‘How then, is it natural that the mind of Man, being so small as contained in such narrow spaces as a brain or a heart, should have room for all the vastness of sky and universe?’

(Philo Judaeus 208, 90)

‘Our entire experienced world of consciousness is, as Schopenhauer justly stated, a brain phenomenon, but the brain itself is a brain phenomenon.’

(H. Kuhlenbeck in The Brain Paradox)

Preface to First Edition (1957)

The relationship of brain and consciousness can be considered from the epistemological as well as from the neurological aspect. In this disquisition, I shall attempt to discuss both points of view, and to integrate these aspects into a unified presentation.

The purely neurologic subject matter constitutes the greater part, approximately two thirds of this presentation, and its validity or purpose retains, for practical intents, an intrinsic independence of any epistemologic interpretation.

Nevertheless, I believe that such an epistemologic interpretation, frequently avoided by the neurologist, is of substantial theoretical importance.

Many authors evade the question by slurring over the crux at issue with a few generalities concealing the gist of the problem. However, some writers, conversant with the topic, have clearly recognized the elementary and essential fact that the experienced private perceptual space is not identical with the inferred public physical space. This recognition, of course, should imply the
distinction of the two different space-time systems including their dimensions. It has also been stated - not without justification - that the relation of brain and consciousness is to some extent a semantic problem. In this respect, the inherent deceptiveness of abstractions and of apparent verbal precision must be kept in mind: fraus latet in generalibus. While in theoretical systems of logic based upon digital rules, the principle of excluded middle can be considered valid, this principle is certainly not valid in many aspects of applied scientific and practical everyday thinking which operates rather according to analogue rules: Truth value is here not digital or binary, corresponding exclusively to one of the two values zero or one, but encompasses, within these two limiting values, innumerable intermediates between truth, that is significant conformity, and error, fallacy or falsity.

The costs for the publication of this monograph, which follows my Summary on the Human Diencephalon, have again been defrayed by the Woman’s Medical College of Pennsylvania, this time from a special Psychiatry-Neurology Fund of the College. As before, I wish to express my appreciation to the College and to our Dean, Dr. Marion Fay, for the appropriation of this liberal subsidy.

H. K.

Preface to Second Edition

The monographs Brain and Consciousness; Some Prolegomena to an Approach of the Problem (1957) and Mind and Matter; An Appraisal of Their Significance for Neurologic Theory (1961) were originally conceived as companion volumes providing a philosophical background to the author’s planned neurobiological series The Central Nervous System of Vertebrates (1967-1978) which was subsequently completed. In elaborating said philosophical background, the concept of neurological epistemology was introduced, based on Schopenhauer’s recognition that our world of consciousness represents a brain phenomenon. The empirical substantiated fact that consciousness is a result of brain function involves, however, the brain-paradox, which, in turn, provides the proof that the problem of brain-consciousness relationship is intrinsically insolvable. As regards consciousness, a valid descriptional definition could be formulated, stating that consciousness is a private perceptual space-time manifold or system, represented by its contents, which are sensory and extrasensory percepts. Upon this basis a ‘mental geography’ in Hume’s sense could be given, that is to say, a ‘delineation of the distinct powers of the mind’. These ‘powers’ have very definite limitations, but one can agree with Hume’s opinion that ‘it is at least a satisfaction to go so far; and the more obvious this science
may appear (and it is by no means obvious) the more contemptible still must the ignorance of it be esteemed, in all pretenders to learning and philosophy’ (Enquiry Concerning Human Understanding; 1750).

While, in accordance with Berkeley’s ‘esse est percipf and Hume’s additional elaborations, both perceptual matter and the extrasensory percepts of thought (reason) and emotion (affectivity) are ‘mental’, there obtains a selfevident ‘dualism’ between the domain of consciousness and the domain of unconscious ‘existence’, which remains incomprehensible, since devoid of space-time relationships, these latter being restricted to consciousness. This unavoidable ‘dualism’ was expressed by the author in terms of a transcendental neutralism implying an ‘orderliness x’ corresponding to the valid aspects of Kant’s ‘Ding an sich’.

Since, however, the natural sciences must, for practical purposes, discount non-observable other consciousness and consider the world as if existing in a public space-time independent of consciousness, a justifiable pragmatic fictionalism in Vaihinger’s sense was adopted. Other relevant results included the anâtman (or non-self) concept introduced by Buddhism, rediscovered by Hume, and justly upheld by Mach, moreover the recognition that logical thought processes (reason) are based on the mechanics of ‘material’ circuit events involving ‘switches’, in accordance with Boolean algebra, as elaborated by Shannon and applied to the nervous system by McCulloch and Pitts. Finally, in accordance with Hume, the considerable difference between reason (logic) and affectivity (emotions) was emphasized. The former involves truth or falsity, respectively provability. Affectivity, although likewise based on neural circuit processes, involves axiologic evaluations, for which the laws of logic with respect to truth or falsehood do not hold.

In preparing a second edition of Brain and Consciousness, which has been out of print for several years, the attempt has been made, on the basis of the diverse above-mentioned results, to enlarge that treatise into an outline of philosophy in terms of natural sciences, neurological epistemology, brain mechanisms, and transcendental neutralism. This, besides necessitating numerous additions, such e.g. as a further elaboration of the principle of sufficient reason, also required a change of title, and a subdivision into three separate volumes. The two first ones follow the arrangement of the original edition. The third volume, entirely new, deals with the world of philosophy. It emphasizes an historical approach, stressing what could be called the evolutionary aspect of Human thought and this latter’s intrinsic limitations, resulting in a ‘scientific humanism’ strongly influenced by the incomparable David
Hume.

My esteemed old friend, colleague and former student Professor J. Gerlach who, in 1973, had already provided a German translation of the original edition, again has taken the trouble to help me by editing and proofreading the present work. In addition to many helpful discussions concerning the topics under consideration, he and Mrs. Gerlach have transcribed my longhand manuscript into the final form. It is a pleasure to express my thanks for their help. I am also obliged to my former secretary, Mrs. Brennan, who, after more than 20 years of efficient service, had to retire from her work, for still typing a substantial part of the manuscript of volume 1.

H. K.

Editor’s Preface

By gladly undertaking the edition of the present volumes I am not only thanking my teacher in neurobiology and scientific method, under whose sponsorship I obtained my doctorate about 50 years ago, but also appreciate the opportunity to assist in the publication of his important work. On a neurobiological basis, he rigorously clarified the possibilities and limits of human scientific, philosophical and cultural activities, all of which are aspects of brain function. In particular, he thoroughly examined and supplemented the classical philosophical systems of Locke, Berkeley, Hume, Kant, Schopenhauer, and Vaihinger. Being their equal, he critically linked the valid aspects of their doctrines to modern science. This second, more comprehensive edition of Brain and Consciousness should contribute to the further understanding of the difficult and complex problems at issue, and the realization of the present work’s high rank.

Joachim Gerlach

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