

STUDIES IN PHILOSOPHY

XVIII

A STRUCTURAL
INQUIRY
INTO THE SYMBOLIC
REPRESENTATION
OF IDEAS

by

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*To my Life Companion Elza Marta Grava
in Most Profound Respect and Gratitude*

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ABBREVIATIONS

In the footnote references of this Inquiry we shall use, for the sake of economy, the following abbreviations:

- SF: Cassirer, E., *Substance and Function*, New York, Dover Public. Inc., 1953.
- DI: Cassirer, E., *Determinism and Indeterminism in modern Physics*, New Haven, Yale University Press, 1956.
- PSF: Cassirer, E., *The Philosophy of Symbolic Forms*, New Haven, Yale University Press, 1953
- CN: Whitehead, A. N., *The Concept of Nature*, Ann Arbor, The University of Michigan Press, 1959
- PR: Whitehead, A. N., *Process and Reality*, New York, The Macmillan Co., 1929, repr., 1941
- NBS: Sir James Jeans, *The New Background of Science*, Ann Arbor, The University of Michigan Press, 1959
- PP: Sir James Jeans, *Physics and Philosophy*, Ann Arbor, The University of Michigan Press, 1958
- NPW: Sir Arthur Eddington, *The Nature of the Physical World*, Ann Arbor, The University of Michigan Press, 1958
- PPS: Sir Arthur Eddington, *The Philosophy of Physical Science*, Ann Arbor, The University of Michigan Press, 1958
- OPT: Dr. Siegbert Hummel, *Zum ontologischen Problem des Dauismus (Taoismus)*, Otto Harrassowitz, Leipzig, 1948
- PCP: Dr. Siegbert Hummel, *Polarität in der Chinesischen Philosophie*, Otto Harrassowitz, Leipzig, 1949.
- PSL: Bloomfield, L., "Postulates for the Science of Language", *International Journal of American Linguistics*, XV, No. 4 (1949-50)
- LTR: *Language, Thought, and Reality*, Selected writings by Benjamin Lee Whorf, ed. John B. Carroll, New York, The Technology Press of M.I.T., 2nd pr., 1957
- JHI: Journal of the History of Ideas
- IJAL: International Journal of American Linguistics
- SPW: The Library of Living Philosophers, ed. by P. A. Schilpp, *The Philosophy of Alfred North Whitehead*, New York, Tudor Publ. Co., 2nd ed. 1951

- SPR: Same Series, *The Philosophy of Bertrand Russell*, New York, Tudor Publ. Co., 3rd., 1951
- SPC: Same Series: *The Philosophy of Ernst Cassirer*, New York, Tudor Publ. Co., 2nd pr., 1958
- SPE: Same Series: *Albert Einstein: Philosopher-Scientist*, New York, Tudor Publ. Co., 2nd ed., 1951
- SPB: Same Series: *The Philosophy of C. D. Broad*, New York, Tudor Publ. Co., First edition, 1959

INTRODUCTION

The recent developments of modern science have made it almost imperative to view all problems concerning matter or energy in their correlation with philosophy and its specific branches of either ontology or epistemology.

At the same time, it has become obvious that the further science investigates the structure of matter the more it recognizes the necessity to regard the 'field' between the so-called sub-atomic particles as more important than the particles themselves, and to stress the functional aspect of energy 'centers' or 'waves' rather than the purely material one.

Among the most important achievements in correlating science and philosophy, there is Cassirer's work which merits a special attention. For instance, his *Substance and Function* clearly shows this modern scientific trend towards functionalism rather than substantialism in the interpretation of physical phenomena.

Since function and structure are closely related, to such an extent that it is hardly possible to discuss the one without the other, our knowledge about the phenomenal world has become quite naturally a functional-structural one, as it has been recognized also by Sir Arthur Eddington.

Moreover, human knowledge cannot be expressed and communicated without symbols, be they written or spoken. Hence the ever-increasing importance of the symbolic representation as a means of expression and communication. To investigate into the realm of the symbolic representation of our knowledge which consists of ideas or concepts is the main purpose of this Inquiry. Our preference for this type of research was prompted

by a purely human intuition of a certain structural-functional analogy between the physical phenomena, such as they occur in the sub-atomic world, and our ideas or concepts which serve as a vehicle for the symbolic representation of those phenomena.

Needless to say that I am fully aware of all the limitations and possible dangers of such an analogy. Nor is it my wish to *prove* anything, since, as Pierre Duhem has expressed it so pertinently in his book *The Aim and Structure of physical theory*, "An analogy is felt rather than concluded". Therefore, any analogy or parallelism pervading this Study must be considered as a *hint* to a probability rather than a conclusion or proof.

In this Inquiry I have tried not to discuss concepts from either the ontological or epistemological point of view, but merely from their structural-functional aspect, following as closely as possible the *phenomenological* method, that is, dealing with concepts as they appear in our consciousness. It must be understood, therefore, that the quotations, used all through my study, from the works of several authors, have no direct bearing upon either my acceptance or non-acceptance of their ontological and epistemological views respectively.

In the first chapter of this Inquiry, I have tried to clarify the age-old problem of the so-called universals, as related to the functional-structural approach, and have found that the sharp opposition between the Platonic Realists and the Nominalists only furthers my intuition as to the interrelatedness of the various aspects of a concept (universal, particular, logical opposite) in their functional-structural togetherness. The symbolic representation of a concept implies and follows the structural pattern of an atom.

In the second chapter I have applied my working hypothesis of the nuclear structure of ideas to the analysis of some basic concepts in the realm of scientific cognition, such as space, time, number, etc. It appears that these concepts are no exception to the ever-recurring nuclear pattern of a system of functional-structural dependencies, such as an atom.

In the third chapter of my Inquiry I have tried to correlate, as much as possible, my previous results to the phenomenon of lan-

guage and linguistic expression. A further series of analogies has presented itself, mostly confirming the nuclear hypothesis, at times slightly deviating from it, in the form of some 'oddities', due to the idiosyncrasy of the linguistic expression as such. Follows a brief discussion as to the close relationship between language, thought and reality. The chapter concludes with a further analogy between atomic physics and the linguistic phenomena, i.e., the principle of atomic fission.

In the last chapter of my Inquiry I have attempted to apply the nuclear hypothesis to some religious-metaphysical concepts in order to show how far they follow the ever-recurring structural pattern and in what ways they may differ from it. The final analysis deals with the ancient concept of Tao in its modern interpretation, that is, in terms of a 'field' or 'Creative Void'.

Usually, in terminating a study, there is a Conclusion. I have deviated from this traditional procedure for two reasons: (1) a Conclusion being mostly a summary of the whole study, I have presented it in my Introduction already; (2) since my whole Inquiry is based upon an intuition 'felt rather than concluded', I have purposely avoided a formal conclusion of my own views. Instead, I have terminated my study by appealing to some authorities in various fields whose quotations, in my opinion, epitomize perfectly well the central theme of this Inquiry.

In working at this study I have become more and more aware of the difficulties of the problem and the limitations of my own knowledge, so that I shall heartily welcome any objective criticism of experts in the fields of philosophy, linguistics and science, respectively. In order to facilitate this criticism, I have given abundant references to authorities and sources, so as to make immediate verification always possible.

Now, if my study, in all its shortcomings and imperfections, appears to be capable of arousing *some* interest or attention among scholars whose erudition is far greater than my fragmentary knowledge, I shall be happy to realize that my sincere efforts completing this work have not been in vain.

I

THE SUB-ATOMIC FUNCTION OF THE SO-CALLED UNIVERSALS

Il n'est doctrine si sotte qu'elle n'ait pu, quelque
jour, susciter une idée neuve et heureuse.

Pierre Duhem

Any inquiry into the vast realm of human thought and its various manifestations necessarily encounters some difficulties from the very start. These difficulties may be of several types: ontological, epistemological, or even structural. The present inquiry tries to leave the ontological and epistemological considerations outside of its scope and if they are sometimes approached, it is only by inference or by comparison. A possible solution of our problem will be sought, all through this study, from the structural and functional viewpoints.

Since the ultimate aim of this inquiry is the proper description of the structural pattern or patterns of ideas in their symbolic representation, the very first problem and, at the same time, the first difficulty we have to meet is the term 'idea' itself. We certainly cannot go further investigating the symbolic representation before we have dealt with the very content of this phenomenon, i.e., 'ideas' or 'concepts'.

For the time being, let us assume that the term *idea* is a synonym of *concept*, and let us also assume that, in its meaning, it stands for some kind of reality, be it objective or subjective. This leads us immediately to the age-old problem of the so-called *universals*. The attempt to clarify this issue constitutes the object of the first chapter of our inquiry.

A. BRIEF SURVEY OF THE PROBLEM

We shall not present the problem of universals in its historic perspective, nor can we deal with all details or intricacies, since many authors have written valuable treatises on the subject, but we shall: 1. indicate some essential aspects of the two extreme views: the *Platonic realism* and the *Nominalism* by pointing out the importance of this *polarity* for a possible solution of the problem from the structural and functional viewpoints; 2. give a brief survey of the middle-position, i.e., that of Aristotle's *Conceptualism*.

1. *Platonic realism: its strength and weakness*
(*Status ante rem*)

Since the days of Plato, the question of the general concepts or universals has always aroused much controversy all through the Middle-Ages up to the present time.

For Plato, knowledge is more than perception. The abstract terms or general concepts are absolutely necessary to the process of knowing a particular object, since the latter, as presented in perception, is only one of the many instances of the abstract term. These abstract terms, according to Plato, must also refer to some kind of entity not given to the senses as a particular. These entities he called 'ideas' or 'forms', later referred to by philosophers as 'universals'. "'Blue' is a universal term applying to all particular blue things. 'Blue' is not just an adjective for *them*, but a name for that character by virtue of which blue things are blue and not of some other color ... The blue or blueness is a universal, for some a real being named by the adjective 'blue' but not existing as a particular thing at some particular time or place."¹

a. *Permanence versus change*

The main point of strength in this position seems to be the observation that all particular things are subject to change, and they perish, whereas the universals, not only are not subject to the law

¹ Lewis White Beck, *Philosophic Inquiry* 5th ed. (Englewood Cliffs, 1958), p. 124.

of flux, but are, by virtue of their essence, permanent, ever-recurring, eternal. Moreover, it seems to be true that in order to apprehend a particular object and grasp its meaning, i.e., in the very process of our cognition, we cannot dispense with the universals. The ghost of Leibniz's famous retort — "nisi intellectus ipse" — haunts every possible mansion or palace which a Nominalist might have constructed for his own peace of mind. Thus, for instance, Blanshard remarks not without some wit that particulars as such do not exist. "For what gives apparent particularity to any character or complex is itself always universal ... The position that identities in the form of specific universals do exist is thus exceedingly strong."²

b. Universality of forms

Another aspect of strength in Platonic realism — the universality of structural forms — has been brought to light in a substantial article by Boodin. Concluding his article, the author remarks: "The brilliant development in the physical sciences has tended again unconsciously, by its own dialectic to confirm the Platonic intuition of form and measure everywhere. The building-bricks of nature — electrons, neutrons, etc. — are measured, are constant in nature, and this fact indicates cosmic control. The discovery by Moseley of atomic number — a series of atomic forms repeated in nature everywhere — is evidence of cosmic architecture which would have delighted the soul of Plato."³

c. Principle of law transcending any concreteness

A third aspect of strength in Platonic realism — the transcendental character of a universal principle — has been revealed by Maximilian Beck, in another well-written article about some metaphysical subtleties in Plato's dialogue *Parmenides*. The author points out some misinterpretations of the basic idea underlying the problem of identity and being, as discussed in the above dialogue. Thus, for instance, a certain confusion may arise due to the looseness or the too general use of the terms 'one' and 'being', which obscures

² Brand Blanshard, *The Nature of Thought*, Vol. I (London, 1939), p. 631.

³ John Elof Boodin, "The Discovery of Form", *JHI*, IV (1943), 177-192.