things approach one another.

It is to be noted also that there are two importantly different kinds of scientific facts. First, nothing can be red without having size (this is the first dogma of empiricism); and second, every particular sized scientific fact is able to be mathematically quantified (and this is the second dogma of empiricism).

G. H. von Wright is conscious of the problem of whether or not the fundamental laws of nature are real ties or mere conventions, but as a realist he thinks of fundamental laws of nature as truths (or, in view of change theory, as at best approximately true). They are generally supposed to explain a heterogeneous multiplicity of phenomenological laws ("phenomenological" is here used in the physicist's sense, in which a phenomenological law is empirically based but need not relate only to directly observable entities). As a realist, von Wright bases his belief in the truth of the fundamental laws of nature on the argument to the best explanation. Further, he observes that to notice a natural scientific fact is a mental fact which contains a material fact. It is not itself a material fact, since it is not in itself something that has an extensive quality, lacking temporal, spatial and observable quality.

There is a good deal of explanation for those who have concerned themselves with analytic philosophy, because they have mixed up historical, scientific and analytic problems to a shocking degree. This has given the impression that they believe all their analysis to be a necessary preliminary to the establishing of scientific laws, connected with the analysis of the self, of the perception of material things, of the relation of the mind with the body. They believe that these are problems of philosophical analysis quite necessary for the philosophy of science. It is quite certain that facts are expressed with the help of words and that these words must not be ambiguous so that any hearer may know quite well what fact is being expressed by any speaker who uses the words. All that is needed is provided by analytic definition, i.e. the setting out of the connotation of an expression able to bring about the understanding. Thus, the analytic definition of scientific knowledge and belief e.g., removes ambiguity, and at the same time, when the words defined present to the mind several facts at once, presents them separately.

Thus analytical philosophy is, as a matter of fact, a language clarifying investigation and the first linguistic distinction important for the philosopher is that between complete and incomplete sentences.
For the moment, von Wright has ignored incomplete sentences and incomplete facts. Complete sentences are those which are made up of: (1) proper names and demonstrative pronouns; and (2) adjectives, verbs and prepositions. The relation expressed by words can be dyadic, when it requires two terms, or triadic, tetradic or more complex relations, all ruled by Bertrand Russell’s theory of types.

Amongst the many relations between matter and mind, there is one which is studied for the first time by von Wright: the relation of knowledge about deontology, especially the human action in the terms of “truth” and “false”.

No discussion of the normative structure of science of human action can begin without immediate reference to the work of von Wright. It is common knowledge that von Wright provided the first systematic and the most influential attempt to identify the main norms operative in a theory of human action and to show how these norms contribute to the advance of scientific knowledge. At the same time, several attempts have been made to argue that the customary analyses of norms is based on misleading assumptions, that its empirical foundation is weak and that it is in need of radical conceptual revision. The central issue which von Wright tried to address is that of the relationship between norms or rules and human action. It seems that one of the crucial errors prevalent among the analytic philosophers, whether they have supported or criticized von Wright’s position, has been to assume that this relationship is relatively unproblematic. Unfortunately, in so doing, they have failed to notice a fundamental point made by Wittgenstein, namely, that no rule can specify completely what is to count as following or not following that rule.

Von Wright is the founder of the deontic logic that he constructed for several axiomatic systems, starting from the genius idea of a modal similarities table which can progress ad infinitum:

### The modal-logic similarities Table

<table>
<thead>
<tr>
<th>a) alethic</th>
<th>epistemic</th>
<th>deontic</th>
<th>existential</th>
</tr>
</thead>
<tbody>
<tr>
<td>necessary</td>
<td>verified</td>
<td>obligatory</td>
<td>universal</td>
</tr>
</tbody>
</table>

This table must be understood in a further way: logical modalities mean the way in which a proposition can characterize the truth of another proposition. E.g., it may assign to a proposition $p$ a logic alethic modality saying that it is necessary, or possible, or contingent or impossible that $p$. Saying that $p$ is true for a certainty (i.e. verified), or undecided, or falsified, it is assigned to a proposition $p$ as a logic epistemic modality. The statement that it is obligatory, or permitted, or indifferent, or forbidden that $p$, means that it defines a logic, moral or deontic modality. Finally, but not least, it may assign to a proposition $p$ a logic existential modality which “is sometimes called quantification theory and is usually not regarded as a branch of modal logic”, e.g. stating that all $p$ are $q$ (universal existential modality), or that there is at least one $p$ that is $q$ (existing existential modality), or that there is no $p$ that is $q$ (empty existential modality).

Accordingly, the following types of modal logic are generated:

a) the alethic logic or the truth-logic that discriminates (according to Thomas d’Aquino) two cases:

1. *de dicto*, when a proposition is true or false; and

2. *de re*; when a property is (or is not) in an object, in which case the property is called necessary, possible, contingent or impossible in that object;

b) the epistemic logic, or the “to know” logic, that specifies the modality when it is known about something that it is true for a certainty (verified), or false for a certainty (falsified), or undecided;

c) the deontic logic; and,
d) the existential logic.

There are many other groups of concepts and logics, in addition to the aforementioned said, which could be called “modal”. E.g., a proposition $p$ can be assigned a logical modality, saying that $p$ is true *now*, or that $p$ *will be* true, or that $p$ *was* true, which defines a tense logic modality and generates conse-

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8 Ibidem.
quently a logic of time. “Though modal concepts are different from truth-concepts, the two realms of categories are not logically totally disconnected. If a proposition is true, it is possible. This cannot be converted: not all possible propositions are true. If a property is true of a thing, the property exists.

There are not only important similarities but also significant differences between the various kinds of modalities. (If there were no such differences, modal logic would be trivial relatively to quantification theory).”

In 1963 von Wright elaborated an original version of tense logic or logic of change by the fusion of the norm category with that of action. He refined the similarities table and the logic of action by developing a logical theory of preference relations (1963) and he initiated the first researches on formal axiology. His late investigations concerned the philosophy of mind on issues of the progress in cognition and in mind. In brief – as he argues in his late book *The Tree of Knowledge* (1993) – the idea of progress maintains that humankind has advanced in the past from the condition of primitiveness or barbarity to human community, and it is advancing at present, and will keep on advancing towards a predictable future. Expressed by a metaphor, the idea of progress is a synthesis between the dead fact in the past and the prophecy of the future, *i.e.* a synthesis between history and Utopia. The idea of progress is inseparable from the outlook of physical time which is passing straight, one-dimensionally, involving both the historical process in general, and its prevailing manifest tendency. The consequence of this way of conceiving the historical process is the widespread belief in the inherent tendency of nature and man of crossing over a regular sequence of developing stages in the past, at present and in the future, the late stages being – maybe with circumstantial regressions and/or delays – superior to the earlier ones. This historical outlook necessarily also involves assumptions of continuity, gradualness and naturalness in the development of the historical process of stages. The progress outlook involves a diagram of things and events both at the scale of the universe and of society, a growth from the inferior towards the superior as real and certain as any law of nature.

The essential and controversial problem of the ideology of progress is the definition or the explanation of the terms “advancement” or “passing from the inferior to the superior”. The tradition starting from Greek antiquity and lasting into the XX century involves two distinct, however connected, classes of outlook. The first class describes human history as a gradual, slow, cumulative process that enriches the cognition, developing knowledge in the arts and sciences. Man follows in his own way the natural processes endeavoring to copy them as best as possible in order to live in groups and communities that are as harmoniously as possible, where the social harmony copies or repeats the natural harmony. It is available, with rare interruptions, from Hesiod, especially in Plato, in Lucretius and Seneca, in St. Augustine and his successors, the whole myriad of Protestants and Puritans from the XVI and the XVII centuries but also after, until the great prophets of progress from the XIX and the XX centuries: Saint Simon, Comte, Hegel, Marx and Herbert Spencer. All held to the firm belief that knowledge of nature in itself – *objective knowledge* as it is found in science and technology – is growing, enriching, becoming ever and ever more perfect.

The second class of philosophical outlook organizes human history around the idea of a moral or spiritual progress and conditions the happiness and freedom of man on earth, his deliverance from the torments of nature and society, by obtaining the moral qualities of calm, quietness, and peace of soul. The purpose of progress as this advancement of mankind is to achieve on earth these moral and spiritual virtues, able by themselves to lead to an ever and ever greater perfection of the human nature.

Between these two classes of philosophical outlook about the essence of humanity there is and will be a relation of reverse correspondence. Thus, the acquisition of spiritual substance and moral perfection, requires, as a necessary condition, *not* to obtain or to grow in knowledge – about the world and man – *but* to repudiate such knowledge. To know means to sin, or to set up a sure beginning to sin. The Greeks have their legend about Pandora’s box in order to illustrate that all moral evil on earth has sprung from the unrestrained, irresistible wish of Pandora to know the content of the shrine, which she has been forbidden to open. When she opens the shrine, the worst diseases of avarice, cupidith, brutality, cruelty,
strife, war, exploitation, etc. Blew blow up. The most famous story of sin arising from knowledge, the history of the Garden of Eden in the *Old Testament* shows the innocent and primary pair, Adam and Eve, tempted by the same and unextinguishable *wish for knowing*, which is their downfall, leading them to be chased and banished from Paradise. It is fairly certain that in the history of Western thought no philosophical or other outlook proposes a different reading of the reverse connection between knowledge and happiness. Unless the author specifically intends the masculine, standard usage would be the feminine.

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I am not sure what is missing here. Maybe 'facts'?

Standard usage would be the feminine, here, unless the author specifically means the masculine.

See note 4

This is my best guess at the meaning of this sentence.

Where does this quote end?

Through the consequences of the philosophy of mind following techno-science philosophy, von Wright opens a new gate to philosophy.


His work *Explanation and Understanding* generated, from its first edition, a fecund debate among both analytic philosophers participation of well-known names in theand continental philosophers such as Manfred Riedel, Rüdiger Bubner, Jaakko Hintikka, J. N. Findlay, Peter Winch, Alisdair MacIntyre, Frederick Stoutland, *et a.* To all his commentators, in his book *Essays on Explanation and Understanding*, professor von Wright answered, without exhaustion, *Essays on Explanation and Understanding*, defending the “anti-positivist” outlook and underlining the decisive distinction between *Geisteswissenschaften* and *Naturwissenschaften*, arguing that the understanding of deliberate action is different from the nomological or causal explanation of natural events. In the thought of von Wright, his book *Explanation and Understanding* represents a crucial moment because it crosses over the limits of the neo-positivist tradition and opens new philosophical horizons on human action and its explanation, as can be seen in his later book, *Freedom and Determination* (1980).

After Kaila expressed the meta-theory of quantum physics in 1950 in a neo-positivist manner, Finnish Philosophy gave much more attention to topics connected with the scientific method. One of them refers to the nature of explanation in the humanities, and another concerns the nature of probability and inductive inference. Both of these concerns are found in von Wright’s work. The Finnish School of Induction, represented by von Wright, was continued by Jaakko Hintikka, Risto Hilpinen, Raimo Tuomela, Ilkka Niiniluoto, Gabriel Sanduera. In the 1970’s the structure and dynamics of scientific theories were the central topic in Finnish Philosophy, expressed especially in the work of Tuomela, Niiniluoto, Matti Sintonen, who worked a
long time on the progress of scientific knowledge, searching, in the spirit of scientific realism, for the characteristics of the change performed in the field of science and the nature of explanatory arguments. The Finnish Philosophy of science also involves work of some young philosophers, such as Unno Remes (1942–1975) on geometrical analysis; Hannu Nurmi (b. 1944) on causation; Pekka Lahti (b. 1948) on quantum-mechanics; Patrick Sibeliu (b. 1949) on linguistics; Veli Verronen (b. 1941) on Th. Kuhn; Vesa Niskanen (b. 1952) on fuzzy concepts; Martti Kuokkanen (b. 1948) on structure in the humanities; Paavo Pylkkanen (b. 1959) on the interpretation of quantum-mechanics in view of the cognitive science sketched by David Bohm. As a matter of fact, the problem of cognitive science and mind prompted several philosophers such as Leila Haaparanta (b. 1954) who is distinctive for her original and phenomenological outlook on cognitive anthropology. Markus Lammenranta (b. 1954) investigated the problem of epistemic certainty in Alvin Goldman, and Sami Pihlstrom (b. 1969) proposed an opening of philosophical realism to contemporary forms of pragmatism.

Of von Wright’s successors, the most famous is Jaakko Hintikka (b. 1929) who turned out to be very efficient in philosophical research, cheering it on by introducing new openings towards analytical thought. He also produced original works on logic and epistemology, which have become well-known in the whole world because he has worked as visiting professor at the Helsingfors University, Stanford University, Florida State University, and, from 1990, at Boston University. Hintikka is one of the most influential editors of philosophical works in the world, being book monitor at D. Reidel Publishing Company’s/Kluwer’s (Dordrecht, Holland). He is also one of the founders of possible worlds semantics for modal logic. His work Knowledge and Belief (1962), has become a classic, and his Models for Modalities (1967) develops in an original way von Wright’s modal-logic similarities table. Applying the idea of normal distributive forms to the semantic information theory and to inductive logic, Hintikka developed a new semantic theory on natural language, called the semantics of the theoretical game. Combining the epistemic logic from von Wright’s table with the semantics of the theoretical game, Hintikka created a new approach to the logic of questions in his work The Semantics of Questions and the Questions of Semantics (1976), extending this idea to the logic of interrogation and scientific discovery. In his work The Principle of Mathematics Revisited (1996) he develops a new logic of the “amicable independence”. His influence on the young generation of philosophers and logicians is obvious in the works of Veikko Rantala (b. 1933), Ilkka Niiniluoto (b. 1946), Gabriel Sandu (b. 1954), Tuomo Aho (b. 1957) et a. The chief-work Game-Theoretical Semantics, by Jaakko Hintikka and Gabriel Sandu, yields a novelty in infinite logic and the existential quantifier, connected with the propositional attitudes and dialogues.

References


