

**PHILOSOPHICAL ESSAYS
IN MEMORY OF EDMUND HUSSERL**

LONDON: HUMPHREY MILFORD
OXFORD UNIVERSITY PRESS



EDMUND HUSSERL

1859-1938

COURTESY OF MRS. EDMUND HUSSERL.

Philosophical Essays

IN MEMORY OF
EDMUND HUSSERL

Edited by

MARVIN FARBER

Professor of Philosophy, University of Buffalo



Published for the University of Buffalo by the
HARVARD UNIVERSITY PRESS
CAMBRIDGE, MASSACHUSETTS

1940

COPYRIGHT, 1940
BY THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE

PRINTED AT THE HARVARD UNIVERSITY PRESS
CAMBRIDGE, MASSACHUSETTS, U. S. A.

PREFACE

EDMUND HUSSERL, late professor of philosophy in the University of Freiburg and founder of the phenomenological philosophy, is regarded by many as Germany's foremost philosopher of the last century, and as one of the great philosophers of the modern period. The difficulty of his published works is responsible for the failure of a large part of the philosophical, psychological and scientific public to appreciate his significance. Despite that fact, his personal influence was extensive. His students and followers hold university positions in numerous parts of the world. The foundation of an international phenomenological society and regular publication (*Philosophy and Phenomenological Research*) is evidence of the growing appreciation of the importance of his work.

The contributors to the present volume are a fair sample of those who have reacted to Husserl's teaching. All of them have been closely associated with him or with his students. No attempt has been made to achieve a uniform interpretation of his philosophy. The contributors reflect some of the typical differences of opinion in the larger phenomenological movement. The essays may be divided into three groups: (1) those that endeavor in the main to give an exposition of phenomenological doctrines, (2) those that are critical of some of the doctrines, and (3) independent contributions by scholars held in high esteem by Husserl. They have been arranged in this order in the volume. It is hoped that they will contribute to the more adequate understanding of phenomenology, and that they will act as a stimulus to its further study and development. Regardless of individual differences of opinion, all contributors agree in having profound respect for the greatness of Husserl as a thinker and teacher. A brief manuscript by Husserl has been added as a supplement to the volume.

Special acknowledgment is due to the members of the advisory committee for the volume, Professors Dorion Cairns,

Gerhart Husserl, Felix Kaufmann and Fritz Kaufmann, for their valuable aid and expert counsel, particularly in connection with the critical estimate of the papers; and to Chancellor Samuel P. Capen and Dean Julian Park of the University of Buffalo for their generous interest in this undertaking. The publication of the volume has been made possible by the University of Buffalo Committee on Publications and the Roswell Park Memorial Fund.

MARVIN FARBER

Buffalo

December 23, 1939

CONTENTS

AN APPROACH TO PHENOMENOLOGY	3
DORION CAIRNS	<i>Rockford College</i>
HUSSERL'S CRITIQUE OF PSYCHOLOGISM: ITS HIS- TORIC ROOTS AND CONTEMPORARY RELEVANCE .	19
JOHN WILD	<i>Harvard University</i>
THE IDEAL OF A PRESUPPOSITIONLESS PHILOSOPHY	44
MARVIN FARBER	<i>The University of Buffalo</i>
ON THE INTENTIONALITY OF CONSCIOUSNESS . . .	65
ARON GURWITSCH	<i>The Johns Hopkins University</i>
THE "REALITY-PHENOMENON" AND REALITY	84
HERBERT SPIEGELBERG	<i>Swarthmore College</i>
THE PHENOMENOLOGICAL CONCEPT OF "HORIZON"	106
HELMUT KUHN	<i>University of North Carolina</i>
PHENOMENOLOGY AND LOGICAL EMPIRICISM	124
FELIX KAUFMANN	<i>The Graduate Faculty of Political and Social Science, New York</i>
PHENOMENOLOGY AND THE HISTORY OF SCIENCE .	143
JACOB KLEIN	<i>St. Johns College</i>
PHENOMENOLOGY AND THE SOCIAL SCIENCES	164
ALFRED SCHUETZ	<i>New York</i>
ART AND PHENOMENOLOGY	187
FRITZ KAUFMANN	<i>Northwestern University</i>
THE RELATION OF SCIENCE TO PHILOSOPHY IN THE LIGHT OF HUSSERL'S THOUGHT	203
LOUIS OSGOOD KATTSOFF	<i>University of North Carolina</i>
HUSSERL AND THE SOCIAL STRUCTURE OF IMMEDIACY	219
CHARLES HARTSHORNE	<i>University of Chicago</i>
A MATERIALIST APPROACH TO HUSSERL'S PHILOSOPHY	231
V. J. MCGILL	<i>Hunter College</i>

OUTLINE-SKETCH OF A SYSTEM OF METAPHYSICS	251
WILLIAM ERNEST HOCKING	<i>Harvard University</i>
MEN AND THE LAW	262
GERHART HUSSERL	<i>National University Law School</i>
THE GHOST OF MODALITY	278
HERMANN WEYL	<i>The Institute for Advanced Study, Princeton, New Jersey</i>

SUPPLEMENT

GRUNDLEGENDE UNTERSUCHUNGEN ZUM PHÄNO- MENOLOGISCHEN URSPRUNG DER RÄUMLICHKEIT DER NATUR	305
EDMUND HUSSERL	
INDEX	327

**PHILOSOPHICAL ESSAYS
IN MEMORY OF EDMUND HUSSERL**

AN APPROACH TO PHENOMENOLOGY

Dorion Cairns

THE PECULIAR character of phenomenology lies not in its content but in the way the latter is attained. Whatever its sense, a theory is phenomenological if, and only if, it is produced phenomenologically. Mere acquaintance with the doctrines of phenomenologists is therefore not acquaintance with phenomenology as such. To be acquainted with a theory as phenomenological, one must also know phenomenological method.

The theory of this method is itself phenomenological — and this indicates that phenomenological method, in some form, is prior to phenomenological methodology as well as to the rest of phenomenological theory. Nevertheless, methodological knowledge is an instrument for consciously improving method, and an improved method leads to improved theory in general and improved methodology in particular. In view of these facts, there is a reason for making phenomenological method the central theme of an essay addressed partly to non-phenomenologists, and there is also a reason for not beginning such an essay with an exposition of phenomenological methodology in its more developed form. The latter can be understood only after the method in its rudimentary form, and certain results of rudimentary method, have been grasped.

To be sure, an adequate understanding of any purposely employed method includes an understanding of what the one using the method sets up as the thing to be actualized by its means. The goal of phenomenological activity is always knowledge, but the initial conception of knowledge — like the initial method and the theory of method — undergoes a change, because of cognitive results actually attained. There is, therefore, an analogous reason for not attempting to state the specifically phenomenological ideal of knowledge at the beginning of the present essay.

I

The fundamental methodological principle of phenomenology may, I think, be initially formulated as follows: *No opinion is to be accepted as philosophical knowledge unless it is seen to be adequately established by observation of what is seen as itself given "in person."* Any belief seen to be incompatible with what is seen to be itself given is to be rejected. Toward opinions that fall in neither class — whether they be one's own or another's — one is to adopt an "official" philosophical attitude of neutrality.

When this principle is first presented, or adopted either implicitly in practice or explicitly as a maxim, its sense derives not only from an already acquired familiarity with the difference between awareness of something as itself given and awareness of something as not itself given, but also from accepted traditional theories. Perhaps the most striking instance of this difference, and surely the instance most emphasized by current traditions, is the difference between sensuously perceiving a thing and being aware of a thing — otherwise, e.g., in remembering or expecting it, or in sensuously perceiving or imagining something *else* as depicting or symbolizing it. Obviously, the sense of the principle also derives at first from a like familiarity with the difference between an opinion that merely formulates what one grasps as itself given and an opinion that goes beyond, or conflicts with, what one grasps as actually given "in person." And here too the accepted tradition plays its role.

But vague familiarity and traditional concepts do not provide the principle with such clarity and definiteness as are necessary if it is to be applied to all opinions with certainty and precision. It might be expected that this defect should be remedied by contriving a set of defining postulates or rules of procedure. The principle itself demands, however, that traditional and habitual opinions about self-givenness and the other matters referred to in it be tested and, if necessary, corrected by *original observation*.

II

Something like the phenomenologist's fundamental maxim, as initially stated, would probably be acknowledged by empiricists, at least qua empiricists. But empiricism imposes a restriction. The empiricist, as such, accepts a belief as philosophical knowledge only when it is somehow known to be adequately established by observation of *individual* affairs. Indeed, some empiricists give the maxim an even more restrictive interpretation, in accordance with which they refuse to accept "the perception of the operations of our own minds within us" as a form of observation by which genuine knowledge may be established. To them, only opinions known to be adequately established on the basis of "sensation" or sensuous perceiving are officially acceptable, "scientific" knowledge.

The phenomenologist asserts that any empiristic restriction of his fundamental principle leads one to ignore or "officially" reject matters of which one is in fact conscious as themselves given "in person," matters that are "data" in the very sense that spatio-temporally individuated matters (including those sensuously perceived) are data. He contends, furthermore, that this assertion of his can be verified according to the above-stated methodological principle, and that therefore any statement to the effect that only individual objects are observable (as themselves given) is a statement observably *incompatible* with what is itself given — a stated opinion that must be rejected in accordance with his fundamental principle. Such opinions, far from being based on original observation, not only go beyond but actually conflict with observable data.

Sensuous perceivedness, to consider it first, is indeed contrasted, as a form of "original self-givenness," with, e.g., the "meantness" of a thing as represented by a (perceived, remembered, or imagined) picture or symbol, or even as directly meant in a clear recollecting of a thing itself as past-perceived. More than that, it is (in a quite precise sense) the "basis" for all other types of objective givenness. Still it is, in itself, only that manner of original self-givenness *peculiar* to individual objects of a certain kind, e.g., to individual "things," their indi-

vidual shapes, individual colors, etc., and to their individual durations and changes in space and time. One can be, and often is, aware of objects of *other* kinds as themselves given — in other manners, to be sure, but “given” in precisely the same sense.

The phenomenologist finds not only that non-sensible objects and their objective determinations may be themselves given and grasped but also that the self-givenness of a self-given object may be itself given and grasped — moreover, that the generic similarity of the specific kinds of self-givenness peculiar respectively to sensuous data and data of other kinds is likewise something that may be itself given and observed. Thus, when he speaks of them all as “data,” as “given,” or even as “seen” or “perceived,” he is — at least in his own opinion — indulging in no mere metaphors.

In short, the fundamental maxim of phenomenology requires that empiristic restrictions be rejected because they conflict with or lead one to ignore strictly self-given, observable, and — as we shall see — intersubjectively verifiable “matters themselves.” It is not perchance in the name of an alleged but unobservable Absolute nor even in the name of alleged necessary conditions of the possibility of experience or knowledge, conditions that allegedly cannot themselves be experienced “data,” that the phenomenologist rejects empiricism. Rather is it solely in the name of matters whose self-givenness the empiricist overlooks or resolves officially to ignore.

Although phenomenology differs thus from empiricism, it differs more profoundly from any philosophy that first sets up formal definitions and postulates, or material hypotheses, and proceeds by a method of formal deduction — supplemented perhaps by material interpretation and “verification” — more or less according to the example of an incompletely understood mathematics or mathematico-empirical physics. To take conceptual stuff already on hand and fashion a cloak of theory for objects *in absentia*, then call them in for a partial fitting — that is at best only a way to botch together another ingenious misfit to hang away with how many others in the

lumber room of history. The matters judged about must themselves be present from the start, and throughout the entire theorizing process they must never be out of sight. They must be observed and explicated in their self-given intrinsic sense and judgments must be produced that derive their entire content immediately and continuously from them.

In their communicative function, phenomenological statements are intended to help the person addressed to bring to self-giveness for himself, to grasp, explicate, and compare the very matters in question, to attach to the words a signification deriving solely from his own observations, and to see the statements as evidently confirmed (or cancelled) by the matters themselves. Whatever verbal definitions or deductive arguments may be contained in a phenomenological discourse are quite ancillary to this purpose — or out of place. Strictly phenomenological statements are to be used as guides for observation, much as one might use a previous observer's description of a landscape as an aid in distinguishing its features while all the time it lies before one's eyes. In other words, their purpose is to assist the reader to knowledge that fulfills the phenomenologist's own criterion. Assistance is useful not only because some observations are intrinsically difficult but also because prejudices are likely to induce one to overlook or explain away what is actually there to be seen. The phenomenologist's appeal to "immediate" inspection is not made on the assumption that a phenomenological proposition need only be understood for its truth to become evident forthwith. The truth of an opinion is seen "immediately" only when its coincidence with a given fact, as judged on the basis of the very matters entering into it, is seen. And often it is a long and hard road to a position from which one *can* see the truth of an opinion — "immediately."

III

Not all empiricists would restrict the sphere of philosophically acceptable self-giveness to what is given sensuously. Locke spoke, as a matter of course, about perceiving such "actions of our own minds" as "perception, thinking, doubt-

ing, believing, reasoning, knowing, [and] willing.” He did not consider it incumbent on him to vindicate the existence of “reflection,” “that notice which the mind takes of its own operations and the manner of them.” In recent years, however, it has become important to defend the view that such conscious processes as Locke enumerated are indeed perceptually self-given and that processes of reflecting, in which these “actions” are perceived, are themselves given reflectively.

Locke apparently thought of reflection only as a perceptual process, in our terminology a process in which one is conscious of something as itself given “in person.” But not every consciousness of something as one’s own conscious process is a consciousness of it as thus perceptually given. For example, one may not only perceive but also remember, expect, or phantasy something as one’s own conscious process. The phenomenologist, adopting Husserl’s terminology, applies the name “reflection” to any awareness of something as one’s own conscious process or as a determination thereof. He accordingly speaks not only of reflective perceiving but of reflective expecting, judging, etc., just as he speaks of non-reflective or “straightforward” perceiving, expecting, etc. Reflective and straightforward perceivings are both called “perceivings” because the original self-givenness of a reflectively grasped conscious process is, as such, observably like the original self-givenness of a straightforwardly grasped object, though their specific manners of original self-givenness are observably different.

But Husserl and those who follow his usage do not restrict the name “reflection” to awareness of one’s conscious processes and their immanent determinations. The name, as they employ it, also covers awareness of something *as* an object of one’s consciousness. Usually one is busied with objects not *as* objects of one’s consciousness but as objects — *simpliciter*. If an object is itself given, one is not usually busied with it *as* something given but as having certain objective determinations. As I look about, I see things, their shapes, colors, etc., and usually occupy myself — cognitively, aesthetically, practically — with things only as having thing-determinations, not as

things believed in, seen, liked, etc. Sometimes, however, one does pay attention to things and other objects *as* believed, *as* given, *as* liked — in brief, *as* objects intended in one's consciousness of them. And this attending to the usually ignored status of intended objects *as* intended is contrasted terminologically as "reflection" with one's usual "straightforward" attending to objects *simpliciter*.

The deliberate application of the fundamental principle of phenomenological method requires attention not to objects simpliciter but to objects as intended and, more particularly, to their self-givenness or non-self-givenness. That is to say, it requires reflective rather than straightforward observation. To be sure, one can and frequently does establish one's beliefs by straightforward observation of what is itself given, without making its givenness one's theme. But straightforward observation, even when it does not in fact go beyond what is itself given, is not "phenomenological" in our sense of the word. The exclusively reflective character of all "phenomenological" inquiry deserves emphasis, if only because, according to a perhaps more common usage, pure straightforward descriptions (without construction or explanation) are also called "phenomenological." There is an important difference, however, between simply describing an object and describing the sense that an object is intended as having — between ascribing to an (in fact presented) object certain (in fact presented) determinations and saying that an object is presented as having certain determinations that are also presented. Husserl sometimes expressed the difference by saying that straightforward description is description of objects *per se* whereas phenomenological description is description of *intentional* objects. Once the difference itself has been grasped, this convenient manner of speaking should not be misleading. It is apt to mislead, however, if one fails to see that the terms "object *per se*" (or "object *simpliciter*") and "intentional object" are names for one and the same object, only *attended* in different ways. In the straightforward attitude one ignores the object's intendedness, believedness, attendedness, etc., and lives in one's intending, believing, attending of the object *per se*; in the reflective

attitude one pays attention to the intendedness of *the same* intended object.

No matter how one may be busied straightforwardly — believing, doubting, denying; liking or fearing; perceiving, phantasying, willing — no matter what the object of one's concern is meant as being — a stone, an atom, an adjective, an angel, space or time, or even the world itself as a concrete whole — always one can adopt a reflective attitude and concern oneself with the object *as* what one is, or was, busied with straightforwardly, *as* what remains intended, in this manner or that, as having such and such determinations. When one does so, one is attending the “intentional” object, the same object qua object of one's consciousness.

From this it should be clear that the dual terminology does not indicate an epistemological dualism. Intentional objects are not objects somehow “in the mind,” nor are they intermediaries between conscious processes and the things themselves. They are the objects one intends as “there” and perhaps deals with cognitively, emotionally, practically; they include all the objects that one correctly intends as existing in the real, intersubjectively accessible world. Objects *per se*, objects *simpliciter*, are, on the other hand, not alleged objects transcendent of the realm of intended objects, but these same intended objects as they are meant straightforwardly, without regarding their intendedness.

Our usual attitudes and conscious activities are not reflective, but that does not mean that reflection is practiced only by phenomenologists. Reflection, and even reflective perceiving, are the occasional practices of everyone, including those whose historically understandable prejudices make them oblivious to reflection and its data as soon as they adopt a theoretical attitude. And from this it follows that reflection, though essential to phenomenologizing, is not its sufficient differentia.

IV

We have seen that the fundamental principle of phenomenological method requires that one's conscious processes, as

themselves given in reflective perception, be acknowledged as genuine data. We have seen also that, to apply that principle, one must regard all objects reflectively as intentional objects, i.e., consider them in their status as somehow intended in one's conscious processes. Any object of which he is conscious serves the phenomenologist as a clue to the conscious processes in which it is intended. Following this clue, he attempts to bring to clear self-givenness the immanent determinations of the process and correlatively the manner of givenness — perhaps self-givenness — of the object *as* intended in that process. In this attempt he is applying his fundamental principle — and doing so in the only manner that can bring to original self-givenness the matters of which the principle speaks, and thus lead to its original clarification.

So far, we have centered our attention on individual matters: primarily on objects intended as individuals and on individual processes of intending them. But it is to be observed that some objects are straightforwardly meant as not being individuals, as objects that are not individuated in space and time. Indeed, they are not only meant but sometimes themselves given and grasped as such. An individual object is intended not merely in its individuality, as having individual parts and standing in individual relationships to other individual objects. It is also intended and may be explicitly grasped *as* an individual (an instance of that *category*), as an instance of a *specific kind* of individuals, as having parts of *specific kinds*, etc. Furthermore, these “categories” and “specific kinds” may be not only thus co-intended but also directly attended for their own sakes and grasped in their original self-givenness on the basis of a clear perceiving or phantasing of at least possible instances. Thus, e.g., an object may be intended and clearly given as a possible, and perhaps an actual, instance of *color in general*, as having a quality that is an individual instance of *brightness in general*, and as standing in an individual relationship, that is an instance of *similarity in general*, to other individual instances of color. And color, brightness, similarity — these general kinds — may themselves be presented and grasped. Indeed, it is only on the basis of the

original givenness and graspedness of the kind as well as the individual that one can judge "with original insight": This is an instance of color; this has a brightness; this is similar to that in brightness; this instance of color belongs to this instance of surface; etc. And only when one has thus judged with original insight can one grasp, as originally self-given, the fact itself: that this is a color, etc. Moreover, general kinds themselves can be judged *about* just as individuals can — they can be identified, distinguished, named, and, in short, "treated" in all the manners necessary to justify one in calling them "objects," despite their non-individuality.

Straightforward grasping, "observing," and judging about generic objects that are themselves given are not, however, phenomenological activities. The phenomenologist as such observes and describes color in general *as* intended, *as* grasped, in its manner of being given, etc., not color in general *simpliciter*. And, correlatively, he describes the conscious processes in which color in general is variously intended, grasped, judged about, etc. He observes that the generic natures or "essences" instanced by straightforwardly intended individuals are, in a strict sense, themselves given; he describes the manner of their straightforward givenness, and the straightforward method of grasping them and judging with evidence about them. But he himself, qua phenomenologist, practices the observation of only such generic natures as are instanced by *reflectively* given individuals, i.e., by his own conscious processes and their objects as intended. Reflectively grasped individual processes of sensuous perceiving provide him with the basis for grasping the specific nature of sensuous perceiving as such; processes of visual perceiving function as a basis for grasping the more specific nature of visual perceiving; and processes of grasping individual objects as themselves given, whether sensuously or nonsensuously, function as a basis for grasping the nature or essence of perceiving in general. The same is true, *mutatis mutandis*, for reflectively grasped processes of whatever kind. Similarly, the intentional object as such, in its sense for consciousness, its manner of being given, believed, doubted, valued, etc., is a basis for grasping such generic or specific affairs

as intentional object in general, givenness in general, direct givenness, objective sense in general, intentional object intended as an individual thing, etc.

Though other persons cannot directly examine my individual processes of consciousness, they can examine their own and confirm or refute my statements about the general nature of consciousness, perception, etc. If there is anyone who has anything like what I have and call "perceiving," it is *ipso facto* an instance of the genus of which my perceiving is an instance, and he can grasp that *same* genus on the basis of his processes even as I grasp it on the basis of mine.

The active grasping of generic natures or essences, whether they be instanced by straightforwardly or by reflectively grasped individual objects, is at first practiced naïvely. But when it has been practiced, individual processes of this type may be themselves grasped reflectively and used as a basis for grasping their specific essence and, correlatively, the essence of the self-givenness peculiar to objects grasped as specific natures or essences. On the basis of such an original grasping of the nature of the process and the nature of what it accomplishes as an original grasping of essences, one then may practice it not naïvely but as a deliberate and critically justified method.

Thus, as deliberately practiced and critically justified, it presupposes reflective inquiry. But as a naïve "method" it has always been practiced by everyone. To paraphrase Locke's aphorism: God has not been so sparing to men to make them barely able to grasp individuals and left it to Husserl to make them able to grasp essences. It should be emphasized that, according to the phenomenologist, reflection and the observing of essences are not his prerogatives but the *de facto* practices even of the narrowest empiricist. "The truth is that everyone sees 'ideas,' 'essences,' and sees them, so to speak, continuously; they operate with them in their thinking and they also make judgments about them. It is only that, from their theoretical 'standpoint,' people interpret them away."¹

But it would not be correct to say that *all* judgments based

¹ Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie* (Halle, 1913), sec. 22.

on the observation of essences exemplified by reflectively given matters are phenomenological. Indeed, it would not even be correct to say, conversely, that *all* strictly phenomenological judgments are based on observation of essences. The observation of one's individual consciousness provides a basis not only for grasping its general nature but also for performing phenomenological judgments of existence, most notably, the judgment that one's individual consciousness itself is not only purely possible but exists as an actual instance of consciousness in general. And this turns out to be anything but trivial, since it is the basis for every other phenomenological judgment of existence.

v

The present flux of consciousness, as reflectively observed, is not simply a process of being actually busied now with this, now with that object. The objects of my actual believings, valuings, and willings are singled out from an objective background that is all the while co-intended as there, to be attended. In Husserl's terminology, consciousness has its "inactual" as well as "actual" component processes and, correlatively, its inactually as well as actually intended objects.

No matter how one's intendings may vary, as one lives actually now in perceiving, now in remembering, in judging, liking, willing — straightforwardly or reflectively — always there goes on, at least inactually, a continuous simple believing-intending of "the world" as the concrete individual nexus in which all intended particular individuals are intended as having their being. The course of consciousness may bring doubting or disbelieving of some previously believed detail in the objective sense of this world, but the latter as a whole is still simply believed in — only as somehow otherwise, or perhaps otherwise, than one previously believed. If one is busied with matters that have the sense of not being temporally individuated, still the individual world is at least inactually co-intended and itself given — though incompletely, as having more to it than presents itself — and, by their sense, these non-individual objects have their varied types of objective "ideal" being,

essentially in relation to the individual world of individuals, e.g., as essences *exemplified* by actual or possible world-individuals, as facts ultimately “about” world-individuals, as cultural affairs ultimately “embodied” in individual things or processes in the world. Thus, in a broad sense, they too are all intended, and perchance originally given, as world objects.

In particular, when I busy myself reflectively with my consciousness, I at least co-intend it, like any straightforwardly attended individual process, as a process in the world; and when I grasp the general nature of consciousness, I at least co-intend it as the general nature of an individual process possible in the world. Indeed, even when I am not busied with my consciousness or its objects as such, but attending straightforwardly to “outside” affairs — still I inactually co-intend my consciousness of the world as *in the world*, as part of the concrete individual nexus in which all particular individuals exist.

This “being in the world,” which I always implicitly intend my consciousness as having, is an objective determination that is always at least partially self-given and graspable whenever I advert to it. Thus, e.g., functional relationships between straightforwardly perceived changes in my body and reflectively perceived changes in my conscious processes are continuously given and belong to the familiar, simply believed-in style of the intended and self-given world.

However, even in this, its original self-giveness, the objective sense of one’s own consciousness as in the world, is a sense that it has for me *only by virtue of its essential character as intending the world*. It is, as it were, a necessary *reflex* effect on one’s consciousness, produced by its own essential nature as consciousness of the world. Its given status as intending the world is in this way *fundamental* to its given status as in the intended world.

The phenomenologist, as we have seen, is always reflectively orientated, toward his consciousness and toward intended objects *as* intended. In order to grasp the above-stated intentional structure clearly, the reflecting phenomenologist adopts as his fixed policy an attitude of neutrality, or self-restraint,

vis-à-vis his own continuous believing in, and otherwise taking a position toward, world objects and the world as a whole.

This means, in the first place, not only that he grasps, reflectively, the believedness, etc., of what he is actually busied with but also that, for purposes of investigation, he "officially" disassociates himself from his actual positions and regards their objects *purely* as "what I believe," "what I see," etc. In the second place, it means not only that he makes explicit and grasps the believedness of the continuously, even if "tacitly," inactually, believed-in objective world as a whole, but also that he actively disassociates himself from this fundamental and continuously validated belief. Thus the world and *all* world objects, in the broadest sense, are regarded *purely* as "what I believe," "what I mean," etc. This fixed policy of dissociation from his own believing, valuing, and willing — inactual as well as actual — is then maintained *in his reflective grasping of his conscious processes*. That is to say, he not only makes explicit and grasps the continuously believed-in, self-given sense of his consciousness as "in the world," but he also regards this sense of his consciousness *purely* as part of "what I believe," "what I perceive as itself given." Thus, e.g., the experienced status of his consciousness as in causal-functional relations with his organism, and, more fundamentally, as a process in world time, are regarded by the phenomenologist *purely* as "what I experience."

If I am successful in maintaining this attitude, I *find*, over against the whole world, including my consciousness as a process in it, my consciousness in its more fundamental status *purely* as the continuous process of believing in the world and in this believing as itself a process in the world. In its status "apart" from its essentially necessary being in the world, my consciousness is, if you will, an "abstraction," but not in the sense of being a *part of the world* that I merely think of and grasp now "regardless" of everything *else* in the world — perhaps as evidently existing even if nothing else "in the world" exists.

When the phenomenologist applies the epithet "transcendental" to his consciousness *purely* as a process of intending

and "having" the world, and speaks of his consciousness in its status as *also* in the world as "phenomenal," he must exercise vigilance not to be seduced by the habitual associations of such language, not to mean by the different words something more — or other — than the difference in "status" that is actually itself given and grasped in reflection. In particular he must be careful not to think of "transcendental" consciousness as, so to speak, existing in an "other world," or as a realm concretely apart from the world. He must not be misled by the traditional associations of the word "phenomenal," as applied by him to himself and his consciousness as in the world, and to the whole world and all world objects. He must reject any suggested contrast of phenomenon with noumenon, with its relegation of the experienced world to the status of an appearance relative to some alleged unexperienced reality.

A further pitfall, not easily avoided at the outset, is the tendency to think still of the "relationship" of transcendental consciousness to the world as analogous to the objective relationship of phenomenal consciousness to other real processes in the world — to think, let us say, of the relationship between, on the one hand, a transcendental process of perceiving a material thing and, on the other hand, the material thing itself, as analogous to the objective relationship between the "same" process, as an event in the world, and the material thing. The difficulty has its roots in the fact that, in the world, perceiving and perceived are not only related *as* perceiving and perceived but also as realities in time, with objective temporal relations. There is some sense in asking how soon after a change takes place in the thing a change in the perceiving (as an event in the world) takes place. The question would, however, be absurd if asked concerning the perceiving as transcendental and the object as phenomenal. The "relationship" of consciousness *purely* as intending and objects *purely* as intended is utterly *sui generis*; it has no objective analogue. Consciousness as in the world not only has this "relationship" to the world but also has objective relationships to other objects in it, and this is a chief source of the confused strife among the various types of idealism and realism. Only after the

peculiar dual status of consciousness as pure transcendental consciousness (of the world) and as phenomenal consciousness (in and of the world) has been clearly seen, can the confusion be dissipated and the historic enigma solved.

The general structure of consciousness as itself given in reflection *to one who dissociates himself from his own believing in the world and in the status of consciousness as itself in the world* may be said to be the first theme of strictly phenomenological inquiry. The “transcendental” being of his own consciousness as a clearly possible instance of transcendental consciousness in general, is, at first, simply accepted as itself given. And this is the *only* “assumption” of phenomenology, even at the outset, since the intendedness, givenness, etc., of the world qua phenomenon is implicit in the essential nature of transcendental consciousness, even though the intended world is not itself an immanent part thereof. In analyzing transcendental consciousness as consciousness of the world and the world as that of which transcendental consciousness is essentially conscious, phenomenology is presupposing neither the existence nor the possibility of the world, as every non-phenomenological inquiry must do, at least tacitly.

* * *

Thus, in attempting to carry out the fundamental methodological principle stated at the beginning of this essay, the phenomenologist comes upon a self-givenness that, in a clear but not easily expressed sense, is “prior” to every other self-givenness, and is able to discover and verify by direct observation the fundamental presuppositions of all natural inquiry — without involving himself in the otherwise inevitable circularity of assuming their validity as its own basis and as the justification of the method itself.

It is at this point that a genuinely philosophical inquiry can really *begin*: as a “transcendental phenomenology.” As its inquiry progresses, it develops its own peculiar problems and method, in accordance with the gradually discovered nature of “the matters themselves” — always following the maxim that only what is seen to be itself given is to be accepted as genuine knowledge.

HUSSERL'S CRITIQUE OF PSYCHOLOGISM: ITS HISTORIC ROOTS AND CONTEMPORARY RELEVANCE

John Wild

ONLY TWO WORKS of Husserl fall within the scope of this paper: *Logical Investigations*,¹ and, to a lesser extent, "Philosophy as a Rigorous Science."² No attempt will be made to deal with the problem of psychologism in Husserl's later writings. The early attack upon psychologism has an importance of its own, apart from Husserl's final philosophy, and in the view of the writer deserves special consideration. It is the thesis of this paper that psychologism, though appearing under many names and disguises, represents an ever-present danger to the philosophic enterprise, which has been faced and to some degree overcome by *philosophia perennis*, beginning with Plato's attack upon sophistry. When seen in this perspective, Husserl's famous polemic in the *Logical Investigations* may be more adequately understood, and its critical relevance to the situation of our own time more clearly appreciated. This paper will fall into the following five divisions: (I) a definition of psychologism; (II) a brief outline of Husserl's attack; (III) a comparison with Plato's general attack upon the sophistry of his day; (IV) a brief indication of psychologistic tendencies in contemporary philosophy; (V) the remedy for contemporary psychologism as suggested by the previous discussion as a whole. In view of the limitation of space we must confine ourselves to a consideration of the bare essentials, without any elaboration of detail.

¹ *Logische Untersuchungen* (1st ed. 1900; 4th ed., Halle, 1928).

² "Philosophie als strenge Wissenschaft," *Logos*, I (1910), 289.

I. THE DEFINITION OF PSYCHOLOGISM

Relativism, skepticism, idealism, and subjectivism include a wide array of diverse theories and intellectual tendencies. Nevertheless we are vaguely aware of an underlying kinship. In spite of manifold specific differences, they have one trait in common. All of them regard reason as dependent in some way upon something non-rational in character. This is the essence of what Husserl called psychologism. In his own day, the non-rational "source" of reason was becoming increasingly conceived as the human organism, i.e., the object of psychology. Ever since the time of Hume, "empiricist" philosophers had dreamed of psychology, or the "science of human nature," as the basic science to which all other sciences are relative. Hence Husserl adopted the name psychologism for the tendency to relativize reason, or to make it dependent upon something not itself. As a matter of fact, however, his polemic is directed against a range of theories far wider than this word would at first suggest. Thus it specifically includes all the various idealistic "sources" of rationality — "*Verstand, Vernunft, Bewusstsein*," even "*Bewusstsein überhaupt*,"³ any thing, or substance, or absolute which is held to determine, or influence, or "include" the intentional acts of reason. To assert the dependence of reason upon any such non-rational entity is to be guilty of psychologism in Husserl's sense.

It is most important to realize that psychologism stands for a *tendency* rather than a specific type of theory. Any view which would make "the categories," for example, relative to a "stage of human development," or to "the psychophysical constitution of the species *homo*," is clearly psychologistic. But one may fall into psychologism in far less obvious ways. The very use of such a phrase as "my mind" is psychologistic, in suggesting that reason as such is something determined by or contained in *me*. All similar phrases, such as "the group mind," or "the mind of a certain cultural epoch," or even "*the mind*," are psychologistic. Of course, they *may* be employed legitimately. In this case, they indicate *what* has been

³ *Log. Unt.*, 1, 124.

apprehended or held to be true by a certain person, or by certain persons. But if used without the most careful qualification, in ordinary discourse at the present time, they represent psychologism, for they imply that understanding as such is *essentially* influenced or qualified by some particular, specific entity. It matters not whether this entity be conceived as sub-rational or super-rational. To refer to the angelic mind or even the divine mind is to fall into psychologism, for it is to suggest that reason may be subject to *essential* as well as to accidental qualification from some external source. Reason, wherever it happens to be realized, is purely and simply reason. To deny this is to commit psychologism.

II. AN OUTLINE OF HUSSERL'S POLEMIC

In chapters III–X of the first volume of the *Logical Investigations*, Husserl is not interested in the various metaphysical aberrations with which psychologism is indissolubly connected. He restricts himself to an examination of the *logical* status of the doctrine in whatever particular form it may be asserted. After considering the distinction between the psychological or mental act, and the intention of the act (ch. III), and the explicit reduction of the latter to the former by such logicians as Mill, Sigwart, and Lipps (ch. III), he proceeds to examine, first of all, the fatal consequences of this confusion (chs. IV, V, VI), and then, secondly, the erroneous prejudices upon which it rests (ch. VIII). Passing over his study of biological relativism (ch. IX), we must now briefly summarize these two phases of the investigation.

A. *The Consequences of Psychologism*

The attempt to assert a relativism of reason, as has long been known, leads to consequences which are not so much false as nonsensical, i.e., not even capable of truth or falsity. Husserl presents a remarkably lucid and pungent development of the classic arguments of Plato and Aristotle against Protagoras.⁴

⁴ Cf. *Theaetetus*, 170 c–171 c; *Meta.* IV, ch. 5–8; also *Summa Theol.* I, Qu. II, Art. I, obj. 3 and ad 3, and Qu. 85, Art. II, resp.

In the first place, to speak of what is true for a certain species or kind of being implies that the very same content is false for another species or kind of being. But the same content cannot be *both* true and false. This lies in the very significance of the words true and false. The thesis of the relativist, therefore, contradicts the sense of the words he uses in asserting it. Such a thesis is, strictly speaking, nonsense. In the second place, to make truth dependent upon the constitution of a certain species is to base it upon a fact which is individual and temporally determined. The truth about a fact must not, of course, be confused with the fact. But to confuse truth in general with certain individual events is even more absurd. *What* is meant by the judgment $2 + 2 = 4$ is not to be confused with the temporal act *by* which we judge that $2 + 2 = 4$. To do so is to commit an absurdity. Third, if truth is *essentially* qualified by the human constitution, it follows that should this factual constitution cease to exist, truth also would cease to exist. It would thus hold true that no truth holds true. This conclusion is nonsense. The antecedent, however, is logically possible. It may be false, but it is certainly not nonsense that the human species, or any other factual constitution, should cease to exist. Hence the whole hypothetical assertion is nonsense, since it joins together a logically possible antecedent with a logically impossible conclusion.

In the fourth place, if the factual existence of a species (for example *man*) causes its own true existence, we are led to conclude that this factual being is *causa sui*. The absurdity of such a statement becomes clearer if we consider the truth (possible with respect to any factual being) that it no longer exists. In this case, we should be forced by the relativity thesis to assert that this being is the cause of its true non-existence. Finally, in the fifth place, we cannot subjectivize truth without subjectivizing all that which such truth intends. There will, therefore, be no world *an sich*, but only a world *for* this or that variety of being. This may be all very well until we come to consider the particular being in question. This being, together with the contents of its consciousness, also belongs to the world. Hence, should its constitution change in certain re-

spects, it would not only have to deny its own existence, but the world itself would cease to exist, provided no such particular species could be found which would be in a position to assert it.

B. The Immediate Sources of Psychologism

These absurdities arise primarily from a deep-seated tendency to confuse intended *structures* of a purely formal character with the particular psychological acts *by* which they are intended. Three types of argument are commonly used in attempting to justify this confusion of logic with psychology.

First, it has been mistakenly held, even by those eager to defend the autonomy of logic, that logical principles are only "norms," or rules, governing valid, as distinguished from invalid, thinking. At first sight, this seems to offer us a means of combating psychologism. As a matter of fact, we are playing into its hands. The "norm," as such, is laid down psychologically for psychological guidance. So long as the exact status of such norms or rules remains unclarified, it is natural to assume that they are simply more or less accidental features of the factual constitution of a certain individual or species. One of the most valuable sections of the *Logical Investigations* (pp. 154-167) shows with convincing clarity that every "norm" rests on some intentional structure of the form *a is b*, which may be directly apprehended as true or false. Any pure content of this form may serve as a norm when judged to be beneficial for further procedure: (*a is b*) is *c*, and *c* is good. The ultimate "norms" of logic, therefore (*a is b*), require no further demonstration. They are ideal structures standing "at the summit of all deductions as axioms."⁵

Second, the question may be raised as to whether the content of logic is not judgments, proofs, conclusions, truth, probability, necessity, etc. How can we regard all these as anything other than psychic occurrences? Judging, proving, and concluding are forms of psychic activity. As to truth, probability, necessity, etc., must they not be psychically lived and experienced? This is doubtless the chief source of psychologism, a

⁵ Page 167.

case of the converse fallacy of accident *a dicto secundum quid ad dictum simpliciter*. The special intentional acts, *by which* form or structure is humanly intended are confused with *what* is intended by them. This distinction between the intending act and what is intended was clearly recognized by Plato,⁶ and was developed and applied with an increasing sense of its importance throughout the whole period of classic philosophy,⁷ though modern philosophy on the whole has ignored it. As Husserl points out, it is completely absent in Hume, and the whole "empirical" tradition stemming from him. In Berkeley's *esse est percipi* principle its neglect can be seen to lie at the root of idealism.⁸ Whenever it is so neglected, relativism, subjectivism, what Plato called *sophistry*, is very close at hand. Reality is placed "out there" at a distance, and the way is clear for construction and idealistic system building. Yet, as Husserl points out, it is difficult for even the most superficial description of mathematical procedures to remain oblivious to the distinction between the psychical processes of counting, adding, multiplying, and dividing, and the sums, products, and quotients intended by these acts. This intentional structure is discernible in every type of knowing, no matter how vague or even erroneous it may be. As Plato says, "Every sensible expression whatever intends something; not intending anything, it is impossible."⁹ In every case the act of intending is distinct from *what* is intended, and in no case is the former a "cause" of the latter.

The third source of psychologism is the tendency to confuse evidence with the subjective *feeling of* evidence. The latter has many psychological conditions such as concentration, practice, and so forth, but is *essentially* dependent upon the actual presentation of the evidence itself. The feeling, no matter how distorted it may be, is a feeling *of* evidence, i.e., the apprehension of ideal structure such as $axb = bxa$. Such a structure,

⁶ Cf. *Rep.* v, 477 c-478 c; *Phil.* 35 b; *Soph.* 262 e; *et passim*.

⁷ Cf. *Summa Theol.* I, Qu. 85, Art. II, *et passim*.

⁸ Descartes seriously undermined it by maintaining that the "objective" content of all "ideas" with the exception of one might be regarded as subjectively "caused."

⁹ *Soph.* 262 e.

whether psychically apprehended or not, determines a possible apprehension. Each such apprehension, when humanly actualized, determines a particular feeling of evidence, which is part of the experience of a particular individual, and subject to various, accidental, psychological conditions. When this feeling of the evidence is confused with the evidence itself, it seems as though the latter were also, in part at least, externally determined, and the truth itself distorted. The correct order: (ideal structure) determining (apprehension of structure) determining (experience of apprehension) is inverted, and we have instead: (accidental psychic conditions) determining (experience of apprehension, confused with *what* is apprehended) determining (ideal structure). This latter reading, which ignores the intentional character of all feeling, prepares the way for relativism and idealism.

III. PLATO'S ATTACK UPON SOPHISTRY

Seven of Plato's dialogues (*Protagoras*, *Theaetetus*, *Hippias Minor*, *Hippias Major*, *Gorgias*, *Euthydemus*, and *Sophist*) are primarily devoted to a criticism of sophistical philosophy, and references to this phenomenon are scattered throughout his writings. We cannot doubt that, in his view, it constituted a preëminent danger, lying in the path of all philosophizing. He was fully aware of the enormous complexity of the phenomenon.¹⁰ Nevertheless, in the dialogue of that name, he works out a summary definition of the sophist.¹¹ He is essentially an idol-maker. Instead of images (*εἰκόνας*), directed outward and proportioned to the real paradigm (the work of philosophy), he fashions idols (*εἰδωλα*), directed toward himself, and proportioned to his own perspective and faculties.¹² He confuses opinion with knowledge, and hence lives in a world very largely of his own manufacture. All human knowing involves both knower and known. The philosopher, so far as possible, allows his knowing to be determined by what is known. The sophist, as far as possible, allows what is known

¹⁰ Cf. *Soph.* 236 d, 240 c, 261 a-b.

¹¹ *Soph.* 265 ff., and especially 233-237.

¹² *Soph.* 236-237.

to be determined by his knowing of it. In other words, he is a relativist or subjectivist. His achievement is not to philosophize, but to psychologize — a false imitation of true philosophy. Removing reality to a distance¹³ by “logical” and “epistemological” difficulties, he is then free to substitute distorted “idols” of his own making for images truly representing things as they are.

Plato was aware of the logical absurdities resulting from the pseudo-thesis of relativism.¹⁴ He was also keenly aware that practical rules of procedure in the arts are founded on purely theoretical insight into structure. When such insight is disregarded, true art (*τέχνη*) passes into “blind procedure and routine.”¹⁵ Unless trustworthy guiding knowledge is provided, the whole art may fall under an illicit control which uses it for ends ulterior to the art itself. It then becomes a false or “fawning” art,¹⁶ no longer really a rationally guided mode of action (*τέχνη*). Without reliable, non-relative knowledge, as distinct from opinion, it is therefore impossible to distinguish real skill or art from quackery. In all such genuine knowledge the difference between the subjective faculty of knowing and the actual structure known is so fundamental to Platonism as to require no special comment.¹⁷ The intentional structure of feeling is clearly described in the *Philebus*.¹⁸ Husserl’s critique of psychologism or sophistry in its modern form thus finds a parallel in key Platonic doctrines, on which we have no further time to dwell. We must pass to certain ontological and anthropological misconceptions which emerge from Plato’s criticism as inextricably intertwined with the internal contradictions of psychologism. In these respects, Plato’s examination offers a most illuminating supplement to the logical and methodological examination of Husserl. Logical method cannot be dissociated from metaphysical presuppositions. What then is the ontology of psychologism?

¹³ *Soph.* 234 c 4, d 4, e 4.

¹⁴ Cf. *Theaet.* 170 c–171 c.

¹⁵ *ἐνπειρία καὶ τριβή*: cf. *Phil.* 55 e; *Gorgias* 463 b, and *Laws* 938 a.

¹⁶ Cf. *Gorgias* 464 c.

¹⁷ Cf., however, *Rep.* v, 477 c–478 c for a brief and lucid statement.

¹⁸ *Phil.* 37 ff.

A. *The Ontology of Psychologism*

Plato's attack on sophistry is directed against famous teachers and "professors," such as Protagoras and Gorgias, with whose doctrines he could assume an intimate familiarity on the part of his audience. Hence he often takes a great deal for granted in his presentation of their attitudes and argument. Many of his allusions and suggestions are missed by the modern reader. One point concerning sophistic teaching, however, stands out with emphatic clarity — its neglect of ontology. Wherever the sophist is brought into view, the distinction between two modes of being, *real being* and *coming to be*, is also close at hand. This distinction lies at the root of Plato's criticism, and involves complicated ontological principles ignored by the sophistic mentality. Nevertheless this very neglect is a sort of ontology, for the word "is" cannot be avoided. Without criticism, in ordinary (sophistical) discourse, it tends to assume a meaning which is *apparently* exact and simple, but *really* confused and ambiguous.

Let us take, for example, the famous assertion of Protagoras: *Man is the measure of all things — of those that are that they are, of those that are not that they are not.*¹⁹ Later critics who have considered this assertion have been so impressed by the relativism which lies on its surface that they have failed to note the simple *ontological* assumption which lies at its root. Only two ontological possibilities fall within the vision of this statement. Things either are, or they are not. There is nothing *between*. It is not worth while to distinguish modes or kinds of *being*, as is necessary in all other cases. We can simply accept *this* word as clear and unambiguous. What is simply is. What is not simply is not. Plato leaves us in no doubt as to the connection of this "simple," sophistic ontology with Parmenides' denial of non-being.²⁰ When pressed, the sophist resorts to logical "exactitude" after the Eleatic model. A thing must either be or not be. Otherwise, there is a "contradiction." By this device, the effort to seek ontological clarity (i.e., *philosophy*) is

¹⁹ *Theaet.* 152 a.

²⁰ *Soph.* 236 d–237 b.

eliminated at the outset, and we are left at the mercy of the sophist.

Plato's philosophy, as is clearly to be noted in his later dialogues, moves *within* this prohibited area. *Between* (μεταξύ) that which is and that which is not lies that which becomes.²¹ This neither *is*, nor *is it nothing at all*. Hence it is regarded as a "contradiction," and ruled out of existence by sophistic logic.²² In reality, it includes all those changing things which are directly known to us. Through these we gain access to being in *all* of its forms and manifestations, the object of philosophy, which seeks to know *all* being, "not merely a smaller or greater, a more important or less important part."²³ This eristical "contradiction" thus bars the way to philosophy. "Non-being" (the only type of being directly known to us) cannot be. Plato avoids this "contradiction" by making two necessary distinctions, that between form and matter, and that between agent and patient. To neither of these is ordinary (sophistical) thought sufficiently sensitized.

(1) *The Confusion of Matter with Form (Relativism)*. All those concrete things of which we are directly aware are changing. There is a certain vagueness or fluidity intrinsic to them which we may call potency. Nevertheless they are distinguishable from one another. Form or structure is also, to a degree, intrinsic to them. The form in itself is self-identical or invariable. The compound of matter and form, the concrete thing, varies and flows in all sorts of ways, without ceasing to be that thing. Should it lose its essential form, it would cease to be what it is. Should it lose its matter or potency, it would become a self-identical, invariable form without any concrete embodiment. Both definiteness (πέρας) and indefiniteness (ἄπειρον) are intrinsic to the concrete, generated substance (τὸ τοῦτων ἔκγονον ἅπαν).²⁴ Sophistical reflection ignores these homely distinctions, regarding concrete things "logically" as though they were pure, self-identical essences, and pure essences as though they were concrete things. Hence it falls into the following confusions.

²¹ *Rep.* v, 479 c, 17 ff.

²² Cf. *Euthyd.* 283 d; 284 b; *et passim*.

²³ *Rep.* 485 b; cf. 490 a.

²⁴ *Phil.* 26 d 8.

When the laws of identity and contradiction, which apply without qualification to essences, are applied uncritically to concrete things, these are regarded as if they were not material or concrete. What is shifting and accidental is regarded as if it were essential, and the various fallacies *a dicto secundum quid ad dictum simpliciter* are generated.²⁵ When potency is thus ignored, each thing becomes a self-identical "atom" or "impression," incapable of being *other than* it is. The limit toward which this tendency moves is an extreme Eleaticism which makes all change or participation impossible.²⁶ When, on the other hand, forms are materialized, what is essential is regarded as though it were shifting or accidental, and the various fallacies *a dicto simpliciter ad dictum secundum quid* are generated.²⁷ All structure is potentialized. All definiteness becomes vague. We move toward the limit of an extreme Heracliteanism which makes all things participate in all things,²⁸ i.e., an ultimate vagueness or potency.

While the sophist makes use of both these extreme positions, he really moves between them, formalizing matter, and materializing form to a certain degree, so far as it suits his purpose. The vagueness or potency which is intrinsic to things is first eliminated by the pretext of logical "exactitude." Hence change becomes a "contradiction," and is replaced by material entities or "atoms," regarded as though they were self-identical forms. The fact of change *then* has to be interpreted as adventitious to the pure form. Such supervenient change which does not really change the thing is regarded as a "relation." The thing does not change, but "it" may enter into various relations. In relation to some other thing it is not exactly what it is. Since all things are in relation, i.e., changing, no thing ever is what it truly is. Thus both form and matter are recognized, but in a spurious manner. Where he *should* recognize vagueness or potency, the sophist is "exact." Then, where he *should* be exact, in the case of the form or structure, he relativizes. What is really material is first formal-

²⁵ Cf. *Euthyd.* 293 d, 298 a ff., 299 e, etc.

²⁶ *Soph.* 251 b-252; cf. 259 e.

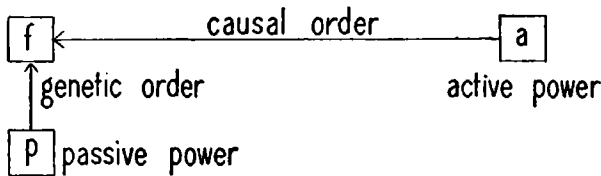
²⁷ Cf. *Euthyd.* 301 a.

²⁸ Cf. *Soph.* 249 c and 252 d.

ized. Then the mistake is over-corrected by a relativism in which form itself is conceived as susceptible to change, both agent and patient being placed on the same ontological level, and then finally confused.

(2) *The Confusion of Agent with Patient (Materialism)*. All change is out of something potential (p), to something actually formed (f), by some agent (a) already formed, and hence existing at a higher ontological level which enables it to act on p .²⁹ Thus (a) ($\tau\acute{o}$ ποιῶν), and (p) ($\tau\acute{o}$ πάσχον) are already linked by the bond of potency ($\delta\acute{\upsilon}\nu\alpha\mu\iota\varsigma$), which, according to Plato, is "relative" ($\pi\rho\acute{o}\varsigma$ τι), binding two things together

I The Structure of Change



either as agent-patient or patient-agent.³⁰ As in the diagram (I), it is to be noted that: (1) there are not merely two things (cause and effect), but three, agent (a), patient (p), existing at *different levels*, and the fully formed product (f); (2) there is only *one* process ($p - f$), *not* two, which, however, (3) is *both* the action of the agent from ahead on the patient, *and* what the patient successively suffers from this source.

When potency is removed by the pretexts of logical exactitude, it is impossible to distinguish any difference *in level* between a and p . Each is regarded as a crystallized "thing." Hence change has to be regarded relativistically as a distortion of the one by the other. "Intrinsically" each is simply what it is. But *in relation*, each becomes different from what it is (II). The agent affects the patient, which, "at the same time," affects the agent. In this case: (1) each causal process now

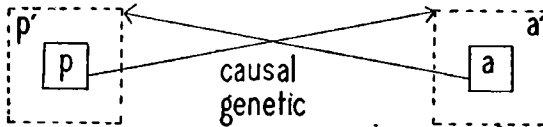
²⁹ Cf. *Phil.* 26 e 6 ff.

³⁰ Cf. *Phaedrus* 270 d 4.

consists of two factors (cause and effect) instead of three; (2) there are *two* processes rather than one; (3) each process can be read in only *one* manner, *from behind*, since each is an *agent acting on* the other (*passive* potency or susceptibility having been eliminated).

Relativism (II) prepares the way for two further materialistic misunderstandings of change (III and IV), as it leaves wholly undetermined whether "the real effect" is *a'*, or *p'*, or both (*a' p'*), and whether the real agent is *a*, or *p*, or both (*a p*). Since it is clear that certain unequivocal "effects" are produced in nature by unequivocal causes, we are easily led

II Relativism



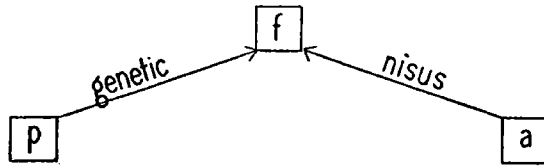
from relativism (II) to the conception of evolutionary naturalism (III). Superficially this looks like a return to I. Thus: (1) there are three factors again, the matter or "elements" (*p*), the "new emergent" form (*f*), and the "nisus" or agency (*a*); (2) there is only one unambiguous process of "emergence" (*p — f*); but (3) since passive potency has been eliminated, this process can be read only in *one* direction, from *behind*.³¹ The emergent is pushed into being from the past by a blind efficiency.

This prepares the way for the complete inversion of mechanistic materialism (IV), according to which: (1) there are no longer three factors, but only two, the wholly inert "effect" (*f*), impelled into being by a wholly active "cause" (*a*), now more or less explicitly identified with the potential matter, or some one of its phases (*p*), as the material efficient cause (*p a*); (2) this is supposed to exercise a "pushing" influence,

³¹ Thus according to Alexander "all causality is a *tergo*." *Space, Time, Deity*, I, 287.

confused with the successive phases of the genetic process ($p-f$); (3) which is now read only in *one* way, as the action of the “past” cause on the present or “future” effect, the view so successfully attacked by Hume, who asked: how can a “cause,” no longer “there,” be supposed to exert any

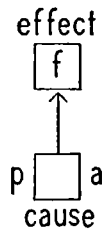
III Evolutionary Naturalism



“effect”? Once passive potency has been removed, active power or “causal efficacy” has no standing. This is the real significance of Hume’s polemic.

As Plato pointed out, potency (*δύναμις*) is correlative (*πρὸς τι*). Omit one aspect and you must omit the other, together with all change as well, for without potency there is nothing

IV Mechanistic Materialism



but pure essences, or the mixed materialized essences which Hume called “impressions.” These do not themselves change. Change “supervenes” upon them as “succession.” Hume never penetrated to the ontological root of the difficulty, i.e., the ignoring of “potency.” Once agent and patient are depotentialized and regarded as fixed “atoms” or “impressions” either “there” or “not there,” change can no longer be under-

stood. Relativism only prepares the way for some form of inverted materialism in which the agent is confused with the patient, and the causal order confused with the genetic series. Instead of form dominating matter, matter is finally regarded as somehow blindly forming itself from behind. We must now turn to this process of inversion, with its intermediate phase of relativism, first as it is exemplified in sophistic metaphysics, secondly as exemplified in sophistic anthropology, restricting ourselves, of course, as we must, to a bare outline of essentials.

B. The Metaphysics of Psychologism

Everything in the world is changing, that is to say, passing from vague potency (*p*) into act or form (*f*). In spite of the vast complexity of this world process, it is possible to recognize certain, distinct types of change, and hence distinct types of being, for, as Aristotle remarked, "there are as many different kinds of being as there are kinds of change."³² At least five of these are of major importance: (1) moving things, roughly speaking, the object of physical science; (2) moving and altering things, the object of chemical science; (3) moving, altering, and growing things (*φυτά* plants), the object of botanical science; (4) moving, altering, growing, and perceiving things, the object of zoological science; and (5) moving, altering, growing, perceiving, and reasoning things, the object of the sciences of man.

These levels are interdependent, but in a hierarchical manner. Each requires the rest, but *in a different way*. The *lower* requires the *higher* unequivocally, as what is vague and potential requires what is definite and actual, for its further realization. The *higher* requires the lower only as matter to form and direct. These interdependent levels, therefore, make up that single structure which we call "the world" (*f*), and which is being realized genetically in something relatively formless, but *able* to receive it (*p*). Thus, though ignorant of detail, all men are aware that the world *in* which they exist is *one*, and that all the changes of which they are aware occur *within* its single, encompassing structure.

³² *Phys.* 201 a 8.

But potency does not actualize itself. Hence, in addition to matter (p) and the formal structure (f), it is necessary to infer the existence of some agent (a), whose active capacity answers to the passive potency of p , and thus accounts for the process ($p - f$). This must suffice to indicate the general outline of classic metaphysics. We must turn now to the distortions which result from the sophistic neglect of ontology. When "exact" logic is applied to the changing world, potency is ignored, and each thing, instead of being viewed as coming to be, is regarded as a static unit, either there or not there. Hence the world loses its dynamic structure, and becomes a multitude of things which require no cause, since they are simply "there." The two most clearly marked levels, man ($\nu\acute{o}\mu\omicron\varsigma$), and nature ($\phi\acute{\upsilon}\sigma\iota\varsigma$), are interpreted as two fully formed or hypostatized realms, lying side by side, though having a logical, depotentialized gulf between them, like that separating pure essences from one another.

No explanation for the unity of *the world* can then be given, except in terms of a static "whole" and its "parts." Nature may be regarded as a "part" of man (idealism), or man as a "part" of nature (naturalism). But in spite of these "easy" solutions, the difference remains — also the interaction between them. Nature acts on man, and man on nature. Such facts, however, have to be regarded relativistically. Passive potency is ignored as simple non-being. The causal or hierarchical structure of the world is thus also disregarded and replaced by the de-potentialized, relativistic dualism of nature and man, $\phi\acute{\upsilon}\sigma\iota\varsigma$ and $\nu\acute{o}\mu\omicron\varsigma$. Instead of being regarded as matter to be understood, things are formalized or *hypostatized* into unknowable noumena. Instead of being regarded as the capacity to understand, reason is *hypostatized* into "the mind" which can only "create" phantasms of its own.³³ Agent and patient are falsely substantialized into "things in themselves," and the bond of potency between them is broken.

So far as the causal aspect of change is recognized at all, it can mean only the *relativization* of the one by the other. Either nature distorts mind (Protagoras), or mind distorts nature

³³ *Soph.* 236 b ff.

(Hippias and the later sophists). Since matter genetically precedes form, however, it is natural to assume that man "evolves" out of nature through the agency of some cause not already in existence, but working from behind (III). This leads to the confusion of the causal with the genetic order (Self-evolving universe), and finally to the identification of matter (*p*) as the true agent (*f*) — materialism. There is a tendency in all sophistry to move in the direction of naturalism or materialism, as in the case of ancient sophistry, where the humanism of Protagoras gradually gave way to the naturalism of Hippias and Antiphon.

C. *The Anthropology of Psychologism*

A similar inversion of hierarchical order is found in sophistic anthropology. All the chief forms of change, or being, are involved in the nature of man. He moves, alters, grows, desires, and reasons. The last constitutes his peculiar difference. The rest are *potentially* human. Only so far as motion, change, growth, and desire become controlled or qualified³⁴ by reason do they enter into the becoming of *man*. So far as these subordinate processes, both in himself and the surrounding world, are guided by man, just so far does he realize his specific nature or form. So far as he does not, just so far does he fail to be what he really is, a rational mode of becoming. Such failure to realize its form is always the specific "evil" for any specific thing. Hence ignorance (*ἀγνοια*), or its most dangerous form, misunderstanding (*ἀμαθια*), is the primary evil of man. But the sophist of all ages calls this doctrine one-sided "rationalism," and tries to avoid it by a relativizing of human reason which ignores the dynamic order of agent-patient, and places reason on a level with the other "parts" of man.

Just as Protagoras divided the universe into two "relative" parts, lying side by side,³⁵ so he divided human nature into two "relative" parts, lying side by side, elevating matter (instinct and desire) to the level of form and reducing form

³⁴ Cf. *Rep.* 438 e 34.

³⁵ Cf. *Prot.* 323 c, where Protagoras treats the realm of nature and the realm of culture as *exhaustive* alternatives: i.e., virtue must be either one *or* the other.

(reason) to the level of matter.³⁶ Reason (the human *form*) is thus only one *part* of human nature, the irrational instincts and desires (human matter) another *part*. Instead of seeing life as a *process*, in which one acts as form and the other as matter, he regards it statically as a compound of hypostatized parts.³⁷ While paying lip-service to the supremacy of reason as the guiding faculty,³⁸ he really reduced it to the level of matter by maintaining that it could be “overcome” by natural strength, and other irrational factors.³⁹ Thus, instead of a hierarchical, causal order, we have separate parts,⁴⁰ each of which relativizes or distorts the other, so far as there is any causation or change between them. Desire “overcomes” reason, and reason restrains or distorts desire (II). What is good for the one is perhaps bad for the other, and *vice versa*.⁴¹ “The good,” so far as it can be conceived at all, has to be conceived as a sort of compromise in which each “factor,” including reason, receives some share. Since reason herself is only one of the claimants, to accept her judgment as to the *rational* apportionment would be unjust and unvirtuous. Hence the good for man is largely irrational. Rather than being rationally guided into being, it simply happens.⁴² So, strictly speaking, virtue is unteachable. Ignorance, therefore, is not the primary source of evil. Weaknesses in man’s physical nature are apt to be far more disastrous.

In reality, of course, reason is able to *take account of* such weaknesses, and plan accordingly. But sophistic anthropology attempts to obscure this rational “responsibility,” or formal control, extending over all the subordinate forms of change. Instead of this, various external factors are regarded as being responsible for reason or its absence. Thus, instead of viewing ignorance, the corruption of the guiding agency in man and the primary source of vice and evil, as something for which man is peculiarly responsible, the sophist comes to regard it relativistically as something “very largely” outside of human

³⁶ Cf. *Prot.* 349 d 4 and the whole ensuing argument.

³⁷ Cf. especially 329 d ff.

³⁸ 352 d.

³⁹ *Prot.* 351 a and 360 e.

⁴⁰ τὰ μόρια 329 e; cf. 349 b-c.

⁴¹ Cf. 344 a 4 ff.

⁴² ἀπὸ φύσεως — 351 b 2.

control. A man can, therefore, plead ignorance as an excuse.⁴³ But so far as a man is not rationally guilty, *he* is not guilty at all. Hence the way is clear for that general dehumanization of man via self-mitigation which is characteristic of sophistry. Even if one really reasons and knows the good, he may still be *overcome* by some irrational element of his nature.⁴⁴ This mitigated or relativistic "rationalism" ends, of course, with the complete overthrow of reason, and the enthronement of desire, or even brute impulse, in its place. Just as the dualism of *φύσις* and *νόμος* leads to a naturalistic metaphysics, so the dualism of rational and irrational leads to a naturalistic anthropology.

Genetically, matter (in this case the brute desires) comes first. This genetic order is then confused with the causal order, and the *true* causal order ultimately reversed. Reason becomes a mere "instrument" for the carrying out of desires, and human nature is turned upside down as in the "inverted" views and persons of Callicles in the *Gorgias*, and Thrasymachus in the first book of the *Republic*. In the *Gorgias* particularly, Plato has portrayed in a peculiarly realistic manner that ethical and political "tyranny" (guidance from beneath) which constitutes the last and perhaps the most fatal practical consequence of sophistic materialism. Instead of form determining or qualifying matter, matter determines form. Although this inversion stands in the most radical opposition to all true technical procedure where the determination of form *by* matter can always be recognized as a distortion,⁴⁵ it may nevertheless be "maintained" by the sophist, as is indeed readily indicated by even the most cursory reference to contemporary common sense reflection.

IV. PSYCHOLOGISM IN CONTEMPORARY PHILOSOPHY

To anyone who has followed Plato's critique of the phenomenon of sophistry, it is evident that psychologism is not merely a dubious hypothesis to be corrected by distinguishing between logic and psychology. It is a basic deformation of the under-

⁴³ As Hippias in the *Hipp. Min.* 372 a.

⁴⁴ Cf. *Prot.* 352 b ff.

⁴⁵ Cf. *Gorgias* 463-466 and 514-520.

standing itself, which penetrates into every branch of philosophical endeavor, distorting both the elaborate procedures of academic philosophizing, as well as those less articulate, but more primordial, modes of apprehension by which man, as such, always, to some degree, understands the world and his station in it. Both distortions are discernible in the modern philosophical scene.

If we turn to academic philosophy, we find it generally characterized by an exaggerated emphasis upon questions of procedure and method. Logic is placed before ontology, and epistemology before metaphysics. In logical positivism, this withdrawal from reality has perhaps reached its ultimate extreme. The whole of philosophy is exhausted in a discussion of linguistic and methodological technique. The knives are constantly sharpened and resharpened. But the roast is never cut. As Socrates points out in the *Euthydemus*, such exercises are really "the sport of the sciences. Even though one were to learn many, or even all of such tricks, one would be not a whit the wiser as to the true state of the matters in hand."⁴⁶

The only important result of this methodological narcissism is an uncritical application of the principles of identity and contradiction, which, if consistently carried out, would eliminate change and resolve everything into "logical atoms," or "impressions," as in Hume. Whether they are called "sense-contents,"⁴⁷ or "Gegenstände,"⁴⁸ the result is the same. The world of becoming is annihilated at one stroke. Logical positivists continue to speak; as all men must, of change, potentiality, and future time. But one wonders how such language is to be reconciled with their impoverished ontology, according to which each hypostatized "fact" is either present or not present. As Plato remarked, "the complete separation of each thing from the rest is the utterly final obliteration of all discourse."⁴⁹ One looks in vain through the whole positivistic

⁴⁶ 278 b.

⁴⁷ Cf. A. J. Ayer, *Language, Truth and Logic* (New York: Oxford University Press, 1936), p. 189.

⁴⁸ "Logical units" as Wittgenstein says — "können nicht zusammengesetzt sein," *Tractatus Logico-Philosophicus*, 2. 021.

⁴⁹ *Soph.* 259 e.

literature for any critical attempt to deal with the fundamental philosophical *fact* of change. To deny this empirical fact without careful examination is to indulge in a species of subjective dogmatism which makes the speculations of transcendental idealism seem soberly "empirical" in comparison.

This tendency to ignore the ontological structure of change is, in fact, characteristic of most contemporary schools. The technical foundation for this neglect was laid down by Descartes, at the beginning of the modern period, in his anti-scholastic definition of motion as a mode or *quality*.⁵⁰ In this he was followed by the whole "empirical" tradition, including Locke,⁵¹ Berkeley,⁵² and Hume.⁵³ In spite of the central role played by this concept in the thought of Plato,⁵⁴ as indeed in the whole history of western philosophy up to the time of Descartes, and in spite of the fact that it thoroughly permeates all intelligible speech, potency is generally slurred over by present-day schools as an "Aristotelian" technicality. Change (i.e., the empirical world) then becomes unintelligible, and is either denied by the logically-minded (cf. McTaggart), or apotheosized by anti-intellectualists (cf. Bergson). In a world of fixed, de-potentialized entities, interaction or change must be regarded, so far as it is regarded at all, as a distortion or relativization of the one by the other. This neglect of change, and its hierarchical or causal nature, makes it impossible to recognize that world-structure of becoming within which nature (*φύσις*) and man (*νόμος*)⁵⁵ both exist at different ontological levels.

This failure to recognize the true nature of causation as a determination of the potential by the actual, with its correla-

⁵⁰ Adeo ut motus & quies nihil aliud in eo sint, quam duo diversi modi. *Princ. Phil.* (Adam & Tannery), viii, 55.

⁵¹ *Essay* (Fraser) I, 170.

⁵² *Princ. Sec. ix*; *Dialogues* (Everyman), p. 222, *et passim*.

⁵³ "To begin with the examination of motion, 't is evident this is a quality. . . ." *Treatise*, Bk. I, Pt. iv (Selby-Bigge), p. 155.

⁵⁴ Cf. *Soph.* 247 e, for example, where *δύναμις* is suggested, over against idealism and materialism which ignore it, as a definition of being; and *Phaedrus* 270 d.

⁵⁵ Cf. Huxley's two essays on *Evolution and Ethics* for a non-epistemological statement, in modern terms, of this ancient, sophistic thesis: man *vs.* nature.

tive relativization of agent and patient, only prepares the way for materialism or evolutionism. In their mutual distortion of one another, the patient seems to have an advantage, for the matter, *out of which* a particular thing becomes, obviously precedes that particular thing.⁵⁶ Hence, through neglect of the formal or causal order, we are easily led to an evolutionism which maintains that "new" structures simply "emerge" from a previously unstructuralized matter. So far as causation is recognized at all, it is viewed as an indeterminate *élan*, or *nisus*, identified with the matter, and moving up "from behind"⁵⁷ to "produce" its passive "effect." In spite of Hume's destructive criticism of this Cartesian conception of causation,⁵⁸ and the utterly unempirical and really self-contradictory notion of a self-evolving universe, it is clearly discernible in contemporary versions of "emergent evolution" and "evolutionary naturalism." Materialism is always the *terminus ad quem* of sophistry.

As man misunderstands the universe, so does he misunderstand himself. As "exact" logical method has first dematerialized and then deformed nature, just so it has first dematerialized and then deformed man. The dynamic anthropology of ancient times was replaced in post-Cartesian philosophy by a static or relativistic dualism of mind and body. Man was no longer held to be a living, changing body, whose various potentialities and capacities were qualified or brought into unity by a directing rational form. Mind and body were depotentialized into two separate substances, lying side by side. The change or interaction between them had to be considered as a distortion of the one by the other (interactionism), or even more abstractly as the persistence of a "relation" (parallelism). In either case, the two were placed on the same ontological level as hypostatized entities, and man, as a unified being, the realization of an identical form in potential matter, became unintelligible.

⁵⁶ Cf. *Meta.* 1049 b 19.

⁵⁷ Cf. Descartes (Adam & Tannery), VII, 240, 6-8; also p. 108, 10.

⁵⁸ Cf. *Treatise*, Bk. I, Sec. XIV, p. 155, where Hume points out that cause, as he understands it, always *precedes* the effect.

The anthropological materialism to which this relativism must lead is certainly not hard to discern on the contemporary horizon. Reason, indeed, is commonly regarded as a tool or "instrument," useful in achieving the ends determined by instinct, desire, or other phases of man's material nature. As in the common sense of Plato's own day,⁵⁹ the supreme source of evil is sought elsewhere than in the misuse of understanding. Subjectivism reigns almost unchallenged in ethics, and intrudes even into the precincts of formal logic, especially via the fashionable concept of "postulation." Education without rational guidance sinks under the sway of politics where blind urges to power and expansion on the part of properly subordinate or material forces seem to have broken loose from all rational or formal restraint and now blindly "dictate" from behind.⁶⁰ It is most tempting to dwell upon these manifestations of sophistry in our own time. But no reader even remotely familiar with the contemporary philosophical scene will have difficulty in filling in this brief sketch with adequate detail. We must turn now to a final consideration of possible remedies for psychologism.

V. THE REMEDY FOR PSYCHOLOGISM

If the preceding analysis is correct, psychologism, or the denial of rational autonomy, is only one phase of a complex structure of logical and metaphysical distortion having its primary source in an initial misuse of reason itself. It will do no good merely to *assert* the autonomy of reason, if we proceed at once to misuse it again. The result will be simply another collapse into psychologism, as is perhaps evidenced by the case of Husserl himself. In the *Logical Investigations*, he definitely includes *Transcendentalpsychologie* and *formaler Idealismus* within the scope of his critique,⁶¹ but in his own later writings he himself seems to fall into the ethereal, but clearly marked, psychologism of the "transcendental or phenomenological

⁵⁹ *Prot.* 352 b.

⁶⁰ This materialization of Politics is clearly described in the *Gorgias* (see especially 515 ff.) as a by-product of "sophistry."

⁶¹ Page 123.

ego.”⁶² This is because Husserl saw only the relatively superficial logical “contradictions” of psychologism, without penetrating to their deeper ontological roots.

As we have noted, Plato pointed out the contradictions of relativism, in his criticism of Protagoras,⁶³ but he also saw that these were only the surface manifestations of a far more fundamental ontological confusion. Sophistry is rooted *psychologically* in an exaggerated preoccupation with questions of methodology, whereby the act of intention is emphasized at the expense of that which is intended. But it is more deeply rooted *ontologically* in the uncritical application of “logic” to being in such a way as to exclude potency, becoming, and all forms of existence intermediate *between* pure being and nothing (i.e., the whole content of what is directly knowable by us). “Reality” is thus removed to a convenient distance, and the way is prepared for sophistic constructions which fail to recognize the dynamic unity of the world, within the sphere of a single formal or causal agency. Human nature is similarly divided into hypostatized parts which can do no more than relativize or neutralize one another. Materialism then looms as the only “empirical” alternative. Hence reason loses its autonomy, and the various “contradictions” of relativism arise.

Any attempt to catch this “many-sided” creature with one hand alone⁶⁴ is bound to fail. Husserl’s effort to build up a *reine Logik*,⁶⁵ independent of ontology, leads only to a new type of psychologism more dangerous than before.⁶⁶ Plato saw clearly that the only remedy lay in a return to the problem of Parmenides, though not to his idealist solution. We cannot hope to avoid sophistry until we apprehend something of the structure of change, and the relation of logic to change. Only thus may we come to understand the causal unity of the world,

⁶² Cf. *Méditations Cartésiennes*, particularly 1st Meditation, pp. 6–23.

⁶³ *Theaet.* 170 c ff.

⁶⁴ *Soph.* 226 a 7–8.

⁶⁵ Cf. *Log. Unt.*, vol. II.

⁶⁶ The anti-ontological tendencies of Husserl have been to some extent overcome in Heidegger’s *Sein und Zeit*, and in certain phenomenological studies of classic philosophy, for example, W. Bröcker’s *Aristoteles*.

and the rational unity of man. The ontology of change lies at the very threshold of philosophy. If we seek to evade it by idealism (leaving out matter), or by materialism (leaving out form), in either case we close our eyes to the only reality directly accessible to our investigation. This reality cannot be regarded as a pure essence and assigned a stable "place" (*χώρα*). It is not so much *in place* as *in genesis*,⁶⁷ and therefore involves both form and matter, though *rather* form than matter. When we attempt to justify our neglect of matter by the various pretexts of "exactitude" and "logical principles," maintaining with Protagoras that a thing either is or is not, we are simply preparing the way for materialism and the abdication of philosophy. The hydra-headed monster of sophistry is always ready, and eager to jump into its place. It leads us ultimately to commit subjectively a dualistic dismemberment of the cosmos (man *vs.* nature), a derationalization of man, and a materialization of concrete ethics and politics.

⁶⁷ ἐν γένεσει *Theat.* 153 c 2.

THE IDEAL OF A PRESUPPOSITIONLESS PHILOSOPHY

Marvin Farber

I. THE IDEAL OF PRESUPPOSITIONLESSNESS

THE CLAIM of presuppositionlessness has been made at various times, and has been held up as an ideal. In the words of Shadworth Hodgson,¹ "The philosophical problem is to find the means of philosophizing without making assumptions." The attempt to achieve a presuppositionless beginning of philosophy occurred in various ways. One way was to base philosophy upon one ultimate principle. But it is only by a process of self-deception that the philosopher can suppose that he has thereby dispensed with all assumptions. It is sufficient to recall Hegel's notion of the aseity of spirit as an example of the tradition. But Hegel's use of the dialectic method was certainly not presuppositionless. In fact, the principle of presuppositionlessness has been called the greatest presupposition.

The principle of the aseity of spirit is at the basis of idealism. In his discussion of absolute idealism, Feuerbach pointed out that this really amounted to the restoration of a divine being to a post of honor. The materialist, of one type or another, endeavors to account for spirit either analytically, causally, or historically. The idealist is compelled to argue for the absoluteness of spirit, which is as little accounted for as is the impersonal God of modern religion. This is a "substantive" assumption. It may take the form of an absolute consciousness, a transcendental ego, or an all-embracing mind. Leibniz accounted for his spiritual monads by an act of divine creation; and the divine being was provided by bad logic. The cognitive predicament which has been used to support idealism does not

¹ In a letter to William James, in 1882. Cf. R. B. Perry, *The Thought and Character of William James* (Boston, 1935), I, 623.

account for spirit. It is rather a way of rendering plausible the necessity of the substantive assumption, which is to be taken as absolute.

Empiricism also aimed at presuppositionlessness, using particular facts and observations as the source of knowledge. It was effective as a weapon against authoritarian beliefs and rationalistic dogmas. But the strict application of the method of empiricism, which would mean restriction to what is given in sensory experience, would be inadequate for purposes both of science and philosophy. That it actually does make use of assumptions is well known. These include the recognition of principles transcending actual and even possible experience, and involving the use of conceptual devices.

Husserl chose an alternative to psychological atomism. He adopted the descriptive method, but made it more complete by attempting to do full justice to the essential structure of experience and its objects; and he sought to clarify all principles and to "constitute" all things on the basis of "pure consciousness," a realm purged of all beliefs in transcendent existence. There were to be no presuppositions, at least in the ordinary sense of the term. Radicalism of method was the aim of Husserl's phenomenological investigations from their beginning. His original studies in the theory of knowledge were made to conform to the ideal of presuppositionlessness, which was derived from the earlier philosophical writings of the 1880's, his immediate philosophical background. It is proposed in this paper to consider the meaning of this ideal, which requires the distinction of the various meanings of "presupposition"; the meaning such an ideal may have for logic and the theory of knowledge; and finally the question of the foundation of phenomenology itself.

II. THE MEANING OF "PRESUPPOSITION"

The term "presupposition" is highly ambiguous. Literally it means "posited as holding or as existing in advance." Because of its many uses the term must be interpreted in a twofold manner, having regard to existence as well as to thought. In

its broadest meaning it refers to any kind of supposition or assumption,² such as a material or ideal domain, a realm of existence, a process of experience, or a system of knowledge. It may also be taken to refer to formal principles, either in the sense of arbitrary assumptions or of necessary logical principles.

The following classification of types of presupposition will be helpful. (a) There are material presuppositions, which are either physical in their reference, or relate to domains of abstract things. In the world of experience, for example, the continuity of existence in time, the independence of existence with regard to cognition, causal uniformity, and infinite extension in a *macro* as well as in a *micro* respect, are generally considered to be basic presuppositions. (b) Mention is often made of cognitive presuppositions, such as the reliability of perception and memory, and the validity of knowledge. These should not be treated as assumptions, however, but as results to be achieved. Our ability to know reality truly does not have to be assumed if all known evidence overwhelmingly verifies it. (c) There are formal assumptions in special systems. The postulational method is a practical matter, and is employed because of human limitations and purposes. In the nature of the case the systems of knowledge could not be dealt with actually as simple wholes. The distinction between assumptions and deductions is a response to the problem of the statement of knowledge, which admits of alternatives, and of the deductive demonstration of propositions. No one set of propositions could be singled out as the necessary foundation of a system. This is different from (d) the principles of logic, which are peculiarly fundamental and which do not admit of alternatives, although they may be defined in different ways. Thus they may be taken to apply to the infinite system of all conceivable propositions, or only to those which may be verified or constructed. For a completely formal or "realistic" logic, they apply to the entire structure of knowledge and are requirements which are imposed upon any systems or parts of knowledge. The question of just which principles are to serve as postulates of logic is not different from the case of the special

² Cf. Husserl, *Ideas*, p. 455.

systems mentioned in (c), for the system of logic has the properties of a special system. It merely happens that its structure as a system is determined by its own laws. There are equivalent alternative postulate sets for logic; but these are to be distinguished from alternative versions of logical principles, such as the principle of the excluded middle, with regard to their range of application, as illustrated by intuitionism and formalism. The cherished "gilt-edged" principles of the traditional logic, the "laws of thought," may appear as theorems in the system of logic. They are no more necessary than any other logical principles. That is not to imply, however, that all sets of logical propositions are on the same level as far as deductive power is concerned. In this sense, "logically prior" may be taken to mean "deductively more powerful."³

Other possible meanings of the term "presupposition" should be mentioned for completeness. These include motivation, influences, significance for society and history, as well as beliefs. According to Brentano,⁴ for example, the term "presuppositionless" meant "free from prejudice" or from prejudgments. The requirement that the cultural sciences should proceed presuppositionlessly was understood to mean freedom from world-view assumptions.⁵ Motives, as one kind of presupposition, were eliminated by Husserl in his use of the phenomenological method;⁶ or at least only phenomenological motives were allowed. There were to be no motives derived from the natural world, or from any non-phenomenological realm, any more than there were to be prejudgments. The attempt to dispense with presuppositions in all meanings of the term requires the disregard, or the suspension, of all traditional formal and non-formal assumptions. It must lead to a mind

³ Cf. C. I. Lewis' discussion of presuppositions in *Mind and the World-Order*, pp. 200 ff., 415 ff.

⁴ In his anonymous article, "Über Voraussetzungslose Forschung" (1901), which deals with freedom of thought and investigation. Cf. F. Brentano, *Die Vier Phasen der Philosophie und ihr augenblicklicher Stand* (Leipzig, 1926), pp. 137-144.

⁵ Cf. E. Spranger, "Der Sinn der Voraussetzungslosigkeit in den Geisteswissenschaften," *Sitzungsberichte der Preussischen Akademie der Wissenschaften* (Berlin, 1929), pp. 2-30.

⁶ Cf. E. Fink, "Die phänomenologische Philosophie Edmund Husserls in der gegenwärtigen Kritik," *Kant-Studien* (Berlin, 1933).

divested not only of all bodiliness, but also of all real and ideal conditions of experience and thought. It would seem that solipsism is the unavoidable beginning. If one's quest for ultimate understanding leads him to such a basis, he must be prepared to pass beyond solipsism. The phenomenological method undertakes to meet this problem.

III. THE CONCEPTION OF A PRESUPPOSITIONLESS THEORY OF KNOWLEDGE

The need for the clarification of logic by the theory of knowledge was urged by Husserl at the beginning of the century, a task which led him to examine the fundamental ideas of the theory of knowledge as well, and to set up the ideal of a philosophical beginning without presuppositions. As he expressed it later, this meant that pure logic was to be "bracketed" along with everything else. The method of reflective analysis, as developed by him, was intended to make possible a final foundation of logic and philosophy.

The requirement that the theory of knowledge be free from presuppositions was prominent in the literature of Husserl's older contemporaries. In his essay on the theory of knowledge as a presuppositionless science, Volkelt⁷ pointed out that all sciences except epistemology presuppose the possibility of knowledge. In his view, epistemology must precede all other sciences, and may not make logical, psychological, or metaphysical assumptions. In order to make an indubitable beginning and to avoid circularity, he began with his own consciousness. Since he restricted himself to that which is absolutely self-evident, there could be no talk of other minds, or of general propositions which are ordinarily assumed as principles. Volkelt's indubitable sphere of consciousness proved to be devoid of promise, for he declared that nothing of regularity

⁷ In 1881 Volkelt expressed the ideal of presuppositionlessness in "Die Aufgabe und die Fundamentalschwierigkeit der Erkenntnistheorie als einer voraussetzungslosen Wissenschaft," a paper published in the *Philosophische Monatshefte*, xvii, 513-541. Cf. also Volkelt's *Erfahrung und Denken* (Hamburg and Leipzig, 1886); *Gewissheit und Wahrheit* (München, 1918).

or law or connection could be discovered in it. He was unable to give a satisfactory answer to the question as to how the epistemologist is to get out of the sphere of his own consciousness. His program for epistemology was intended to make clear the extent of knowing and the degrees of certainty.

As expressed in his *Certainty and Truth*, the requirement of presuppositionlessness means that the theory of knowledge be begun by means of a proposition to which immediate certainty is attached without restriction, and which is therefore self-evident. Even logic may not form the basis of epistemology. Propositions derived from logic or psychology must be gained by means of epistemology. They must either be certain in themselves, or possess certainty by virtue of being inferences from other already established propositions, which ultimately are known to be self-evident. Thus knowledge belonging to other sciences can be brought within the framework of epistemology. Volkelt's proposal to dispense with the assumption of the independent validity of mathematics and science clearly shows his conception of the radical ideal of critically examining all knowledge and belief. The truth of science is presupposed in the investigation of the "transcendental" basis of scientific knowledge, and hence such a theory of knowledge cannot be fundamental. The "transcendental presupposition" was made by Kant, Windelband, and others. As distinguished from them, Volkelt attempted to make epistemology presuppositionless, in accordance with its definition as the science of the validity of knowledge, or of the possibility of knowledge. To assume the validity of knowledge for being would reduce the entire undertaking to a comedy, as he stated it. Volkelt's "epistemological epoché" corresponds to Husserl's phenomenological suspension of judgment and belief, but his belief that he had fulfilled by epistemology what Husserl requires for phenomenology can only be justified if one mistakes the will for the deed. Recognition of the general programmatic nature of a presuppositionless theory of knowledge designed to serve as a "first philosophy" is not equivalent to the rigorous formulation of the necessary method. Volkelt's type of analysis failed to offer even a remote equivalent of the elab-

orate and painstaking descriptive analyses which make up the real content of phenomenology.

It will be sufficient, finally, to mention Schuppe's and Rehmke's views as illustrations of the pre-phenomenological treatment of the problem. Schuppe⁸ agreed with Volkelt in regarding epistemology as the fundamental science. He interpreted "presuppositionlessness" as meaning that only those presuppositions are made without which the undertaking itself would be devoid of meaning and content. These include a conscious being, the doubt of the epistemologist, a concept of truth and error, and the required activity of thought. Schuppe had also tried to follow the line of Descartes' method of doubt, but was no more successful than Volkelt in finding a way which leads to something outside of the thinking consciousness. He did no more than pose the problem.

By the presuppositionlessness of a science Rehmke⁹ understood the requirement that no determinations concerning its particular subject-matter are to be accepted in advance of its investigation. That would be to make prejudgments. Only the fundamental science of philosophy is completely free from prejudgments. Historical science, for example, assumes "consciousness simply" or "man simply" as determinately given. Rehmke emphasized the difference between presuppositionlessness and prejudgmentlessness. For science, only the latter concept applies, for a presuppositionless science would be impossible. That holds also for the fundamental science, which presupposes "givenness simply" and nothing further. Apart from that, it places everything in question.

A survey of the relevant literature shows that there is a vast difference between the general aim to achieve a philosophy as a fundamental science and the actual elaboration of a method to realize it. The time was ripe to provide the latter.

⁸ W. Schuppe, "Zur 'voraussetzungslosen' Erkenntnistheorie," *Philosophische Monatshefte*, xviii (1882), 375-386.

⁹ Johannes Rehmke, *Philosophie als Grundwissenschaft* (Leipzig, 1910), pp. 40 ff. Cf. also his *Anmerkungen zur Grundwissenschaft* (Leipzig, 1913).

IV. FORMAL REASONING AND THE REFLEXIVE PREDICAMENT

The problem of the "founding" of logic was of central importance for Husserl, and provided the initial motivation for the development of a universal phenomenological method. It will therefore be well to consider first the question of the self-sufficiency of formal reasoning.

In the usual case, there are characteristic concepts and postulates which distinguish a special system of knowledge. The ideal of deduction is the construction of all knowledge homogeneously, which means in terms of one basis. Basic conceptual unity has been achieved in principle in formal science; the fundamental concepts of logic have been shown to be adequate for the construction of mathematical concepts. The former, however, stand in need of further investigation.

The attempt to determine the fundamental principles of logic involves the question of the circularity of formal reasoning. The latter is circular for the same reason that all terms cannot be defined; i.e., universal demonstration is as impossible as universal definition, *as a matter of presentation*. It is impossible to prove all propositions, for there must always be an assumed basis for demonstration. This restriction refers exclusively to the medium of reasoning and not to the particular nature of the propositions. It cannot be said that any particular significant proposition is incapable of proof, even though it is true that all propositions are not thus capable of proof, at least within deduction. In a well-founded system, significant propositions, or propositions which are proper to the given system, are essentially either true or false. There is no inherent reason why they may not be proved to be one or the other. The question of our finite, human ability to prove or disprove propositions does not enter into the problem of circularity. That concerns the foundation of the principles of logic. Assumptions must be made in all reasoning, including reasoning in logic itself. The attempt to demonstrate any of the principles of logic requires the use of premises, and either a part of logic is involved therewith, or another and

perhaps larger system of propositions. The essence of the method of deduction is really in question here.

The aim of formal reasoning is to operate with purely formal structures as far as possible. The sharp delimitation of formal logic is necessary for the development of the science. All philosophical or non-formal considerations must therefore be eliminated. Husserl's judgment that the traditional logic is grounded in the world of mundane existence does not hold for symbolic logic, which is kept as free from all non-formal elements as possible. But it does presuppose a possible world for its realization. The importance and significance of epistemological, psychological, and ontological questions pertaining to logic cannot be denied, for logic is admittedly not a self-sufficient discipline. Deductive reasoning involves cognitive operations, if not actually, then possibly, "as though" such processes were carried out. This applies not only to such operations as substitution and inference, but also to the process of idealization, which provides the ideal objects and relations of logic. It is becoming increasingly clear that logic requires the preparatory analysis of meaning and the concept of reality. The reference to something objective presents a problem for which the analysis of meaning and symbolism is necessary. The fundamental principles of knowledge which govern truth and meaning apply to all systems, either as wholes or to their constituent propositions. The crucial question for a presuppositionless philosophy, as far as deduction is concerned, is that of the possibility of examining the grounds and processes of knowledge in such a way that the fundamental concepts and principles are evident, as a prelogical undertaking. In short, there are presuppositions of logic which concern its cognitive aspects, endow it with the element and criteria of meaning, thus constituting its subject-matter, and provide for its reference to an objective realm.

The self-foundation of formal logic must be supplemented by another dimension of investigation. The phenomenological treatment of logic has the function of clarifying its basic ideas, and also of providing its very elements by means of the descriptive analysis of such concepts as judgment and meaning.

The concepts of the understanding, and hence all of the ideas used on the higher level of formal reasoning, are traced to their "origin" in pre-predicative experience.¹⁰ This procedure is designated "genetic," not in an empirical, factual, or historical sense, but in the sense of the intentional reference of all ideas or principles to their "original" evidences — in the last analysis, to the direct evidence of individuals. The element of historical time is simply irrelevant to such analysis. Husserl regarded the domain of the logical as being much greater than in the traditional logic. Logical "contribution" was found by him to be present on all levels of experience, and not only on the comparatively high level on which the traditional logic begins in its analysis. But he held that it is on the lower levels that the concealed presuppositions are to be found, on the basis of which the evidences of the logician on a higher level are to be understood.

The logocentric predicament is incurred, as Sheffer has pointed out,¹¹ because of the necessity of presupposing and employing logic in order to give an account of logic. This difficulty is met by attempting to make explicit that which is assumed to be valid, and by a kind of formal epoché, which makes it possible to distinguish sharply between the study of formal structure and its interpretation in terms of any kind of objectivity, and also between both of these and the study of the conditions that make considerations of notation and interpretation significant and valid. Even if the logocentric predicament could be avoided by means of a purely intuitive method, another predicament would take its place on the epistemological level. In order to investigate cognition, it is necessary to make use of knowledge. This is sufficiently justified in the course of the investigation, but it must nevertheless be regarded as an assumption for the initial purpose of epistemological analysis. That is unavoidable because of the essentially reflexive character of philosophic inquiry. Corresponding to the formal epoché, in which abstraction is made from all

¹⁰ In the language of Husserl's *Erfahrung und Urteil*, edited by L. Landgrebe (Prague, 1939).

¹¹ Cf. *Isis*, VIII (1926), 226 ff.

concrete, sensory meanings, but more sweeping in its extent, is the epistemological epoché, which suspends all logical, psychological, and ontological principles. That is necessary for the thoroughgoing descriptive analysis of cognition. The degree of clarification is greatly increased thereby, for lower levels of cognition may be investigated by means of "genetic" analyses. As in the case of the logocentric predicament, there is no insurmountable difficulty, as long as all tentatively assumed elements are made explicit.

V. THE PROGRAM OF PHENOMENOLOGY

There was recognition of the ideal of presuppositionlessness as applied to logic and the theory of knowledge in the *Logical Investigations*,¹² and with regard to philosophy as a whole in the *Logos* essay, "Philosophy as a Rigorous Science." The mechanism for this ideal was first provided by the method of phenomenological reduction, which was systematically presented in the *Ideas* and *Cartesian Meditations*.

The phenomenological studies in the *Logical Investigations* were preparatory in character. From Husserl's statement that a scientific investigation in the theory of knowledge must satisfy the requirement of presuppositionlessness, it can be inferred that this ideal was recognized as the acid test of a truly critical philosophy. In his view this meant the strict exclusion of all assertions which could not be completely realized phenomenologically, i.e., in terms of intuitive experience alone, and subject to well-defined conditions. The "theory" to be achieved is simply the reflective and evident understanding of the nature of thinking and knowing in general. Acts of thought may refer to transcendent or even to non-existent and impossible objects. But the meaning of such experiences is clarified purely on the basis of the experience. The question regarding the justification of the assumption of "psychical" and "physical" realities that are transcendent of consciousness is not proper to the pure theory of knowledge. The question of the existence and nature of the "external world" is metaphysical.

¹² *Logische Untersuchungen* (Halle, 1901), II, 19 ff.

It is true that epistemology, as the general explanation of the ideal essence and valid meaning of thought, considers the question of the possibility of knowing "real" objects or things, which are essentially transcendent to the experiences by which they are known, and the nature of the norms of such knowledge. But it is not concerned with the empirical question, whether human beings can actually gain such knowledge on the basis of the factual data given to them.

As Husserl regarded it, epistemology is really not a theory at all; it is not a science in the pregnant sense of a unity of theoretical explanation. Its aim is not the construction of deductive theories. This is shown by the most general theory of knowledge which Husserl described in the *Prolegomena*¹³ as the philosophical supplement to the pure mathesis, which comprises all *a priori* categorial knowledge in the form of systematic theories. The "formal" theory of knowledge, which explains this theory of theories, is prior to all empirical theory; hence it is prior to all explanatory real science, to physical science and psychology, and also to metaphysics. It aims, not to explain the factual occurrence in objective nature in a psychological or psychophysical sense, but rather to clarify the idea of knowledge with respect to its constitutive elements and laws. It is interested in understanding the ideal meaning of the connections of experience, in which the objectivity of knowledge is documented, and seeks to bring the pure forms and laws of knowledge to clarity and distinctness by recourse to adequately fulfilled intuition. This clarification occurs within the framework of a phenomenology of knowledge which is concerned with the essential structures of the "pure" experiences and their meanings. There is no assertion concerning real existence, and hence no use can be made of premises drawn from metaphysical or natural science, especially psychology. It is this metaphysical, natural scientific, psychological presuppositionlessness, and no other kind, which Husserl proposed to realize at this time. If reference was made to actual languages and the merely communicative meaning of some of their forms of expression, he did not overstep the

¹³ *Log. Unt.*, vol. I.

limits of his inquiry, for the analyses presented would retain their meaning and epistemological value regardless of whether there are actually languages and intercourse between people, or whether there are people and a world of nature. The analyses would hold even if everything existed only in the imagination, or as a possibility. The only premises recognized by Husserl are those which meet the requirement of an adequate phenomenological justification, which means fulfillment through evidence in the strictest sense of the term.

The conception of philosophy advanced in his *Logos* essay, in which philosophy is portrayed as a discipline that provides the sciences with a new dimension and a final completion, indicates the universal scope of Husserl's analysis. He emphasized the importance of the radical criticism of the naturalistic philosophy, urging a positive critique of its foundations and methods. The term "radical" is a popular one in phenomenology. Negatively it spells freedom from assumptions or beliefs of any kind, and positively it signifies the insightful establishment of all elements of knowledge. In Husserl's view, the natural sciences are "naïve" with respect to their points of departure.¹⁴ For them, nature is "simply there," and things *are* in infinite space and time; they are "pre-given." The same holds for things from the standpoint of psychology. Every psychological judgment posits physical nature as existent, whether explicitly or not. It follows that if physical natural science cannot be philosophy, then neither can psychology, which is based upon it. The "naïveté" with which nature is regarded as given for natural science is "immortal" in it, as Husserl expressed it. He recognized the fact that natural science is very critical in its way, which is satisfactory as long as we remain in natural science and think with its attitude. But, he contended, a different critique of experience is both possible and necessary, a critique which places all experience in question and, along with it, experiential-scientific thinking. The proposed critique requires that all scientific and pre-scientific assertions concerning nature, or all statements which imply that things are posited as existent in space,

¹⁴ *Logos*, I, 298.

time, causal connection, etc., must be eliminated on principle. This procedure was extended to include the elimination of the existence of the investigator himself, of his psychical faculties, and the like.

The clarification of consciousness and of all forms of objectivity is undertaken by phenomenology, and its procedure is supposed to be radical in the sense that no existence is assumed. This is made possible by essential intuition, in which an essence is grasped without positing any existence. Essences can be "seen" just as immediately as tones can be heard; for example, the essence "tone," or the essences "thing-appearance," "visible thing," "judgment," etc. Pure phenomenology was defined by Husserl (in the *Logos* essay) as a science which investigates essences alone, and not as concerned with the investigation of existence, or with "self-observation." The knowledge of essences and of essential relations was held to provide all that is necessary for the clarification of empirical knowledge and of all knowledge. Such knowledge was regarded as being prior to empirical knowledge, in the sense that the essential knowledge of the psychical is presupposed by all psychological knowledge.

If the procedure is to be thoroughly radical, no "pre-giveness" may be allowed; nothing is to be handed down for a beginning.¹⁵ Inasmuch as philosophy is defined as being essentially the science of true beginnings or origins, the science of the radical must be required to be radical in its procedure in every respect. The method of philosophy is in short a method of direct intuition. The phenomenological grasping of essences opens up an endless field for work, and provides knowledge without any indirect symbolism and mathematical methods, without the apparatus of inference and proof. This appears to be the most rigorous type of knowledge.

Husserl's motives were thus given a vigorous expression, and this early account has the advantage of clearly formulating the general program which his later work has extended and deepened. The *Ideas* presented a much more detailed account of this program, and introduced the method and technique of

¹⁵ *Logos*, I, 340.

phenomenological reduction. Characteristic of the work is the orientation with respect to Descartes, in particular the method of doubt. In Descartes' hands the method was nugatory. As employed in phenomenology, it is of aid in determining the ultimate grounds of knowledge, and also in providing a universal plane of experience and knowledge.

The phenomenological method is not only a possible method for the theory of knowledge, but is one which necessarily must be developed and carried through consciously for the understanding of the nature and structure of knowledge. In fact, it has been tacitly assumed and used in part in the past. It is to Husserl's credit that he was able to elaborate it systematically as a descriptive method applied to pure experience, i.e., independent of the thesis or belief in spatio-temporal "natural existence," but including that realm in its scope. It would be a misunderstanding of the method to expect it to derive existence by means of a device which abstracts from existence. The positive program of phenomenology is devoted to the task of the "constitution" of the world of nature and culture. Interpreted properly as a method of construction, in accordance with the descriptive ideal of phenomenology, the procedure is a legitimate part of the theory of science or of knowledge. Husserl spoke¹⁶ of the "constitution of objectivity as referred to its subjective source" as one phase of his inquiry. This indicates the importance of determining the scope of constitutive phenomenology. Does it comprise reality, or possible reality, throughout; or is it concerned merely with the constitution of objectivity in this relationship to subjectivity, which is of course a possible and defensible theme? The latter is alone meaningful for phenomenology. Care should be taken not to interpret constitution as a creative activity in a metaphysical sense, if the method is to be kept free from dogma. This is not to suggest that there is no creative element in experience. The examination of the creative performances of the understanding, for example, is also a matter for accurate descriptive analysis.¹⁷

¹⁶ *Ideas*, p. 234.

¹⁷ Cf. *Erfahrung und Urteil*, part II.

VI. THE FOUNDATION OF PHENOMENOLOGY

The question as to whether anything is assumed in phenomenology must now be considered. Take, for example, Husserl's statement,¹⁸ that "the stream of experience cannot begin and end." The same could be said of consciousness, in his view. The consciousness or experience of individual beings begins and ends. Which consciousness or stream of experience may be meant? It can only be an absolute process, the phenomenological status of which must then be established. And what shall be said of the permanent, objective validity of essential insight, or of the uniformity of the constitutive process itself, the fixed, temporal structure of consciousness, the validity of memory, and the egos of various types of construction? These must be justified by phenomenological analysis.

The bulk of Husserl's discussions of method shows that he does not acknowledge the use of assumed elements and constructions. They have no place in a philosophy conceived as a rigorous science with a final foundation.¹⁹ No alleged self-evident elements may function as an unquestioned ground of knowledge in a science which is charged with final self-responsibility. Of course, something may not be unquestioned, and may nevertheless be assumed, at least provisionally. Husserl's ideal of philosophy was held to be realizable in an infinite historical process. The radical reflection which is required examines systematically "the ultimate thinkable presuppositions" of knowledge. The reflective inquiry leads first to the "universal subjective being and life" which is presupposed as pre-scientific in all theorizing, and then proceeds to the "transcendental subjectivity," which is regarded as the primal source of all endowment of meaning and verification of being. Husserl called attention to the new meaning of the expression "transcendental subjectivity" the retention of which was an unhappy circumstance. This rigorous science of

¹⁸ *Ideas*, p. 236.

¹⁹ Cf. Husserl, "Nachwort zu meinen Ideen zu einer reinen Phänomenologie," *Jahrbuch für Philosophie und phänomenologische Forschung*, XI (1930), 549-570. This is Husserl's introduction to the English edition of the *Ideas*, plus a preface of about three pages, to which reference is made here.

philosophy was held to be a universal and absolutely founding discipline, and there was no question about its being advanced as something essentially new. Husserl warned against transcendental anthropologism and psychologism as dangers besetting those who fail to reach the real ground of philosophy by means of the phenomenological reduction. If the procedure is thoroughgoing, no elements of an empirical or *a priori* anthropology are retained.

In the continuation of his description of the phenomenological method²⁰ Husserl distinguished between ordinary presuppositions of a positive kind and that which is presupposed implicitly in all presupposing and in all questioning and answering. The latter was held to exist necessarily, and to continue to exist, and was not acknowledged to be an assumption. It was regarded rather as the first thing to be freely and expressly posited, and that "with a self-evidence which precedes all conceivable instances of self-evidence, and is contained implicitly in them all."

That the repeated declarations concerning the presuppositionless ideal of philosophy did not refer to assumptions in every sense of the term is thus shown by Husserl's last published writings. The absolute basis which philosophy secures for itself was declared by Husserl to constitute the totality of presuppositions that can be taken for granted.²¹ This was stated more pointedly in an article on phenomenology,²² in which he wrote that the transcendental problem derives the means of its solution from an existence-stratum which it presupposes and sets beyond the reach of its inquiry. This realm was described as the bare subjectivity of consciousness in general. All knowledge was to be founded upon this basis by referring everything to the "transcendental origin." Husserl's idealistic position was clearly indicated by his thesis that all objective existence is essentially "relative," owing its nature to a unity of intention which is established according to transcendental laws.

²⁰ Cf. the author's preface to the English edition of the *Ideas*.

²¹ *Ideas*, p. 28. Cf. also Fink, "Das Problem der Phänomenologie Edmund Husserls," *Revue internationale de Philosophie*, vol. 1 (1939).

²² *Encyclopædia Britannica*, 14th ed., xvii, 701 f.

VII. SIGNIFICANCE OF THE IDEAL

The problem of presuppositions derives its prominence from the idealistic argument concerning the priority of thought to being. It is due to the cognitive approach to philosophy, i.e., beginning with the knower and his objects, which has its historical explanation. That is one line of development leading to transcendental idealism, with its *a priori* construction of thought-forms, and to transcendental phenomenology, which is designed to be the self-clarifying, constitutive basis of all knowledge. Another line of development proceeds from the "logic of the world" to abstractions or logical forms and their deductive arrangement, which gives rise to the question of the circularity of logic and the status of its fundamental principles. These were conceived by Husserl to hold unconditionally, in accordance with the "logical absolutism" of the *Logical Investigations*, a position which was given a transcendental foundation by his later logical studies. We are referred therewith to the self-foundation of phenomenology as a theory of knowledge.

It has been seen that what Husserl calls the genetic method is different from what is ordinarily understood as the naturalistic genetic method. The latter operates within the space-time framework of the actual world. For it, things have a history, and the temporal order is essential. Thus the mental development of a particular individual is traced back to the earliest formation of abstractions, or there is interest in the development from the first blurred confusion of experience to distinct ideas and the discrimination of the elements of experience. For the phenomenological genetic method, all actual, historical individuals are of no interest as such; abstraction is made from the real temporal order. An idealized meaning, for example, is traced back essentially to a simpler experience which it presupposes. Ultimately this means the experience of individuals. This is similar to the way in which remembrance as such refers back to an original perception.

This method is presuppositionless in a way that formal logic is not and cannot be, for formal logic operates on the "higher" level of idealizations. If everything is to be placed in question

and understood by recourse to primitive experience, the idealizations of logic must be accounted for. The phenomenological method, with its technique of reduction and essential analysis, is the most radical of all methods, if used correctly. The intentional analysis of the cognitive process, when restricted to cognition and its correlates as such, may well be the most critical possible beginning for philosophy.

In logic one operates with proposition-meanings and structures which represent past products of intellectual activity. There are two possible ways to go back to their "origin": first, to go back to their actual historical origination in the minds of particular thinkers; and second, to proceed from the actual matters of fact merely in order to "remake" or "constitute" them by going back to their perceptual, judgmental basis, and showing how they arise essentially. It is the latter procedure which is adopted by phenomenology. The exclusive consideration of essential structures and relations is the first step; and the phenomenological reduction makes possible the final elucidation of all elements of knowledge and experience by enabling us to get back of and to the bottom of all presuppositions. Because this means the reduction to the conscious life of an individual knower to begin with, as the basis for all later constitutive activity, and because the perception of individuals is the starting-point, this method makes possible a truly descriptive philosophy.

What is assumed at this point? Not the spatio-temporal world; none of the scientific theories which are used to interpret the world of existence; no independent or continuous existence; no other human beings; not one's own bodily existence or empirically conditioned ego; not the ideal science of pure logic, or any of the idealizations of theoretical knowledge: in short, nothing is assumed, and as a beginning there is only the self-validating cognitive experience itself. "The world" is, to be sure, "pre-given." But that region of pre-givenness, whose acknowledgement rules out the oneness of subjective idealism, plays no role in the constitutive method itself. It is used as a guiding-thread, or as a clue, just as the traditional logic is used. They are provisional presup-

positions. When constituted "originally" they are no longer presuppositions. As far as individual knowers are concerned, the constitutive process represents an infinite task.

In his *Experience and Judgment*, Husserl stated that the being of the world is not achieved through a judgmental activity, but is the presupposition of all judging. If one apprehends an object, he discerns it as having been there previously, even if he were not attending to it. Thus all existence that affects us does so on the ground of the world; it is given to us as supposed existence, and the activity of knowledge aims to test whether it is truly such as it is supposed. The world as an existent world was regarded by Husserl as being the universal passive pre-giveness of all judgmental activity, of all theoretical interest that may enter in. As Husserl maintained, however, the concept of a presupposition receives a new meaning in the radicalism of transcendental phenomenology. "The world," which was the basis of all previous philosophies, is always there for it as a domain that is already valid, just as it is in everyday life. But it is not an explicit premise. In phenomenology, an epoché is performed upon this fixed, posited being. The pre-given world is finally regarded as constituted by transcendental subjectivity. To attain to this one must proceed from the "original life-world" to the subjective "contributions" from which the latter arises. In this sense transcendental logic investigates the participation of the logical contributions of consciousness in the construction of the world.

The examination of all assumptions, including its own, is made possible by the phenomenological method, which in its complete form includes reference to historical and cultural meanings, to which may be added the inspection of the method itself with regard to its place in history and culture. There need be no narrowness; nothing need be inaccessible to a truly descriptive method. The method of intentional analysis has the additional advantage of extending the field for description. The thoroughgoing justification of this method is not accomplished at one stroke, but must be achieved progressively. That is the task of the critical self-justification of all knowledge upon the basis of the self-giveness of the objects of experience.

The ideal of presuppositionlessness that is illustrated by Husserl's actual procedure in his investigations, including his logical as well as epistemological writings in all periods of his development, requires that there be no unexamined assumptions of any kind; that there be no metaphysical or existential assumptions unless there is a special reason for explicitly positing them; and that there be no prejudgments. It properly means the explicit examination and constitutive analysis of all elements of the structure of knowledge and reality. In contributing toward that end, Husserl has made one of the most striking advances in recent philosophy.

ON THE INTENTIONALITY OF CONSCIOUSNESS

Aron Gurwitsch

THE INTENTIONALITY of consciousness may be defined as a relation which all, or at least certain, acts bear to an object. In this manner, Brentano introduced the notion into contemporary philosophy. Seeking to account for the difference between what he calls "physical phenomena" and what he calls "psychical phenomena," Brentano found, among other characteristics, that the latter are distinguished by a relation to, or a direction toward, an object.¹ This directness of "psychical phenomena" is interpreted by Brentano as their containing within themselves an "immanent" object-like entity. Although Husserl takes over Brentano's notion of intentionality, he raises some objections against this interpretation.² His examination of Brentano's conception of intentionality finally leads him to abandon it completely; but he agrees with Brentano in acknowledging the existence of a highly important class of mental facts — for which Husserl reserves the title of acts³ — which have the peculiarity of presenting the subject with an object. Experiencing an act, the subject is aware of an object, so that the act may be characterized, as Husserl does, as a *consciousness of* an object whether real or ideal, whether existent or imaginary.

This peculiarity, however, ought not to be considered as a real quality or as a real property of acts, such, for example, as intensity, which is held by many psychologists to be a real

¹ F. Brentano, *Psychologie vom empirischen Standpunkt* (ed. by O. Kraus, Leipzig, 1924), Book II, ch. 1, par. 5.

² *Logische Untersuchungen*, II, v, sec. 9-11; *Ideas*, sec. 90. Lack of space forbids us to summarize Husserl's criticism of Brentano's doctrine; some essential differences between Brentano's and Husserl's conceptions are emphasized by L. Landgrebe, "Husserl's Phänomenologie und die Motive zu ihrer Umbildung," in *Revue internationale de Philosophie*, vol. 1.

³ *Log. Unt.*, II, 378.

property common to all sense data. In fact, to ascribe to an act, under the heading of intentionality, a real quality which makes it transcend itself to seize an object belonging, as is the case in the perception of a real thing, to a universe external to the sphere of consciousness, to which the act, though endowed with the transcending quality, remains tied nevertheless — this would be to bestow on the act a magic or at least mysterious power. Conscious acts confront us with objects; experiencing such an act, the subject is aware of an object, and he is so owing to the reference the act bears in itself to the object. The objectivating function of consciousness is, however, a problem rather than a simple datum, which one could content himself to take notice of. In fact, the objectivating function involves a whole complex set of problems. Out of these we choose the most elementary, but, as we think, at the same time the most fundamental one. *To be aware of an object means that, in the present experience, one is aware of the object as being the same as that which one was aware of in the past experience, and as the same as that which one may expect to be aware of in a future experience, as the same as that which, generally speaking, one may be aware of in an indefinite number of presentative acts.* Identity in this sense is, no doubt, constitutive of objectivity (*Gegenständlichkeit*). But, even if considered on the most elementary level, the identity of objects, inasmuch as it is a conscious fact — and it is only for this reason that we have any knowledge of it and may talk of it — turns out to be an insoluble problem for the traditional conception of consciousness. We shall go on to show, if possible, that the treatment of this problem leads to a new conception of consciousness that is radically opposed to the traditional one.

I. THE PROBLEM OF IDENTITY AS STATED BY HUME

Let us consider the problem of identity in its most accentuated form, as stated by Hume concerning perceptible things.

Following Locke⁴ and Berkeley,⁵ Hume asserts "that our

⁴ Cf. Locke, *An Essay Concerning Human Understanding*, Book II, chap. XXIII, especially sec. 6 and 14.

⁵ Cf. Berkeley, *A Treatise Concerning the Principles of Human Knowledge* in *Works*, ed. by A. C. Fraser (Oxford, 1901), I, 258.

ideas of bodies are nothing but collections formed by the mind of the ideas of the several distinct sensible qualities, of which objects are composed, and which we find to have a constant union with each other.”⁶ Now the “sensible qualities” in question are identified, by Hume as well as by his predecessors, with the sensations which are produced in the mind when a perceptual act is experienced; these “sensible qualities” are taken for real elements, of which the perceptual experience is composed; consequently they pass for real elements of consciousness itself, i.e., for elements existing within consciousness. Hence the object, being composed of the same data which figure in the perceptual experience, turns out to be a real element of this experience, and to coincide with it; at any rate, the object itself is also conceived to exist within consciousness, and to be a content of it. This thesis is indeed defended by Hume. “Those very sensations, which enter by the eye or ear, are . . . the true objects . . . there is only a single existence, which I shall call indifferently *object* or *perception* . . . understanding by both of them what any common man means by a hat, or shoe, or stone, or any other impression conveyed to him by his senses.”⁷ This thesis is presented by Hume not as a result of philosophical inquiry, but as the opinion of the “vulgar,” i.e., the opinion of all of us, when, without philosophizing, we adopt the natural attitude and are concerned with any things we find in our surroundings.

Then a problem must arise. Taking up again the observation of a thing we have already observed some time ago, as, for example, shutting and opening our eyes alternately, we are provided with a set of sense data. The latter may resemble one another to a very high degree, but yet they remain distinct from one another and do not fuse, in any manner whatever, into a single one. We can enumerate these multiple sense data by means of the perceptual acts which we experience successively, and to which the data belong respectively. Nevertheless we believe — we do so as “vulgar ones” — that

⁶ Hume, *A Treatise of Human Nature*, ed. by T. H. Green and T. H. Grose (London, 1890), I, 505-506.

⁷ *Ibid.*, I, 491.

we are in the presence not of a set of objects, however much they resemble one another, but of one single object appearing as identically the same in every one of the successive experiences. In the very face of the multiplicity of sense data, the identity of the object and our belief in it must be accounted for, without forgetting that the object is conceived as a complex composed of sense data. In these terms Hume stated the problem,⁸ and the solution he adduced for it is well known.⁹ Because of the resemblance among the sense data, the mind passes so smoothly and so easily from one to another that it is scarcely aware of the transition. This resemblance puts the mind in a state similar to that in which it is when it surveys, without interruption, an unchangeable object for some time; this latter state gives rise to the idea of identity.¹⁰ Thus, on account of the double resemblance, the mind mistakes similarity for identity. Whereas there is in fact only a succession of sense data, of which none, when it has disappeared, can be brought into existence again, the imagination misleads us to believe that such data, having ceased to appear, i.e., to exist, can return as the same when the interrupted observation is taken up again. The belief in the singleness of the perceived object rests on confounding resembling, but yet distinct, sense data with identical ones.¹¹

The mere presence to the mind of sensuous data composing an object is not sufficient for giving rise to the idea of its identity. Hume is perfectly right in emphasizing that the notion of identity needs that of time.¹² This means, in the case under discussion, that the object perceived now, after opening the eyes again, is held to be the same as that which appeared before shutting the eyes. Perceiving the object, the mind must recall previous perceptions; the impressions which are now present to the mind must be attended with ideas, which, al-

⁸ *Ibid.*, I, 493: "The very image, which is present to the senses, is with us the real body; and 'tis to these interrupted images we ascribe a perfect identity."

⁹ *Ibid.*, I, 491-494.

¹⁰ We shall come back later to the identity of an object observed uninterruptedly for some time.

¹¹ Cf. Hume, *op. cit.*, p. 535.

¹² *Ibid.*, pp. 489-490.

though resembling the former at all points, differ from them, according to Hume's doctrine, with respect to force and vividness. In order to conceive identity, the mind must confront itself with a plurality of items. But as soon as it has done so, it must overlook not only the differences as to intensity, but also, and chiefly, the fact that it has presented to itself a plurality of items. Since identity consists in the illusion of holding the resembling, but distinct, items to be a single one, the function of the imagination in producing this illusion is such as to abolish the condition that is indispensable to put the imagination into function.¹³ This illusion therefore can subsist only as long as the subject is inattentive to what really happens in his mind. The contradiction, however, between the experienced succession of sense data and the irresistible propensity created by imagination to mistake them for a single and identical one is too striking to be overlooked. To disentangle itself from this contradiction, the imagination devises the further fiction of a "continued existence" ascribed to the "broken and interrupted appearances."¹⁴ But this new fiction cannot help Hume, since only in case the identity of the object, perceived after the interruption of that perceived before it, has been established may the question be raised as to the existence of the object during the interruption.

The case is the same with the identity of an object observed for some time without interruption.¹⁵ Under these circumstances, identity means "*invariableness* and *uninterruptedness* of any object, through a supposed variation of time." Variation

¹³ In the excellent analysis which J. Laporte ("Le scepticisme de Hume," in the *Revue philosophique de la France et de l'Étranger*, cxv, 1933, pp. 92-101) gives of the passages of the *Treatise* referred to here, he emphasizes the stress Hume laid on the "operation" of the mind in producing the illusion of identity. Laporte's analysis, however, renders the more obvious the contradiction upon which we insist. The operation of the mind does not consist in making something out of the materials for which this operation is employed, as is the case when objects are united into an ensemble, when they are numbered, when a perceived matter of fact enters into a judgment and undergoes categorial formation, and so on. Here, on the contrary, the operation, as it were, has to make disappear, before the mind, the materials necessary to set it going.

¹⁴ Hume, *op. cit.*, pp. 494-497. We must neglect here to examine Hume's account of continuous existence.

¹⁵ *Ibid.*, pp. 489-490.

of time implies succession and change, if not in the object in question, which is supposed to be permanent and unaltered, then in the coexistent objects. Nevertheless, the unchangeable object is imagined to participate in these changes,¹⁶ without suffering, in itself, any modification whatsoever. Again: on the one hand, succession and variation of time must not only happen in fact, but also be experienced by consciousness, for otherwise there would be only a single permanent object, and the mind would be provided with the idea, not of identity, but of unity. On the other hand, the transition from one moment to another, which constitutes duration and variation of time, must scarcely be felt, no other perception or idea must be brought in play, in order that the disposition of the mind might be such as to continue surveying one permanent, unchangeable, identical object.¹⁷ Variation of time must be felt, but not enough to produce any alteration in the mind's activity. Once more the operation of imagination is in contradiction to the very condition of this operation.

If Hume's explanation of identity is untenable, it is not because identity is held to be a "fiction," i.e., a creation of imagination. Had Hume contented himself to assert that identity is no matter of sensibility, but is due to another mental faculty, namely, imagination, he would have advanced a two-factor theory of perception. Such a theory is, no doubt, open to criticism, but it cannot be rejected as inconsistent, the main objection which, it seems, is to be made against Hume's theory. His task is to account for the fact that the perceiving subject, experiencing these impressions and by means of them, is aware of something identical, despite impressions being "internal and perishing existences,"¹⁸ subject to variation of time, so that none of them when once passed can ever return. But there is no room in Hume's doctrine both for *identity* and

¹⁶ It will be shown later that the "participation" of an object which stands before consciousness for some time, and which during this time is given as permanent and identical, in those changes which constitute its presence-time and its duration is not a "fiction" but an immediately experienced fact.

¹⁷ Hume, *op. cit.*, p. 492.

¹⁸ *Ibid.*, p. 483.

for *temporality*. It is highly significant that Hume talks of our tending to "disguise, as much as possible, the interruption,"¹⁹ to "remove the seeming interruption by feigning a continued being."²⁰ If we could sacrifice either identity or temporality, we would get rid of the irreconcilable contradiction in which these principles stand to each other; but we cannot, because of the irresistible tendency created by the imagination to ascribe identity to resembling perceptions on the one hand, and because, on the other hand, the interruptions of these perceptions are too striking to be overlooked.²¹ *Identity and temporality turn out then, for Hume, not only to be opposed to, but even to exclude each other.* These principles stand in a perpetual struggle with each other. As long as we are inattentive enough, we may believe in identity, although in reality there is merely a succession of resembling items. Philosophical reflection comes to show the falsehood of this belief, without, however, being able to shake it seriously.²² According as we adopt the attitude of practical life or the philosophical one, we waver from instinctive and natural opinion to "studied reflections," without ever gaining a conclusive solution of the problem.²³ Thus Hume fails to account for a very simple fact, familiar to the "vulgar" in their everyday lives, the fact formulated by saying: The thing I see now, I saw some time ago, and tomorrow I shall take up its observation. In a case like this, identity as well as temporality stand before the subject's mind, whether his attention bears upon the one or upon the other.

The ultimate reason for Hume's failure is to be sought, I submit, in his general conception of consciousness: ". . . the true idea of the human mind, is to consider it as a system of different perceptions or different existences, which . . . mutually produce, destroy, influence, and modify each other. . . . One thought chases another, and draws after it a third, by which it is expelled in its turn."²⁴ *Consciousness is then conceived as a unidimensional sphere of being, whose fundamental structure consists only and exclusively in temporality.* What constitutes the

¹⁹ *Ibid.*, p. 488.

²⁰ *Ibid.*, p. 496.

²¹ *Ibid.*, p. 494.

²² Cf., *ibid.*, pp. 497-498 and pp. 501-505.

²³ *Ibid.*, pp. 535-536.

²⁴ *Ibid.*, pp. 541-542.

mind "are the successive perceptions only," the mind being "nothing but a bundle or collection of different perceptions which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement."²⁵ Hume expressly likens consciousness to a theatre, but it is, so to speak, a theatre without a stage; in modern terminology, one could compare consciousness with a perpetual succession of cinematographic pictures.

Whatever differences may exist among the different kinds of perceptions, "primary qualities," "secondary qualities," passions, affections, and so on, in so far as they are perceptions, i.e., contents of consciousness, they must be taken to be on the same footing and to have the same manner of existence.²⁶ That is to say, all of them are real events happening in the stream of consciousness; they appear and disappear, and every one of them has its place in this stream with relation to other events belonging to the same stream. Nothing can ever be found in consciousness but such an event, one picture among others which precede or succeed it, and which in their succession constitute the conscious life.²⁷ Being aware of an object is reduced to the mere presence in consciousness of a real content.²⁸ Hence the identification mentioned above of sensible qualities with sensations, through which the former appear, both designated, as a rule, by the same terms, as color, smoothness, ruggedness, and so on.²⁹ After all, the object as composed of real contents of consciousness must itself become a real element in the conscious stream. For consciousness conceived in this way there can indeed exist nothing identical.³⁰

²⁵ *Ibid.*, pp. 534-535.

²⁶ Cf., *ibid.*, pp. 480, 482-483.

²⁷ Cf., *ibid.*, p. 487: "... nothing is ever really present to the mind, besides its own perceptions."

²⁸ Cf., *ibid.*, p. 483: "... every thing which appears to the mind is nothing but a perception, and is interrupted, and dependent on the mind."

²⁹ See Husserl's criticism of this confusion in *Log. Unt.*, II, v, sec. 2, and *Ideas*, sec. 41.

³⁰ It is worth noting that even the identity of objects undergoing a real change, by the addition or diminution of parts, is explained by Hume (*op. cit.*, pp. 537-538) in some cases by inattention. The essential condition of ascribing identity in such cases is that the changes be insignificant enough not to strike the mind.

Though formulated by Hume in the most explicit manner, this conception of consciousness as a unidimensional sphere constituted by the mere succession of real events was already effective with Locke and with Berkeley and — as far as I can see — it has been embraced more or less explicitly by all philosophers up to the present day. With regard to the problem under discussion, it makes no great difference whether the perceptions are considered, with Hume,³¹ as distinguishable and separable from one another, or whether, like James³² and Bergson,³³ one lays stress upon the continuity of the stream of consciousness and upon the interpenetration of the mental states, so that demarcations may no longer be drawn to separate them from one another. This conception constitutes the ultimate sense of what Husserl calls *psychologism*.³⁴ What is true for perceptible objects belonging to the real world holds good also for mathematical entities, for significations, propositions, and for all kinds of products of logical thinking. Reduced to the real elements and contents which constitute the acts of awareness of them, none of these objects can ever be apprehended as the same, in an indefinite number of acts. Since objectivity is to be defined by this sameness of the object as opposed to the multiple acts, whether they be experienced by one person or by different persons, on the basis of the conception of consciousness under discussion there can be no objects at all, of any kind whatever.

II. HUSSERL'S NOESIS-NOEMA DOCTRINE

The preceding discussion leaves us with the problem of how identical and identifiable objects may exist for, and stand before, a consciousness whose acts perpetually succeed one another; every one of these acts, in addition to their succeeding one another, incessantly undergoes temporal variations. For what is meant by James's "stream of thought" and by Berg-

³¹ *Ibid.*, p. 495.

³² W. James, *The Principles of Psychology* (London, 1908), I, 237-243.

³³ H. Bergson, *Essai sur les données immédiates de la conscience* (Paris, 1932), chap. II.

³⁴ Cf. *Formale und transzendente Logik* (Halle, 1929), sec. 56-58, 62, 65.

son's "durée" does express an experienced reality, of which we may become conscious at any moment, if we are attentive to what happens in our conscious lives.

A solution has been given to this problem by Husserl by means of his theory of intentionality; and as far as I know it is the only one that exists. Lack of space prevents me from studying the growth of this theory throughout Husserl's writings. When in the *Logical Investigations* he tackled intentionality for the first time, Husserl was not yet dealing with the problem we have emphasized. His theory of intentionality gradually got a reference to this problem, and, though this reference did not become manifest until the *Formal and Transcendental Logic*, it seems to us that the form in which intentionality is advanced in the *Ideas*, chiefly in the *noesis-noema doctrine*, already constitutes an answer to our problem. Taking the noesis-noema doctrine into consideration from this point of view, we shall proceed beyond what was explicitly formulated by Husserl himself.

When an object is perceived there is, on the one hand, the act with its elements, whatever they may be; the act as a real event in psychical life, happening at a certain moment of phenomenal time, appearing, lasting, disappearing, and, when it has disappeared, never returning. On the other hand, there is what, in this concrete act, stands before the perceiving subject's mind.³⁵ Let the thing perceived be a tree. This tree, at any rate, presents itself in a well-determined manner: it shows itself from this side rather than from that; it stands straight before the observer or occupies a rather lateral position; it is near the perceiving subject or removed from him at a considerable distance, and so on;³⁶ finally it offers itself with a certain prospect, e.g., as giving shade, or, when the subject perceiving the tree recalls to his mind his past life, the tree perceived appears in the light of this or that scene of his youth. What has been described by these allusions is the *noema of perception*, namely, the object such, exactly such and only such, as the perceiving subject is aware of it, as he intends it in this con-

³⁵ *Ideas*, sec. 88.

³⁶ Cf. *Méditations Cartésiennes*, p. 34.

crete experienced mental state. It is with respect to the noema that the given perception is not only a perception of this determined object, but also that it is such an awareness of the object rather than another; that is to say that the subject experiencing the act in question, the *noesis*, finds himself confronted with a certain object appearing from such a side, in the orientation it has, in a certain aspect, and so on. Hence the noema may also be designated as the perceptual sense.

The noema is to be distinguished from the real object.³⁷ The latter, the tree for instance, as a real thing appears now in this determined manner; but it may offer itself from a different side, at another distance, in a different orientation and aspect; and it does so in fact when the subject goes around it. It shows itself in a multiplicity of perceptions, through all of which the same real tree presents itself; but the "perceived tree as such" varies according to the standpoint, the orientation, the attitude, etc., of the perceiving subject, as when for instance he looks at the tree from above, or at another time perceives it while in the garden. Indeed, a real thing may not present itself as such except by means of a series of perceptions succeeding one another.³⁸ These perceptions enter into a synthesis of identification with one another, and it is by, and in, this synthesis and the parallel synthesis among the corresponding noemata, that what appears successively constitutes itself, for consciousness, into this real thing which it is, one and identical as opposed to the multiple perceptions and also to the multiple noemata.³⁹ Hence problems arise as to the relation of the act and its noema to the real thing perceived through the act, and further as to the relations the noemata uniting themselves by the synthesis of identification bear to one another;⁴⁰ at any rate it is obvious that the real object ought not to be confounded with a single noema.

On the other hand, the noema is distinct from the act in the sense that it does not constitute a part, an element, a factor of

³⁷ *Ideas*, sec. 89-90.

³⁸ *Ibid.*, sec. 42, 44, 143.

³⁹ *Ibid.*, sec. 41, 86, 135, 145, 150, and *Méd. Cart.*, sec. 17-18.

⁴⁰ *Ideas*, sec. 98 and 128-131.

the act, and does not really exist within consciousness, as the act does.⁴¹ When, looking at a thing, we alternately shut and open our eyes again, without any change in the position of our body or in the direction of the glance, we experience a number of perceptual acts, all different from one another. Through every one of these acts, however, not only does the same object offer itself, but it appears also in the same aspect and orientation, from the same side, at the same distance, and so on. The tree presents itself now in exactly the same manner as it did a moment ago, as it did yesterday, as it is expected to do tomorrow. The "perceived tree as such" is identically the same, notwithstanding the variety of the acts to which it corresponds. *In the noema*, then, *we have something identical* which, for this very reason, ought not to be mistaken for an element of the corresponding act. Were it such an element, it would appear and disappear with the act, and it would be tied up, as the act is, to the place the latter occupies in phenomenal time.

The noema, as distinct from the real object as well as from the act, turns out to be an unreal or ideal entity which belongs to the same sphere as meanings or significations. This is the sphere of sense (*Sinn*).⁴² The unreality of entities belonging to this sphere lies, first of all, in their atemporality, i.e., in a certain independence of the concrete act by which they are actualized, in the sense that every one of them may correspond, as identically the same, to another act, and even to an indefinite number of acts. Noemata are not to be found in perceptual life alone. There is a noema corresponding to every act of memory, expectation, representation, imagination, thinking, judging, volition, and so on.⁴³ In all these cases, the object, matter of fact, etc., in itself, toward which the subject directs himself through the act, is to be distinguished from the object such, exactly such, as the subject has it in view, as, through the act, the object stands before the subject's mind. As to judging, the difference is between *objects about which* and *that which is judged as such*.⁴⁴ It is worth noting that somehow

⁴¹ *Ibid.*, sec. 97.

⁴² *Ibid.*, sec. 133.

⁴³ *Ibid.*, sec. 91 and 93-95.

⁴⁴ *Logik*, sec. 42, 44-45, 48.

James⁴⁵ anticipated Husserl's notion of the noema of thinking and judging.

Husserl's noesis-noema doctrine, which we must content ourselves with summarizing briefly, far from being a constructive or explanatory theory, is rather a simply descriptive statement of an objectivating mental state, i.e., of a mental state through which the experiencing subject is confronted with an object. Every mental state of this kind must then be accounted for in terms of identity as well as of temporality. The traditional conception of consciousness, in which emphasis is placed upon temporality, the succession of acts and the variations each act undergoes by its duration, is truly not false, since the fact emphasized is a real fact of consciousness. But this conception is incomplete and unilateral. No mental state is to be conceived only and exclusively as a real and temporal event in the stream of consciousness, without any reference to a sense. This reference is overlooked in the traditional conception. *Identity is to be acknowledged as a fact irreducible to any other; it turns out to be a fact of consciousness, no less authentic and no less fundamental than temporality is.* Thus we are led to a duality. And it must be stressed that this duality holds good even for the most elementary level of consciousness, where the question concerns the repeated appearance of an object in the same manner of presentation, without there being a need for going on to consider the appearance of an object, one time in perception, another time in memory, representation, etc., and, still more, to take into consideration the successive presentations of an object, appearing as identically the same, from various sides and in the most different aspects.

III. TEMPORALITY AND IDENTITY

Before setting off the general conception of consciousness implied in and following from the noesis-noema doctrine, let us look at the nature of this duality and at the relation between the terms composing it.

That identity is a fundamental fact in conscious life does not

⁴⁵ James, *op. cit.*, I, 275-276.

signify a permanent explicit awareness of it. In all perceiving, thinking, judging, and so on, in all theoretical and practical life, we make use of the identity of the objects we deal with; when perceiving a thing, for instance, we take it for the same as that perceived some time ago, or when thinking of a proposition, we hold it to be the same as the one which we demonstrated yesterday, and then go on to verify this demonstration (the same as that performed yesterday), or to reason further upon the basis of this proposition. So we may behave and so we do behave, without necessarily grasping identity in an explicit way, although all of our behavior is constantly guided by it. The object with which we are concerned is our theme, and our only one; as a rule, the identity of this object does not constitute a secondary theme accompanying the former. But, of course, identity may be rendered explicit to the subject's mind and may be taken as a theme. How then does it become so? In what way do we get an original awareness of identity?

A perceived object offers itself in a certain manner of presentation. Experiencing such a perception, we are free to remember past perceptions and to look forward to future perceptions, so that to all these mental states, past as well as future ones, there corresponds the same noema as that corresponding to the present experienced perception. Thus we become aware in an original way of the noema and of its identity, as distinct from and opposed to the multiple acts to which it corresponds. It is of no importance, if the past experiences are recalled with a more or less exact temporal determination, and also if the moment at which the future acts are expected to happen may be foreseen with some exactness. It is not even necessary that the acts taken into consideration be recalled perceptions, i.e., appear as having been present at a past moment, and that the experiences considered as future be really expected to happen. For the present purpose, it will be quite sufficient to conceive acts as possible or potential, and such as to differ from one another and also from the present perception, but as to actualize the same noema. Acts through which the same object appears and offers itself in the same manner of presentation can differ from one another only as to the moments in conscious time at

which each of them takes place. At any rate, *we may not render identity of the noema explicit and ascertain it by an original experience unless we also become aware of the temporality of consciousness.*

Noematic identity may be brought up to explicitness, even without taking into consideration acts different from the present experienced one, on the condition that there be reflection upon the duration of the latter. Duration consists in, and manifests itself for consciousness by, an incessant transformation of every "actual now" into a "having just been an actual now." When time is elapsing, the present moment does not sink into past, so that it could not be recalled again to the mind, except by reproduction; on the contrary, the present moment, ceasing to be present, is yet retained in "primary memory"⁴⁶ and takes the form of "having just been present." At once that which has just been present, relative to the actual now, when this is transformed in the manner mentioned, undergoes a transformation in its turn, passing into a "retention of a retention"; it is then removed still more from the occasional actual now, until it disappears from immediate memory, no longer being retained.⁴⁷ Thus reflecting on what really happens in consciousness, at every moment we find a continuous variation and transformation: a continuous passing of the present phase into a retained one, and of a phase given in a retention of any degree into a retention of a higher degree, a continuous iteration of this transformation.⁴⁸ Upon these incessant variations is based the stream-character of consciousness,⁴⁹ which, owing to their continuity, is experienced as a unidimensional order. What is concerned by these transformations is, however, not the object perceived, or its manner of presentation, but only its temporal orientation, its temporal modes of appearance.⁵⁰ In other words: what is concerned is the act rather than its noema, the fact that a perceived object

⁴⁶ As to the difference between "primary memory" (retention) and "secondary memory" (reproduction), see Husserl, *Vorlesungen zur Phänomenologie des inneren Zeitbewusstseins* (Halle, 1928), par. 19.

⁴⁷ *Ibid.*, sec. 8 and 10.

⁴⁸ *Ibid.*, sec. 39 and Supplement 1.

⁴⁹ *Ibid.*, sec. 36 and pp. 466-467.

⁵⁰ *Ibid.*, sec. 30-31 and Supplement iv.

as such stands before consciousness rather than the perceived object as such itself. Looking at the stream elapsing, we become explicitly aware of the fact that the perceived object as such has already appeared for a long time, or that it has just begun to appear, and — if we also allow for protentions — that we expect it to continue appearing, or that we foresee interruption of its appearance, and so on. Once more, *explicit awareness of identity requires that of temporality* and, in the case just analyzed, even of *intrinsic temporality*. Hume was then perfectly right in referring to temporality when he sought to account for identity.

On the other hand, were there nothing identical standing before consciousness, awareness of temporality would no longer be possible. With this hypothesis, retentive modifications could no longer be variations in the temporal orientations of something which may successively assume different temporal orientations. The very reality of conscious life, when an act is an enduring one, is a phase of present actuality most intimately connected with a whole continuity of phases retained (in retentions of various degrees), all these phases being related to one another, and the phase of present actuality constituting a limit of this continuity.⁵¹ With our hypothesis, however, instead of this continuity of phases there could be only a set of punctiform act-impulses among which one would bear the character of actual presence, whereas the others would be provided with characters different from one another as well as from that of the former. All these act-impulses, though simultaneously given, would still remain in isolation from one another; at any rate, they would lack the intrinsic relationship to connect them into a unitary act; for the unity of an enduring act is possible only with regard to something identical whose appearance may assume different temporal phases.⁵² Conscious life being in incessant variation, at every moment one set of such act-impulses would be displaced by another one, without any intrinsic reference between them; for such a refer-

⁵¹ *Ibid.*, par. 16. For the sake of brevity we confine the discussion to the intrinsic temporality of an enduring act.

⁵² *Ibid.*, Supplement XI.

ence supposes the same to pass from one temporal phase into another. At every moment, then, the unity and the continuity of conscious life would be broken off. Since experienced time consists but in the progressive removal either of a certain phase of an act or of the act in its entirety from the actual now, in such a way that what is being removed appears as having been, a moment ago, nearer to the actual now than it is at present — a consciousness for which the hypothesis under discussion would be valid could not become aware of time. Consequently for such a consciousness time would not exist at all.⁵³

It is then by way of the very same reflection that the subject, in an original way, ascertains the identity of the object offering itself in a certain manner of presentation, of the noema, as well as the temporality of the noema's appearance, the duration of its appearance and all changes the duration carries with itself. Temporality and identity are, no doubt, poles opposed to each other. As against Hume, however, *they are poles which do not exclude but require each other. Temporality and identity are related to each other like the terms of a correlation.* This is indeed the nature of the duality to which Husserl's noesis-noema doctrine leads.

IV. THE CORRELATION-CONCEPTION OF CONSCIOUSNESS

To each act there corresponds a noema, namely, an object such, exactly and only such, as the subject is aware of it and has it in view, when he is experiencing the act in question. *Consciousness* is not to be mistaken for a mere unidimensional sphere composed of acts, as real psychological events, which coexist with and succeed one another. Rather it ought to be considered as a *correlation, or correspondence, or parallelism between the plane of acts, psychological events, noeses, and a second plane which is that of sense (noemata).* This correlation is such that to each act its noema corresponds, but the same noema may correspond to an indefinite number of acts. It is then not a one-to-one correspondence.

⁵³ *Ibid.*, pp. 376-377.

The noeto-noematic correlation is what has to be meant by the term intentionality. In this light, the formula "consciousness of something" is to be understood:⁵⁴ a conscious act is an act of awareness, presenting the subject who experiences it with a sense, an ideal atemporal unity, identical, i.e., identifiable. It is not by virtue of favorable circumstances calling for an explanation and for a reduction to more elementary facts, but owing to what constitutes the nature of consciousness itself, that an experienced act bears a reference to a sense. Consciousness is to be defined by its bearing reference to a sphere of sense, so that *to experience an act is the same thing as to actualize a sense*. Hence every fact of consciousness must be treated in terms of the relation *cogito-cogitatum qua cogitatum*,⁵⁵ and no mental state may be accounted for, except with regard to the objective sense (*gegenständlicher Sinn*), of which the experiencing subject becomes aware through this act.⁵⁶

Intentionality means the objectivating function of consciousness. In its most elementary form, this function consists in confronting the subject with senses, ideal unities, to which, as identical ones, he is free to revert an indefinite number of times. No sooner than this elementary structure of the objectivating function has been established, problems may be tackled as to higher structures of intentionality, concerning for instance syntheses by means of which particular perceptual senses are united into systems which are the real perceptual things, concerning categorial forms bestowed upon the perceptual data in thinking,⁵⁷ dealing with syntactical operations by which, in apophantics, more and more complicated meanings and significations are constructed from out of simpler ones,⁵⁸ and so on. All structures of intentionality rest upon the noeto-noematic correlation which, for this reason, is the most elementary structure. But it is, at the same time, also the most fundamental and the most universal one, since every sense-entity, of whatever kind and of whatever degree of complication, is an identical and identifiable unity, to which the subject

⁵⁴ *Méd. Cart.*, p. 28.

⁵⁵ *Ibid.*, pp. 30-31, and *Logik*, p. 120.

⁵⁶ *Ideas*, preface, sec. 6.

⁵⁷ *Log. Unt.*, II, VI, chap. VI. ⁵⁸ *Ibid.*, II, IV, sec. 13, and *Logik*, sec. 13.

may come back again and again. Thus the noeto-noematic parallelism enters into all forms of mental activity; and it is to it that one is led by the basic problems of logic.⁵⁹

The objectivating function belongs to an act, but not as taken in itself and as isolated from other mental states. On the contrary, this function is possessed by an act even when the latter has the distinctive character of evidence or self-presentation, on account of its being inserted into the whole of the experiencing life and only with regard to this whole.⁶⁰ Objectivity is identifiableness, i.e., the possibility of reverting again and again to what, through the present experienced act, is offered to consciousness, and the possibility of so doing whether in the same or in any other mode of awareness.⁶¹ This holds good for real as well as ideal objects.⁶² It holds good also for "inner perception." When a present experienced mental state is grasped by an act of reflection and is thus made the object of this act of inner perception, the latter possesses the character of evidence, since the apprehended act is offered directly, immediately, and bodily, not by memory or in any symbolic manner. Nevertheless, it is not on this account that the act of inner perception is objectivating; it is so only because what appears through it, although its self-presentation never can be actualized again, may yet be recalled later, and may be so an indefinite number of times.⁶³ Objectivity and identity have then no sense, unless with regard to a multiplicity of acts, that is to say, with reference to the temporality of conscious life. These analyses of Husserl's concerning objectivity, by which he has cleared up the ultimate meaning of his struggle against psychologism,⁶⁴ throw a new light upon the here advanced correlation-conception of consciousness.

Though never formulated by Husserl in quite explicit terms, this conception seems to be at the root of a large part of his theories, and, when his work is considered in its growth, this conception reveals itself, I submit, to be one of the teleological goals toward which phenomenology is tending.

⁵⁹ *Logik*, sec. 73.

⁶⁰ *Ibid.*, pp. 142-143.

⁶¹ *Ibid.*, p. 139.

⁶² *Ibid.*, sec. 61-62.

⁶³ *Ibid.*, pp. 140-141 and sec. 107 b.

⁶⁴ *Ibid.*, sec. 56-57, 65, 67.

THE "REALITY-PHENOMENON" AND REALITY

Herbert Spiegelberg

I. THE PROBLEM

ONE OF THE MOST COMMON and most fundamental criticisms of phenomenology as initiated by Edmund Husserl has always been: What can a science of mere phenomena tell about real things? It may inform us concerning objects which we *take* to be real. But does that in any way guarantee that the *supposedly* real is *really* real? How will phenomenology decide the truth of our meanings? Is not this the limit, and a rather premature limit, of every phenomenology?

These very pertinent questions require an explicit answer. They concern the fundamental relation between phenomenology and epistemology. Implicitly at least, both idealistic and realistic phenomenology claim that phenomenology is in a position to answer epistemological questions. Only neutral phenomenology would deny it.

In their primary and essential tasks phenomenology and epistemology are certainly not identical. This must be emphasized against a phenomenologism which would dissolve all philosophy into phenomenology. Nevertheless, there are very close connections between the two fields. It is these connections which this paper proposes to discuss. The main problem here concerns the relation between the "reality-phenomenon" and the actually real.

In fact, this seems almost the crucial problem of epistemology. The central region of reality that is claimed to be accessible to our cognition consists of the immediately perceived objects, i.e., of the perceptual phenomena. The examination of their relation to reality must therefore be basic for every epistemology. In asserting this I imply that it is the task of epistemology proper to examine the justification of the

claim to knowledge made by our cognitive acts, i.e., by our perceiving, by our thinking (inasmuch as such thinking aims at knowledge proper), and by the corresponding products of thought such as propositions, inferences, hypotheses, etc.

Abstractly speaking, the examination of this *quaestio iuris* would require the direct comparison between the phenomena as presented to us and the "real" reality apart from such presentation. Simple as this method may sound, for reasons of principle it is impracticable for all subjects involved in the process of cognition. For the second term of such a comparison would never be given to us by itself, free from any relation to us, but only as another phenomenon. Every epistemology claiming to be really critical will have to acknowledge this essential dilemma. Epistemology can never aspire to pull itself by its own hair from the morass of subjectivity up to the higher level of an ideal umpire. In view of this basic predicament of every cognition we can only grasp phenomena and nothing else.

This consideration at once suggests the question: Is not all cognition essentially and definitively restricted to mere phenomena ("appearances"), as a moderate or skeptical phenomenalism asserts? Or *are* there only phenomena, as radical phenomenalism of the positivistic brand pretends? In order to answer these questions the phenomena themselves will first of all have to be subjected to a thorough analysis. There is at least the possibility that in their very structure they already refer to something beyond themselves. Analyses of this sort are the foremost task of a science of phenomena, i.e., of a phenomenology in a specific sense. It has to give a thorough inventory of everything presented in the very way it is presented, or, in other words, of the what and how of the phenomena in their general structure.

Yet such an analysis can yield only information about what we *consider* to be real in addition to the immediate phenomena. It is only here that our actual problem begins: How far does the reality-phenomenon tell anything about "real" reality?

No exhaustive treatment of this problem can be claimed for the following discussion, but only an attempt to bring some

basic problems to greater clarity. Without such a reorientation there is little hope for breaking up the rigid entrenchments of the epistemological opponents and, in particular, for clarifying the issue between idealistic, realistic, and neutral phenomenology.

II. THE "REALITY-PHENOMENON"

To begin with, three fundamental terms will have to be defined and interpreted, all the more because Husserl's exposition fails to give an explicit analysis of them. These definitions may, at first sight, look rather arbitrary. They are, however, based on a previous survey of phenomena, and are meant to follow their intrinsic articulation.

(1) By *phenomenon* I am going to understand everything given to us *directly*, i.e., without mediating inferences, exactly in the way it is given to us. This implies that I do not contrast phenomena and things but only phenomena and non-phenomena, i.e., non-presented objects. Everything if presented becomes a phenomenon in this sense, acquiring thereby the additional character of "phenomenality" and losing it again if no longer presented. Accordingly, phenomena in this sense are not only "surface-phenomena," such as modes of appearance, perspective aspects, *sensa*, in short mere appearances; they also comprise what is given in and through these latter, i.e., the appearing thing itself in its role as being presented, the "depth-phenomenon."

(2) *Reality* means here the "standing-on-its-own-account" (in and of itself) of any object; as such it is independent of any observer and of his observation.¹ Accordingly, everything real occupies a definite place of its own in the tissue of the real world. In contrast to that, *unreal* appearance has no place or seat in reality independently of the observer. Something is real in this sense, even if it is dependent on factors other than subjects, in the way, for instance, that color is dependent on

¹ Independence of the subject cannot be the substance of reality; that would make no sense in the case of the reality of the subject's real acts, which are obviously dependent on him; it is, however, a very fundamental and essential *consequence* of reality in all other cases.

extension for its possible existence, or acts are dependent on agents. In a similar way, something remains real if, in the causal line of its genesis or its continuation, it depends on third factors, ultimately on God; this applies even if such a real object has been created by acts of the real subject, as in the case of a work of art that is conditioned by his reality-producing acts. For being real it is enough that the real object stands "on its own feet," independent of the cognitive activities of the subject. Accordingly, the sphere of the real, in the sense here defined, is by no means restricted to physical or psychological objects. "Ideal" entities, values and ideals, duties and rights, social entities, etc., may on principle stand of and by themselves, i.e., be real. The question of the reality of reality-phenomena will here be raised in its widest possible form.

(3) The term "*reality-phenomenon*" will stand not only for the phenomenon of an object's reality but also for the full phenomenal object which claims to be real; in short, reality-phenomena are phenomena which are at the same time supposedly real. In this they differ from "mere" phenomena, which from the outset do not claim any reality. Within these reality-phenomena, epistemology will have to distinguish between *genuine* reality-phenomena actually implying reality and merely seeming or *sham* reality-phenomena which are *only* supposedly real.

I have purposely refrained from defining the phenomenon as "what shows itself in itself" (*das sich an ihm selbst Zeigende*).² For the question is precisely whether that which shows itself *is* actually the thing itself which it pretends to be. If only those "contents" shall be admitted as phenomena whose authenticity has already been previously ascertained, the concept of phenomenon becomes unfit for phenomenology. Before applying the term legitimately, we should, then, have to make sure that it is actually, and not only supposedly, the real thing which speaks out of the phenomenon.

A similar difficulty would arise if, making use of Husserl's

² M. Heidegger, *Sein und Zeit*, I, 28.

momentous account of genuine perception as implying the "bodily self-givenness" of the perceived object, we should try to characterize the reality-phenomenon as the one in which an object is "bodily present." Again, this would mean that we could not speak about a reality-phenomenon legitimately before we should have established that it is actually the real thing "in person" which presents itself.

Understood in our restricted sense, the following analyses are based on the premise: There are reality-phenomena, i.e., phenomena which at the same time claim to be real.

Such an assertion may still be challenged by phenomenism. Is not the concept of a reality-phenomenon a contradiction in terms? Can a phenomenon ever contain more than its own phenomenality? Are not phenomenality and reality incompatible from the outset? This objection seems to start from the widespread assumption that there is a hermetic separation between the world of phenomena and reality. It seems timely to protest emphatically against this old prejudice. Phenomena are by no means something like a layer of films after the fashion of Democritean "eidola" which are transferred from the object in space to the sense-organs, thus blocking the passage to reality. Reality and phenomenality do not exclude each other either in concept or in structure. That which is real exists in and of itself and may, as far as its structure is concerned, at the same time be presented to us with its very reality. Again, what is presented to us as a phenomenon *may*, at least, be real at the same time. The phenomenal world is not a group of entities characterized and segregated by their interior structure; it constitutes a sphere of entities that are united in a merely extrinsic way, owing to the connecting spotlight of observation which moves across entities of the most different structure, both real ones, standing by themselves, and unreal ones, that do not stand by themselves and depend on the observer. Real things, therefore, may, as far as their structure is concerned, remain exactly what they are, if they enter into relations with us and are presented to us. This occurrence means only that they adopt the additional character of phenomenality.

All such considerations regarding the possibility of reality-

phenomena become immaterial in view of the simple fact that there are phenomena, as best represented by products of phantasy, which neither *have* nor *claim* any reality for themselves. They contrast with phenomena, such as that of the printed paper just perceived, which enter with the claim of being taken to be real. To that extent all genuine perception implies perception of reality. But only in special cases does this reality-perception become explicit as such.

III. THE REALITY OF THE REALITY-PHENOMENA

Does some reality necessarily correspond to all reality-phenomena? Or more precisely: Do the reality-phenomenon and reality essentially coincide? Certainly there is no intrinsic obstacle preventing their coincidence. But its reality and absolute necessity is restricted to the very narrow field where objects are presented to us both completely and immediately, i.e., with full adequacy and simultaneously in one single grasp. Phenomena of this type do not possess several "sides" from which they might present different more or less adequate aspects. In contradistinction to them, multilateral phenomena would essentially show themselves only partially at a time and for this reason their successive aspects might always clash with one another.

All phenomena *as such* are presented to us simultaneously and with full adequacy, whether more or less clear in their trans-phenomenal references. They include the objective phenomena such as sound or color, our subjectival acts referring to them, in so far as we are phenomenally conscious of them in the actual moment of their performance, and the conscious self performing or experiencing these acts, including his own existence; this threefold stratification indicated by Husserl's *ego cogito cogitata mea* may in short also be characterized as: our own existence as that of a believing being, our acts of believing and the thing believed in so far as it is believed. This field, in Husserl's terminology that of "pure subjectivity" or that of "absolute transcendental consciousness," will here be called the *subjectival field*.³

³ By the term "subjectival" (and its opposite, "non-subjectival") I wish to

This field of necessary reality constitutes, however, only a very small fragment of our supposed total of reality. Much more pretends to be real than this subjectival "subsistence minimum" of solipsism, from which the whole external world, the physical as well as other people's psychical world, would be excluded. But such "non-subjectival" reality-phenomena are not presented with the same completeness and adequacy as the subjectival field is.⁴ In their case such a presentation is even essentially impossible. For, whereas the subjectival phenomenon has only one side, as it were, and only one possible distance from the observer, the non-subjectival is essentially many-sided, may present itself from different points with different aspects and in changing position, even if it has no sides in a spatial sense but, for instance, only aspects of varying distinctness.

Moreover, the non-subjectival gives certain promises concerning the aspects not yet presented, in fact, even an infinite number of them. If, for instance, a mountain-phenomenon claims reality, its reality is never completely given. Rather, one of its aspects refers to an infinity of other aspects promising to uphold reality in the same way as it was evidenced in the first. In this first aspect others are predelineated in various ways, partly in full detail, such as the immediately bordering zones of the front side (as far as given at all), partly only as to their general structure, such as the back side. Anyway, such

indicate that such entities are by no means subjective in the sense of having no objective existence, as being only misleading appearances, but that they belong to the make-up of the subject and his world. To this subjectival sphere belong by no means all the psychological data, but only a very limited part of them, namely, only our present conscious image of our actual experiences and of other people's as well. We may be very much mistaken as to the real character of our psychological experiences, and that not only in recollection (cf. M. Scheler, "Die Idole der Selbsterkenntnis," in *Vom Umsturz der Werte*). There are even philosophers who are mistaken about the fact of their alleged (Cartesian) doubt. What they actually experience is not doubt but a mere talking about their doubt.

⁴ In this connection a fatal ambiguity may be mentioned which attaches to the German term *sich (als wirklich) geben* much used in phenomenological discussions. This phrase means not only "to present, offer oneself" (*sich darbieten*) but also "to pretend" (*sich ausgeben*). Phenomena primarily only pretend or promise to be real. But such a promise has still to be fulfilled or verified before we can say that reality is actually given.

a non-subjectival reality-phenomenon claims to be more than a mere piece of theatrical scenery looking from the front as if real, to reveal itself from the back as a pure catch like Potemkin's legendary villages — in which, however, the wing-pieces were indeed something real. The most striking examples of such illusory pretense of reality are still to be found in mirror-images or in colored stereoscopic pictures. Even here the reality-phenomenon promises to defend its reality-character in all possible directions. But this promise of omnilateral "resistance" turns out to be misleading in the case of the *mere* reality-phenomena; they do not fulfill their promises when approached from some other side.

Thus a non-subjectival reality-phenomenon can prove its actual reality only by keeping its "intentional" promises in the succession of its aspects. In the case of objects which are not immediately and adequately presented like the subjectival ones it is, however, essentially impossible ever to go through all their aspects, even successively. Quite apart from the endlessness of their exterior and interior microscopic and ultra-microscopic aspects, even in the macroscopic field it is out of the question to cover all their aspects in succession. Hence there is always the theoretical danger that, for instance, optical reflexes have been taken for objective qualities or that ambiguous lateral aspects have been interpreted wrongly, so that the supposed real object suddenly explodes into an illusion in the way a mirror-image does.

There is, besides, still another more fundamental danger based on the fact that everything non-subjectival essentially can appear only in successive aspects, never simultaneously. These aspects may be ever so adequate and complete: who knows for certain what has become of the aspect which confronted us just a second ago and which, as we believe, has now "turned its back"? Anyway, at the present moment, when we look at the supposed former back side of the object, we have no guarantee that it still exists, that the Potemkin-village has not in the meantime been "pulled down" and perhaps is just about to be erected at the very place where our glance will pass after another second. Extravagant as such an assumption

may be, it cannot be excluded outright, once the epistemological problem has been raised; moreover, it is an assumption which is being made even by scientists in the case of the "secondary" qualities.

This applies in an analogical way to non-subjectival phenomena other than the physical, and including "ideal" ones such as truth. They too pretend to remain "real," even where not constantly watched. Yet, failing the possibility of such control, they are never completely presented.

Thus the actual reality of non-subjectival reality-phenomena can never exclude the possibility of an illusion. They all promise something beyond their actual content, and this transphenomenal promise may, in theory, always turn out to be erroneous, as they are only one-sided or many-sided appearances.⁵ It deserves special emphasis that all these considerations are based on intrinsic or essential necessities and that the limitation of our knowledge of non-subjectival objects here asserted is based on insight into their essence and into that of the subject in their mutual relation.

Is there really no hope of obtaining an absolute guarantee of the non-subjectival reality-phenomena by another approach? Such attempts are indeed implied in recent phenomenological philosophy. They will now be examined with respect to their basic principles.

IV. HUSSERL'S PHENOMENOLOGICAL REDUCTION IN ITS EPISTEMOLOGICAL SIGNIFICANCE

This is not the place for appraising Husserl's contributions to epistemology in general. Only one particular and more problematical feature of his new method asks for interpretation and comment here.

"Phenomenological reduction" has become more and more the central part of Husserl's whole phenomenological philosophy. In fact he considers it to be basic for its understanding.

⁵ In the latter case I am thinking of the possibility of a cunning arrangement of stereoscopic colored pictures grouped concentrically in space and representing coherent perspectives.

No wonder that this point has become the most controversial issue between the main trends of phenomenology. There is, however, no controversy about the fact that phenomenological reduction is an operation referring to the supposed reality of certain phenomena. It is this aspect which makes it significant for the present discussion.

Even according to Husserl himself it is far from easy to grasp the precise meaning and the structure of this operation, quite apart from the fact that his own accounts (especially in view of his latest publications) have changed considerably. At closer examination one receives the impression that phenomenological reduction has come to be an increasingly complex operation. Of this complexity thus far no adequate account has been published. The following interpretation does not claim to agree with Husserl's later exposition of the subject. It is based on the classical account given in the *Ideas*, the clearest published so far.

Taking up Descartes' attempt at universal doubt, Husserl here starts from the possibility of questioning all "non-subjectival" reality-phenomena as to their reality. Reduction then performs the methodical suspension of our belief in the reality of these phenomena. In this operation, initially, the belief in reality is by no means being crossed out as invalid, but is only "bracketed." The reality of the phenomena thus reduced remains simply undecided. Or to put it differently: the question whether the phenomenon is real or not is disregarded, set aside.⁶

Having performed this "reduction," "transcendental" phenomenology analyzes the whole field of the phenomena thus transformed and examines them as to their essential structures and intrinsic connections. Eventually, however, phenomenological reduction achieves much more; it prepares the ground for Husserl's peculiar phenomenological idealism

⁶ This last interpretation is certainly not in keeping with Husserl's own account, inasmuch as he asserts that phenomenological reduction opens up a whole world of entirely new phenomena. I must confess, however, that I fail to realize this, considering that reduction is described only as a procedure of abstracting from certain sides of the full phenomena.

(or better: irrealism).⁷ Allegedly it turns out that the assumption of a reality parallel to the reality-phenomenon is not only superfluous but even absurd. To that extent, reduction settles the epistemological problem at the same time.

In view of such a result, the question seems obvious: Is reduction at all fit to decide the reality of a reality-phenomenon? I cannot but deny it. Reduction may be ever so important for sharply isolating the sphere of those phenomena which are indubitably certain. Moreover, it may indirectly be helpful for discovering the full qualitative wealth of the phenomena which is so easily overlooked owing to our preponderant interest in the question of actual reality. But if it is correct that "bracketing" means simply disregarding the question of reality, it can never be the means of deciding it. Breaking off the bridges across a stream can never be the way to determine what is on the other side, even if it should turn out that the crossing is really impossible or unnecessary because one might live as well without connection with the other side. The possibility of such autarchy would never give us the right to deny the existence of the world from which we have emancipated ourselves. As long as phenomenology keeps strictly within the borders determined by the "bracketing," it can only be an epistemologically neutral phenomenology, neutral against idealism as well as against realism.

It seems, however, as if the decisive evidence for Husserl's idealism is of a more specific nature: After the reduction to the "residue of world-annihilation," i. e., the "subsistence-minimum" of solipsism, a phenomenological inventory shows that the belief in a non-subjectival reality has its exclusive source in the believing subject. Thus reduction, as implying at the same time a reflection upon the constitutive functions of our consciousness,⁸ can reveal as the source of the world of objects with all their characteristics (including the intersubjectival field) certain productive-creative acts of the con-

⁷ Cf. E. Fink, *Die phänomenologische Philosophie Edmund Husserl's in der gegenwärtigen Kritik* (Berlin, 1934), especially pp. 30 ff., 57.

⁸ On this point cf. Th. Celms, *Der phänomenologische Idealismus Husserls* (Riga, 1928), pp. 309 ff.

stituting "intentional" life of the subject. Non-subjectival reality allegedly turns out to be reducible to certain "hidden achievements of our intentionality," constituting reality itself.⁹

No explicit account of such an intentional constitution of reality has, however, been presented thus far¹⁰ and it remains to be seen whether the materials concerning "primal constitution," which are included in the unpublished writings, will yield this crucial proof. Until then it must be left open as to how such a claim could be substantiated, except by reconstructive inferences of a more or less hypothetical character. It seems, however, as if such an account would have to refer to a stratum of phenomena not immediately accessible to plain phenomenological observation. Inasmuch as such an account would imply the reduction of original qualitative phenomena of reality to sources of a different qualitative structure, this would appear particularly objectionable. But even without that, any reduction implying a transformation of the immediately given would appear to be unphenomenological, in the original sense of phenomenology, as doing away with all theorizing tampering with phenomena. It is not clear, finally, how far reduction, i.e., the bracketing, the setting aside, of the question of reality, can be the way for discovering the hidden achievements of the constitutive consciousness, a point which, by the way, even Husserl (through Fink) admits. It seems even unclear how far reduction would be indispensable for the discovery of acts allegedly constituting reality.

In Husserl's *Ideas*, however, a third consideration appears to be decisive for the denial of independent reality to all non-subjectival reality-phenomena, namely, an essential insight of an allegedly intuitive character to the effect that all being goes back to an assignment of being (*Seinsstiftung*). Accordingly, all phenomena by necessity would have to be

⁹ The meaning of the term "constitution," however, remains somewhat ambiguous with Husserl, sometimes standing for the actual construction of the object itself, sometimes for its establishing itself in our consciousness.

¹⁰ Fink, *op. cit.*, p. 55.

knowable and, to be sure, knowable “not only for an ego invented as a pure logical possibility but for some actual one.”¹¹ Yet this argument as it stands is hardly conclusive. Is a world of objects without an actual ego really so absurd, so intrinsically inconsistent? Must a world devoid of actual knowing subjects necessarily collapse, considering that such subjects are known only on the basis of certain living organisms for which there is evidence only during a comparatively inconspicuous period of our little planet?

Husserl’s phenomenological reduction, like Descartes’ radical doubt, can never show us more than the region of the indubitably certain. But it is by no means evident that this is the whole of reality. The really acute problem of epistemology begins beyond that point. Reduction, by cutting us off from reality, would make us utterly unfit for deciding this problem. It would be as “uncurable” as, in Hume’s terms, Descartes’ doubt was.

V. DIFFERENCES AMONG THE REALITY-PHENOMENA IN THEIR EPISTEMOLOGICAL SIGNIFICANCE

Are there no other means for ascertaining the reality of non-subjectival reality-phenomena and for distinguishing between genuine reality-phenomena and merely seeming ones? A thorough phenomenology of cognition and particularly of perception as envisaged by A. Pfaender’s realistic phenomenology does not have to resign itself to this result. Already phenomenally there are different kinds of reality-phenomena. Careful examination and comparison of them and of our ways of perceiving them reveals considerable differences among them, although it may not be easy to give a precise account of them. And these differences permit the distinction in principle and usually even in fact between veridical reality-phenomena and merely seeming ones.

To illustrate this by a few frequently discussed phenomena: The mere reality-phenomena which we face in a dream or

¹¹ *Ideen*, pp. 90, 92.

when half-awake show a peculiar indistinct fluctuation and flexibility as compared with the clear-cut delimitation and inexorability of the reality-phenomena we have when fully awake.¹² Reality-phenomena occurring in states of excitement or prejudice appear saturated and, as it were, discolored by emotion, as compared with those presented under conditions of cool observation. Whoever remains self-critical will be aware of that even during such a condition, and will therefore postpone his ultimate judgment until its removal. Likewise, in a critical frame of mind an abnormal condition of our sense organs may be registered as influencing our reality-phenomena and consequently be neutralized.

This is particularly important for the correct appraisal of illusions in sense perception, as in Locke's famous experiment with the three vessels containing water of different temperature where the luke-warm water in the middle one is felt as warm by the previously cooled hand and at the same time as cold by the previously warmed one. Critical perception will appraise such experiences only in the context of the full situation and simultaneously consider the undercooling of the one hand and the overheating of the other of which we are clearly aware. Similarly a critical observer in touching a ball with his fingers crossed will be conscious of their abnormal position and consequently not accept as veridical the impression that two balls are present. Likewise we know immediately that the blurred reality-phenomena presented to us in the case of inadequate accommodation are less trustworthy than the clearly outlined phenomena obtained in correct adjustment. But quite apart from such distortions from the side of the subject, reality-phenomena with imperfect illumination have not the weight of the ones perceived in full light. The blueness of distant mountains steeped in the blue haze of the atmosphere does not claim reality in the same sense as

¹² Criteria such as distinctness and vividness are more ambiguous: not only because even phenomena when we are fully awake may remain indistinct and blurred: dream-phenomena can, at least in part, adopt a tormenting over-distinctness and vividness often leading to actual awakening, quite apart from the fact that we do not obtain consciousness of these criteria until later.

the blue object-color of a gentian. Similarly the bluish, reddish, yellowish shadings shown by snow in specific illumination as registered particularly by impressionistic painters will hardly ever be confused with the white object-color or raise any serious doubt about it. Even the so-called geometrical-optical illusions concerning size or direction of certain lines will with really critical observation prove untenable and flexible. Only at first sight will the semblance of inequality or of a bend in the lines prevail. A careful following up without paying attention to the misleading environment will unmask this semblance or at least raise suspicion even before we use a ruler. Outside the experiment-situation a critical observer would rather abstain from judgment or give it only in a very problematical mode by referring to the "impression" the phenomenon produces.

Thus careful sifting of the reality-phenomena will be able to establish distinctions between them. Some will, if not immediately, at least in the successive examination of their different aspects, prove to be mere phenomena without reality, such as reflex or iridescent colors, in so far as they claim at first to be permanent colors in the object. In others reality seems to be grasped immediately and given bodily. One of the most important features here is the criterion of evidence, which, however, is still in need of much more phenomenological analysis. Differences of this kind exist in all kinds of reality-phenomena, in the field of values as well as of ideal entities. Whoever scans reality only in a superficial way will overlook these important shades within the phenomena. Careful sifting by a critical phenomenology of perception, on the other hand, can eliminate inadequate reality-phenomena and at the same time remove the most dangerous sources of illusion.

Important as these distinctions may be, however, for reasons of principle, they are unable to provide us with the same absolute certainty as subjectival reality-phenomena possess. Even sifted non-subjectival reality-phenomena are never completely and simultaneously presented. They will never allow us to get out of the subjectival field into the non-sub-

jectival world in a way guaranteeing its reality beyond the possibility of illusion. Significant as the critical sifting of the reality-phenomena may be, much as it may point beyond mere phenomenality, measured by the standards of indubitability we remain necessarily locked within the world of phenomena, however wide and elastic this "prison" may become. In the field of non-subjectival phenomena there is no absolute safety against an ingenious deception, unlikely as such a possibility may be. The standpoint of a subject standing outside the non-subjectival phenomena and restricted to this perspectival perception is essentially unfit for obtaining absolute certainty about them. Even phenomenology will have to put up with this result.

Does this mean that in the case of non-subjectival reality-phenomena all cognition of reality becomes absolutely impossible? Does this ultimate uncertainty even entail the non-existence of everything non-subjectival? This was indeed the point of radical "irrealism." Right here lies the decisive problem.

VI. DUBITABILITY AND DUBIOUSNESS

Certainly everything non-subjectival, including its reality, remains dubitable in principle. Nothing even stands in the way of doubting the whole subjectival sphere, though such a doubt would have no reasonable chance of confirmation, and consequently would be essentially unjustified, whereas in non-subjectival reality there always is the theoretical possibility of its proving justified. But this does not imply that everything reasonably dubitable is unreal and only the reasonably indubitable real. Dubitability and unreality are neither identical nor inseparable.

For this reason epistemology will not make much headway with the non-subjectival reality-phenomena if dubitability is used as its criterion. Important as it may be for determining the field of absolute certainty, it cannot decide about reality in the intermediary field between the absolute certainty of reality and the absolute certainty of unreality. In this area doubt is significant only if it is reasonable, if it can produce

good reasons, in other words, if the reality-phenomena are *dubious*. Otherwise doubt is merely the expression of pathological scrupulousness and therefore epistemologically insignificant. The phenomenon of dubiousness, or deserving doubt, and not that of dubitability, is the most important in this field.

The groundless denial of everything dubitable lays the *onus probandi* one-sidedly upon the shoulders of the affirming party by asking it to prove the indubitability. However, no such one-sided burden of proof can be admitted in philosophy. Neither the affirming nor the denying party has a title to better treatment, if truth and not mere debating about it is our real concern.¹³

Unprejudiced epistemology will have to submit not only the *pro's* but also the *con's* to a thorough "doubting" examination. If the *con* is not proved conclusively, it remains at best an abstract possibility. On the other hand, an extremely important *pro* is always contained in the critically examined reality-phenomenon. Wherever met it entitles us to disregard mere dubitability. To this extent we may stick to our everyday practice: all reality-phenomena claiming and upholding reality under thorough inspection may pass for real until their reality is made dubious by valid reasons.

The next task would be to clarify in detail what dubiousness means, and, furthermore, under what circumstances genuine dubiousness occurs, or, in other words, what are valid reasons for doubting. This in turn presupposes an analysis of the rather complex phenomenon of doubt, with regard to its structure, its kinds, and also its varieties. This may be omitted here. Suffice it to say that dubiousness is closely connected with the phenomena of uncertainty or questionableness. The term "dubious" accordingly points at the epistemological fickleness of certain phenomena and of the statements referring to them. To give a few instances of such instability: The phenomenon may be unclear or wavering, it may contain

¹³ It is therefore not less one-sided, if Nikolai Hartmann, in *Zur Grundlegung der Ontologie*, pp. 156 f., shifts the *onus probandi* exclusively to the denying party. Where would that lead in the case of occultism or of superstitions in general?

inconsistencies either in itself or in its presuppositions or consequences, or an assertion may rest on unverified assumptions, a conclusion on uncertain premises, etc. The systematic investigation of these cases is one of the major tasks of epistemology.

VII. INSUFFICIENT REASONS OF DOUBT:
DESCARTES' ARGUMENTS

Here is an example of such analysis: Descartes' epistemological doubt, radical as it pretends to be, still claims to question everything dubitable, not from mere fancy but for good and well-considered reasons.¹⁴ Here I propose briefly to examine these reasons, bearing in mind that even Descartes did not consider them conclusive, once he had found firm ground in God's veracity as the ultimate guarantee for his criteria of clearness and distinctness.

Descartes' first argument against sense-perception is taken from the fact of sense-illusions.¹⁵ He gives no detailed analyses but simply takes for granted what, since the times of the ancient skeptics, has been advanced against the trustworthiness of our senses. He does not consider that a critical attitude might enable us to distinguish these illusions from veridical perceptions. But even if illusions should be phenomenally indistinguishable, we should have to consider:

(1) Illusion, inasmuch as it implies the missing of actual reality, presupposes the possibility of grasping it by veridical perception. Besides, illusion can only be identified as such from the standpoint of veridical perception. The unmasking of an illusion is therefore rather a guarantee of, than a danger to, the possibility of veridical perception.¹⁶

(2) Illusion in one case does not prove illusion in all cases, but at best the possibility of illusion in other cases. More can

¹⁴ "Non per inconsiderantian vel levitatem sed propter validas et meditata rationes" (Meditatio I).

¹⁵ "Prudentiae est nunquam illis plane confidere qui nos vel semel deceperunt." (*Ibid.*)

¹⁶ Cf. H. Leyendecker, *Zur Phänomenologie der Täuschungen*, I. Teil (Halle, 1913).

only be ascertained at the price of veridical perception free from illusion.

Descartes' second argument for the illusiveness of our perceptions is derived from the impossibility of giving a reliable criterion by which to distinguish between the reality of awakesness and the pseudo-reality of a dream: to put it bluntly, "Perhaps all life is nothing but a dream" (Calderon). Yet a thorough phenomenology of dream-experiences can reveal considerable differences between dream-consciousness and waking-consciousness. There is, for instance, quite apart from the degree of distinctness, the lack of criticism in ordinary dream-life on the part of the subject, and an unstable fluctuation and capriciousness on the part of the objects. But even without such distinguishing criteria, the unreality of dream-phenomena would only make sense with reference to a genuine reality refuting it as a mere dream.

If, finally, Descartes considers the possibility of some ingenious trickery by an omnipotent deceiving demon, we leave the region of well-substantiated doubt based on the actual doubtfulness of the actual reality-phenomena. Certainly his arguments do not exhaust all possible arguments for the doubtfulness of sense-perception. But they may show that the phenomenological basis of the traditional doctrine of illusions does not support the far-reaching conclusions so often drawn from them.

VIII. REALITY-CRITERIA

Mere criticism of the arguments showing the doubtfulness of non-subjectival reality-phenomena is, however, by no means sufficient. A number of significant phenomena indicate affirmatively the reality of reality-phenomena: a fact which certainly does not exclude that these phenomenal criteria have been produced in turn by Descartes' demon, but which, for this reason, must not be ignored. Without any claim to completeness, I mention here:

(1) *The phenomenon of readiness.* According to the actual testimony of our perceptual experience reality-phenomena are

formed not only at the periphery of our perceptual field whenever our glance turns toward them. They seem rather to enter it as ready-made objects only to be illuminated by our consciousness. The singularity of this significant phenomenon (which has already been pointed at by Pfaender) becomes particularly noticeable if contrasted with phenomena which clearly originate at the periphery of our perceptual field, as for instance, vagueness or blurredness.

(2) *The phenomenon of persistence.* To the phenomenon of the readiness of reality-phenomena there corresponds the phenomenon of their remaining unaltered if our glance turns away from them. In leaving our phenomenal field and losing in distinctness they neither seem to perish in the way the character of phenomenality or clearness perishes nor do they follow our glances in the way streaks (conditioned by our lenses) follow them. The way they drift beyond shows that this change does not concern the reality-phenomenon but only its accessory character of presentation.

(3) *The phenomenon of the perceptual periphery.* The edge of our momentary field of perception is by no means delimited sharply. On the contrary, the structure of the marginal phenomena shows plainly that the field of objects extends beyond the accidental and very blurred periphery of our phenomena. To be sure, close by the periphery of perception in Husserl's "horizon" of perception the objects lose more and more in distinctness. Nevertheless, the object presented retains its structure (regardless of the decrease in phenomenal clearness). From this periphery of our presentational field, in the gradual development of our perception, some regions emerge to complete presentation, containing reality-phenomena with the fullest possible adequacy. This seems to indicate that even beyond the field of *any* presentation, where distinctness reaches its zero point, the world continues; that the edge of our perceptual field does not mean the abrupt end of the world, in spite of the fact that we have no *direct* evidence of a field beyond. Thus the transition character of the periphery of our phenomenal field points at an *extraphenomenal* field with which it stands in uninterrupted connection. And whatever

should persist outside the sphere of our phenomena would certainly also exist in and of itself, i.e., be actually real.

(4) *The phenomenon of boundaries in concrete objects.* Most three-dimensional perceptual objects do not end at their perceptual border without any indication of a continuation beyond. Thus a ball, as distinguished from a disk, makes it clearly understood that behind the outlines of its front side there is an area not actually presented. Even the structure of this area can generally be derived from accompanying circumstances in the phenomena, such as darkness of shadows or gradation of light at the edges. Such border zones are very conspicuous in astronomical pictures of the crescent or half-moon, especially at the transition from the illuminated to the eclipsed section; in this region even the ball shape seems to be immediately graspable.

(5) *The phenomenon of independence.* If, in face of a perceived phenomenal object, we carefully suspend all acts which possibly might support its existence, acts of the kind that occur not only toward imagined but also toward mathematical objects, then the fact that such a suspension leaves our reality-phenomena untouched forms another indication of their actual reality. Mere constructs projected into the phenomena would drop out after such an operation, just as, for instance, constellations in stars or certain phenomenal rhythms "heard into" a sequence of sounds "collapse" once our supporting imagination is withheld.

(6) *The phenomenon of resistance.* Following Maine de Biran, Bouterwek, and Dilthey, Scheler has laid particular emphasis on the resistance offered to our will by everything real. Certainly there is much truth in this idea, although dependence merely on our physical effort would be too crude a criterion, especially in the case of non-material objects, and, to be sure, already in the case of space and time. The decisive point seems to lie in a specific resistance against a peculiar mental act of testing, probing, sounding, the reality of reality-phenomena, an act which somehow shakes, jolts, or challenges them with regard to their alleged reality. This act (which has been referred to by Pfaender) attempts, as it were, to deprive them of their reality, and to unmask them as mere appear-

ances. If, nevertheless, they persevere against such an attack (differently, for instance, from those streaks in our lenses which evade every glance grasping for them or from those tiny rays issuing from weak light sources at night, as stars or lanterns) this seems to constitute an additional and increased indication of their actual reality.

(7) *The phenomenon of agreement.* Intrinsic agreement among our reality-phenomena and, in particular, among the many references forward and backward, as they occur in the course of our perception of reality, is equally significant. Continuous mutual confirmation and consistency among reality-phenomena in fulfilling their "promises" beyond the range of our actual data seems to indicate that there is some objective guarantee for this harmony in actual reality.

IX. CONCLUSION

This sketchy hint at the possibility of a realistic solution of the problem of the reality of non-subjectival reality-phenomena on a phenomenological basis is by no means meant to imply that reality coincides with reality-phenomena. It only implies that there is *some* reality in or behind the phenomena. In fact I think there are momentous reasons which, in the case of sense perception, make it impossible to uphold a strict identity between our reality-phenomena and actual reality, as phenomenological realism has too readily assumed. But this by no means implies an endorsement of critical realism in the usual sense, which I consider to be unworkable for reasons of principle as going beyond the limits of possible experience.

There is no space here to develop this idea of a critical modification of phenomenological realism.¹⁷ The main thing that had to be shown was that phenomenology is by no means restricted to the phenomenal prison to which Husserl's method of reduction seemed to condemn it.

¹⁷ A paper on "Critical Phenomenological Realism," which originally was to be published as part of this essay but had to be left out for reasons of space, will be published separately in *Philosophy and Phenomenological Research*.

THE PHENOMENOLOGICAL CONCEPT OF "HORIZON"

Helmut Kuhn

THE CONCEPT of "horizon" with its family of compounds appeared first in Husserl's *Ideen* (1913), simultaneously with the disclosure of the "transcendental" type of phenomenological research. It soon assumed, in Husserl's own words, an "all-commanding role,"¹ prescribing to phenomenology an "absolutely new method."² Thus it is in the nature of our subject-matter to frame its treatment as a study of the phenomenological method. As this is far too great a subject to be fully dealt with in short compass, I propose to put in relief one aspect of this method. I shall present it as a development of experience, that is, of a type of knowledge which perpetually springs from the contact of the intelligent mind with objects of all kinds. To think of Husserl's teaching as of a modern Platonism standing in contrast to the analysis of experience initiated by Locke and Hume is misleading and detrimental to a fair appraisal of his achievements. This is not to say that phenomenology should be classed with empiricism. The votaries of experience commonly request us to clear our mind of all beliefs and generalities taken on trust or engrained by habit and to give ourselves whole-heartedly to the experienced world. Precisely this is enjoined by Husserl. But he warns us also not to let ourselves be deceived by the false pretensions often attached to the generalizations of science and not to take for ultimate reality the "cloak of ideas" cast over nature by mathematical physics. The fact that we are able to explain colors in terms of a microcosmic mechanics does not warrant the assertion: colors are "in reality" ether-waves of a determinate length, or they are "nothing but" ether-waves. "The tradesman on the market," Husserl says, "has

¹ *Logik*, p. 177.

² *Méditations Cartésiennes*, p. 42.

his truth — the truth of the market. Is that not, taken in its relations, a good truth and the best of which he may avail himself? Is it the mere semblance of a truth, because the scientist, forming his judgments with respect to other relations, other goals and ideas, seeks a different sort of truths and because these truths, though instrumental within a far broader range of application, happen to be unfit just for the purposes of the market?"³

The assertion that philosophy develops experience is equivocal, and so is the epithet "empirical" affixed to philosophical systems or procedures. It may mean (a) that philosophy moves on the same level with specialized empirical research, either combining its results into a systematic whole or carving out for itself a special sector of experience. In the second place, the notion may be (b) that philosophy has to work on experience, subjecting it to a critical analysis. Philosophy, then, as the "experience of experience," would constitute a new plane of reflective experience. In this second sense alone phenomenology can claim to be a development of experience. It is an attempt to base philosophical analysis on an impartial and adequate account of what really happens in experience. For the attainment of this end, the concept of "horizon" is one of the foremost instruments.

In order to grasp the meaning of the notion under analysis, it may be well to retrace the steps of the terminological creation from which it sprang. Three elements of meaning may be pointed out, all three adumbrated by the pre-philosophical usage. (1) Horizon is the ultimate circumference within which all things, real and imaginable, are bound to appear. To explore the horizon means to move away from the ordinary foci of attention with a view to integrating the things at hand in a broader and ever broader context. The idea of horizon stands for the progressive drive inherent in experience. (2) While limiting the totality of given things, the horizon also frames it. The frame of a picture, though forming no part of it, helps to constitute its wholeness. Simi-

³ *Logik*, p. 245.

larly, the horizon determines that which it frames. The fact that the object is framed by a horizon is relevant to its mode of appearance. Its way of being is essentially a "being within." Hence horizon as a guiding notion enables us to reveal shades of meaning cast on the object by its environment. It stands for the striving after intensification and concreteness. (3) By its very nature every horizon is "open." As we move from the center toward the circumference fresh horizons open up. We are constantly invited to transcend the boundary of our field of vision. This process is either infinite or limited. In the first case, no truth would be attainable. We could make no statements but provisional ones. In the second case, the limitation would have to be provided by something outside all imaginable horizons, that is, by some non-empirical factor (analogous to the shape of the globe, which limits the shifting from one "horizon," in the original sense of the word, to another). Thus the notion of horizon points to a basis of experience outside experience. It stands for the impetus of self-transcendence with which experience is animated.

The following discussion of the three aspects enumerated takes up and utilizes a notion conceived by Husserl without confining itself to an interpretation of his words. The value of the term under consideration consists in its functional character. The underlying idea cannot be located somewhere within a systematic framework. It is not a sediment of the process of knowledge but a principle animating it. It shows itself only in operation. Therefore its meaning has to be explained by exemplification rather than by a systematic delimitation.

I. "HORIZON" ANSWERS TO THE DRIVE FOR EXTENSION

I perceive some visible object, say this brown wooden box right in front of me on the table at which I am sitting. Reflecting on this event, I distinguish two elements: First, the thing perceived with its manifold sensuous qualities; not this box, however, as forming a part of the real world, but this

same object in so far only as it is an ingredient of that piece of organized inner life which, a second ago, filled my consciousness and which lends itself now to a retrospective analysis. This first element may be labeled percept. The percept, however, is merely a specific form of what has been dubbed *noema* by Husserl — a term which cuts across the border-lines of perception, recollection, imagination, and the other forms of experience. *Noema*, in other words, denotes indiscriminately the thing perceived, remembered, fancied, expected, and so forth, the object of all objectivating acts. Secondly, there is the act of perception visualized as a dynamic structure. Again this is a member of a numerous family of acts, a specification of what falls under the general notion of *noesis*. Common to all these acts is their being directed toward something, their meaning or intending something. They all point to an object as to their end. Perceiving, thinking, feeling, remembering, hating we perceive, think, feel, remember, hate something or somebody. It is this pervasive characteristic of the mental operations in which phenomenological analysis centers. Its recognition entails no less than a comprehensive conception of the working of the human mind. To denote this dominating structure of our cognitive and emotive life, Husserl used words and compounds derived from the Latin *intentio*, a Scholastic term resurrected by Franz Brentano. In most cases, the term “teleological” will do as a substitute.

While we are performing the act itself, absorbed or, as Husserl was fond of saying, “living” in the act, we are unable to become aware of it. The object holds our attention to the exclusion of everything else. The act reveals itself as a teleological structure only to a supervening reflection, that is, to another teleological act within which the former appears as an object. Every objectivating act is apt to become the object of a new objectivation, and it invariably undergoes this metamorphosis when it is swept into the purview of our reflective consciousness. Hence the reflection which brings about this telescoping of acts, an act constantly performed in everyday life, is the prototype of the meditative process in philosophy. The structure designated by the term *intentio*

runs through the total field of philosophical research. From the phenomenological point of view, philosophy is an analysis of the inner life viewed as a creative impetus toward objectivation.

A comparison of the two constituents of the whole act shows the primacy of the objectivating striving over the ready-made object, of the *noesis* over the *noema*. At any rate, this primacy exists for the analysis of the act. The act as a whole does not become visible to us unless we free ourselves from the absorption in the object as simply given or discovered, forcing instead into view the same object as perceived, believed, remembered — in short, as an element of a presentative act, as the end (*telos*) of an *intentio*. It is owing to the prominence given to the objectivating activity that the composite of this activity and its correlate object, that the whole act, becomes accessible. Yet another argument, carrying even more weight, points in the same direction. We assign to the object a specific character, its objectivity. Objectivity may be defined as the independence of the object of the mode of its apprehension. The positive meaning at the back of this negative definition appears to be that the object is the invariant pole or *telos* of an unlimited series of variable acts. An object has objectivity in so far as it can be perceived, remembered, desired, and so forth, successively without losing its identity. It rather gains its identity from these actual or potential variations. Objectivity is not a mysterious quality which locates things beyond the flux of conscious life. It simply indicates the possibility of keeping the objective something before our mental eye as persistent, or again of dismissing and then recalling it as unalterably the same. Thus the very objectivity of the object is to be defined in terms of the objectivating activity. The question as to whether or not this assertion entitles us to speak of the object as “constituted” by the correlate acts cannot be discussed in this connection. A positive answer would lead straightway to the idealist conclusions of Husserl’s later writings.

These preliminary remarks supplied the elementary notions indispensable for any phenomenological analysis. We now

return to our example, the perception of the wooden box. The percept of this perception admits of a further distinction. There is first the visual image of the thing, secondly the perceived thing in its entirety. The two are not congruous with one another, as the second evidently protrudes beyond the first. Only three sides of the object are presented in the visual image, placed there in juxtaposition as parts of the visual plane and marked off against the background by color and light. We see, however, the thing as being spatial, having eight sides, a smooth surface, etc. I can turn the box round with my hand, making sure what it feels like and bringing into view its opposite side. Or I may look at it from the far corner of the room. These and other changes of viewpoint are not merely adventitious with regard to the initial perceptual act. They develop potentialities predelineated in the original percept. We do not see an aggregate of color-impressions as the associationist psychology would have us do. The adherents of this school rarefied the actual percept into an abstract under the guidance of certain preconceived ideas. Their congeries of impressions is an idealization of experience in the same sense as A. S. Eddington's often quoted "scientific table," consisting of an eddy of electric charges, is another such idealization determined by other leading concepts.⁴ In reality we see the concrete thing, this box. The visual image presenting one aspect of the thing is charged with potentialities — potentialities which may be unfolded by coördinate percepts revealing further aspects of the same thing. By its very nature the initial aspect is one among countless others. It signifies something other than itself, conveying the more or less decipherable index of related views of the same thing. We may or we may not care to actualize these potentialities, either by actually turning round the thing or by performing in imagination some act of this kind. In any case the possibility of this change of viewpoint exists, and it exists not only as a bare or factual possibility. It is a "bare possibility" that, by some awkward movement, I may knock the box off the table. This is irrelevant to the appearance of the object, an arbitrary

⁴ *The Nature of the Physical World* (New York, 1928), p. xii.

specification of the possibility of moving or handling the object. And this latter possibility is relevant indeed. Relevance in this connection means that the possibility or series of possibilities is implied in the percept. It forms a constitutive element of the appearance of the thing.

The potentialities which we have in mind are clustered round the visual image. We cannot eliminate them without destroying the unity of the percept. To introduce here the concept we are aiming at is merely a question of terminology. "Horizon" is but another name for the totality of organized serial potentialities involved in the object as *noema*, that is, as the intended object of an "intentional" act. The "ray of consciousness" illuminates a small central sphere, the sensuous substratum immediately given to our visual, auditory, olfactory, or tactual perception. Around this focus there is a halo of potential perceptions shading off the meaning of the focal center. Nucleus and horizon together compose the percept or, more generally speaking, the "object in mind." However, this characterization of the horizon is as yet one-sided. We moved, as it were, only within one of the several dimensions which together make up the horizon in its entirety. Those potentialities or implications which so far served to illustrate our point constitute what has been termed the "inner horizon" by Husserl. The explication of those anticipated aspects to which alone we have called attention leads into the intrinsic structure of the object. As we send our glance traveling through the open stretches of the horizon, the thing before us offers itself in ever fresh aspects. Explication, carried on in this direction, is intensification. But we may as well turn in the opposite direction and move away from the object. All the salient characteristics observed in the "inner horizon" — the relation of potentiality to actuality, comprehensive anticipation and gradual unfolding of anticipated features — recur *mutatis mutandis* in the new field. The perceived thing, the box before me, is more than its momentary appearance, but it is also more than the multiplicity of its aspects. It is on the table, beside the inkstand, in the study, serving as a receptacle for pencils. It has its "outer horizon" as well as its inner.⁵

⁵ *Erfahrung und Urteil*, p. 28.

There is no such thing in our experience as an isolated object. The perceived thing is related to other things, to its closer and wider environment. All these relations taken together form an organized whole, the world. The object before me is an object within the world. Again this relatedness is not an incidental addition to the object taken in itself, an addition which might as well be disregarded. Seeing the thing, I see also its relatedness, though only by way of implication, as the as-yet-shadowlike court round the focus of perception. Furthermore, both the outer and the inner horizon are inextricably interwoven with the *temporal horizon*. The present perception of the object before me is a link in a chain of successive perceptions each of which either had or will have a presence of its own. Accordingly, the apprehension of the thing points both ways: to the immediate and remote past on the one hand, to the immediate and the distant future on the other. The temporal characters of the "stream of consciousness," the remembrance of the past as well as the expectancy of coming things, inform the present apprehension. The "once" and the "just now," the "right now," "soon," and "later," are structural features of that complex whole which is the ever-shifting temporal actuality of our consciousness.⁶

Both the outer and the inner horizon are permeated by the temporal "dimension" of experience. The very terms by which we explained the significance of the horizon, such as anticipation, actualization of the potential, explication, involve an element of time. However much I am absorbed in the momentary object of my attention, the direct inspection will invariably be bordered by a "fringe" of retrospection and prospectation. The box I am looking at is familiar to me. That is, the actual percept is welded together with a long series of former objectivating acts, or rather with their sedimentation, the well-known, often seen, easily recognized thing. I never simply see an object. I see it again, I discover it, stare or glance at it, stumble over it; in short, my awareness of it is always tinged by some temporal mode of apprehension.

⁶ Cf. Husserl's *Vorlesungen zur Phänomenologie des inneren Zeitbewusstseins* (Halle, 1928).

Again, the present percept points forward to its successors. The object offers itself in various modes as abiding or evanescent, with the promise of its future presence, as a momentary or as a periodical appearance.

There are relative discontinuities, but there is no real break in the temporal background encircling the "here and now" of actuality. The absolutely new is inconceivable. Novelty exists only in conjunction with familiarity. Every object, it was asserted a while ago, presents itself within the world. And this world is the world of the percipient. Now "world" defined in terms of temporal experience is an organized body of expectations based on recollections. Previous to any single experience, our mind is already armed with a framework of regions, outlines, and typical shapes of experienced objects. To perceive an object means to locate it within this system of expectations. Compared with the actual perception, the expectation of "what a thing of such and such a sort may look like" is indistinct, a mere diagram. With respect to this dormant mold, the perception which awakens it is a fulfillment. Then the actual saturated experience in its turn lays the foundation of new more or less formalized expectations. Both elements, however, anticipation and *nisus* toward continuance, the "before" and the "hereafter," do not belong to separate acts in the succession of experiences. They are rather ingredients of the one act under consideration, composing the temporal horizon of the object intended, the *noema*. And each previous or subsequent act has its own temporal extension, its own past and future.

On the strength of the above analysis, it may not be overbold to assert that seeing this box before me I see the whole world — "world" taken in the strictly subjective sense to which we confined this term. Prerequisite for the coming about of this perception is, e.g., the acquaintance with spatial objects of a characteristic make-up: filling a certain sector of the total space, being limited by other objects, visible when exposed to light, impenetrable to touch, having a determinate weight, etc. These are the features I expect things to bear. They constitute the basic lineament or "style" in which

I build up my picture of the world. I cannot perceive this box or any other object unless it fits into the preconceived pattern. A poet may fancy a world different from ours. But its divergence from reality will be confined to variations within the accepted scheme of things. The dispute of realistic versus idealizing art springs, in the last analysis, from the problem as to how to determine the limits of the unalterable groundwork of reality. It is of no use to search for a beginning of the anticipatory pattern of the world within experience. Wherever there is experience, rudimentary though it may be, there is already the typical "mundane horizon" around the envisaged objects. We may trace its differentiation and transformation, not its commencing in time.

At the outset, we distinguished the act as a teleological structure (*noesis*) from the object as the goal of this act (*noema*); in other words, the thinking (*cogitatio*) from the thought (*cogitatum*). We have now to subdivide the two sides of this division. On the part of the *noema*, a nucleus has to be set over against its court or horizon. In an analogous fashion the act as "intending" falls into the direct visualizing of the object on the one hand, the concomitant aiming at its background on the other. Envisaged under its first mode, we find the act, so to speak, as a straight ray of consciousness hitting the object. The second mode of "intending" (if allowance will be made for the inevitable inaccuracy of this metaphorical abbreviation) is to be likened to a stream of dispersed light enveloping the central ray and terminating in a dimly lit halo. At the back of this seemingly artificial classification with its duplicated duality there lies, as we saw, a wealth of structures which in their entirety constitute experience.

II. "HORIZON" ANSWERS TO THE ASPIRATION AFTER CONCRETENESS

The horizon induces the investigator to travel from the center through continuous lines of connection to peripheral regions. Now I proposed to consider, in this second part of my argument, the countermove which checks and supple-

ments this centrifugal drive, the reflux, as it were, from the circumference toward the center. In the meantime, however, it has become obvious that the two tendencies are not to be separated, not even for the purpose of exposition. The idea of the diastole of knowledge implies that of the systole and *vice versa*. The two correspond to the two components of the idea of horizon — to the notion of “that which lies beyond the immediately given” on the one hand, to that of the inherent potentialities on the other. The light of explication illuminating the horizon will necessarily stream back to the center and shed a fresh clarity over the initial aspect of the thing perceived. The broader the context in which I see an object, the more concrete will be its appearance. I compare, for example, this little box knocked over and falling off with the sun traveling above through the sky. No doubt the two things are sufficiently heterogeneous. Yet I have something definite to go on, if I strike this comparison. I am simply following lines adumbrated in the horizon of my initial percept. The object offers itself as a thing in the world, and reviewing this broadest context I encounter among other things the sun as likewise being “in the world.” Furthermore, the sun answers to the same “categorical expectations” which are fulfilled by the vision of the box: they both fit into the mold characterizing “bodies in motion.” In other words, within the organized body of expectations — the characterization which we have given to the ultimate horizon of the perceived object — this object and the sun are encompassed by the same structural feature. The bare fact of putting the two things side by side may lead to divergent results. I may arrive at the idea of sympathy pulling with invisible strings both sun and falling box; or, as a beneficiary of modern science, I may come to discover the law of gravity. In either case a fresh concreteness will accrue to the vision of the object. It will appear more distinctly as the representative of something beyond itself. Progress in knowledge teaches us how to see better things near at hand by seeing them in their togetherness with distant things. The ancient Ionians, for example, observed “periodical alternation” as a pervasive feature of the experi-

enced world. This observation of widest range stimulated a closer attention to periodical changes within the human body and thus paved the way for scientific physiology.

Our program, then, cannot be carried out literally. We find that the drive toward intensity or concreteness has already been taken care of by the treatment of the centrifugal *nisus*. We may, however, raise the question of concreteness in its strictly general form. What do "concrete" and "abstract" mean, and what right do we have to use the latter term with an overtone of depreciation? In answer to this question the reply will be made that experience in the indicated sense, that is, the immediate awareness of objects offering themselves as present, is the true locus of concreteness. Our notions deserve the title "concrete" by virtue of their clearly defined reference to these original acts of experience. There is no question of confining direct experience to merely sensuous perceptions or impressions. The simple percept is permeated throughout and informed by universal structures. Breaking up this unity we shall find that its two elements, taken singly, are "abstract," the sensuous material no less than the conceptual framework. Both acts and intended objects are also abstract when taken as self-contained wholes detached from the network of actual experience. The meaning of the object as well as the truth of the intending act can only be ascertained by the elucidation of its horizons in continuous chains of explications. No proposition or judgment carries the guarantee of its validity in itself. Husserl's own theory at an earlier stage was not free from abstractness in so far as it seemed to land us in a multitude of independent essences. The notion of horizon was instrumental in overcoming this deficiency.

Knowledge has to keep close to experience, the source of concreteness. On the other hand, knowledge has to go beyond the immediacy of experience; that is, it has to deal with more or less detached generalities and to that extent cannot help being abstract. The two assertions, contradictory on the surface, are actually in perfect harmony. Modern physics, for instance, is abstract indeed. It reduces the data of experience to terms of locomotion defined by spatio-

temporal relations. Treating sensuous qualities as mere indications of mechanical events, it arrives at a radical quantification of experience. Thus it makes the most of the great discovery that reality as a spatial-temporal phenomenon can be expressed in mathematical terms and that this mathematical idealization enables us to plan and predict events with a high degree of precision. Now this decidedly abstract or, as we had better say, idealized rendition of reality is meaningful and understandable only in conjunction with the primary untampered experience from which it is abstracted. It results from the one-sided and strictly methodical exploration of a set of features typical of primary experience, features ordinarily perceived as a little articulated lineament in the horizon of objects. In order to verify his findings the physicist has to take recourse constantly to the fulness of unabridged experience and to reënact the idealization from which his science stems. And what is here said of physics in its relation to experience applies with proper modification to the other branches of knowledge.

From this legitimate abstractness we distinguish its counterfeit replica. The foreshortening of reality in accordance with some conceptual scheme is perfectly justified provided the meaning and limited bearing of the idealization is borne in mind. The spectacular success, however, of the explanatory scheme of physics inveigled philosophers into reversing the true relationship between original experience and quantifying idealization. The possibility of reading nature in a mathematical language was mistaken to mean that experience itself, the matrix of all knowledge, was to be spelled in this idiom. Even where this naturalistic error was not committed in its gross form, the analysis was adversely affected by the subtle influence of physical habits of thought. A revealing instance is Hume's contention that all the perceptions of the mind fall into two classes, impressions and ideas, and that the second differs from the first by a lesser degree of force and vivacity.⁷ This basic dogma of Hume's betrays the influence of a natural-

⁷ *Enquiry Concerning Human Understanding*, sec. II.

istic mode of thought in two ways. The notion of "impression" with its physiological implications is obviously modeled on the smallest unit in contemporary physics, the atom; and the attempt to reduce to a mere difference of degree the qualitative difference between impression or direct sense-perception on the one hand and idea as the result of reflection on the other is a specimen of misplaced quantification. These are spurious idealizations of authentic experience: instead of articulating genuine implications, they impose upon actual findings an alien order.

In our day a powerful anti-naturalistic current in psychology and sociology opposes atomism. *Gestalt*, the whole prior to the part, synopsis — such are the catch-words of a trend of thought which successfully aids modern research in tightening its grip on experience. From a phenomenological point of view, however, the "holistic" system of reference is no less apt than its predecessor to harden into a dogma which overrules an unbiased inspection of the actual data. This is particularly evident in sociology. The fact that the individual necessarily acts and thinks as a member of a community, of a family, tribe, or nation, should not entice theorists into assuming a collective super-person logically anterior to the individual. No part can extricate itself out of the whole in which it belongs by a withdrawal of its assent. But the human member of a community can do so, and the individual's ability to make such a decision is constitutive of, and prior to, the societal unity. This unity rests on the loyalty of its members. This example calls attention to a fundamental problem. It will not do to advocate the permanent contact with experience as the fountainhead of intellection, nor can we rest content with the demand that abstract schemes should be confined to an explication of actually given horizons. As we go into the business of the explication or actualization of the potential, we shall have to confront an order of priority and posteriority. In each single case we shall have to decide which of two structural features conditions the other, or whether there is a third layer of phenomena on which both are based. The ideal of true empiricism is not to be reached

by an evasion of system, but rather by a systematization which sets forth the fundamental structure of all imaginable experience as a hierarchical order of conditioning and conditioned strata. Explication is essentially a regress from the variable and specific to the basic and permanent. The variety of horizons corresponding to the multitude of envisaged objects must finally lead to an ultimate "horizon of horizons" containing the conditions of all actual and potential experience. The question presses upon us as to what ultimately makes our world a world. Apart from the tremendous difficulties involved in the detailed carrying out of this systematization, a problem bound up with its general plan may briefly be raised.

III. THE PROBLEM OF AN "ULTIMATE HORIZON"

According to Husserl, the usefulness of the notion of horizon consists also in that it provides an explanation of the "occasional judgments" and their validity. By this term we understand assertions made outside the process of explicit reasoning. In workaday life we commonly converse with each other by means of elliptic phrases, brief intimations, or even mere gestures. It hardly ever occurs that we express our opinion in a sequence of arguments, one supporting the other, and yet we understand each other perfectly well. The reason for this is that we constantly live and think in reference to a scheme of anticipations called "situation" — another dimension of the horizon encircling the focus of conscious life. Its chief traits may be described as follows. (*a*) Situation is the situation of somebody, of an individual, a group of individuals, or, in a generalized form, the situation of a certain type of individual, or lastly of man as such — all these subjects viewed as agents, acting, resting, assuming attitudes, pursuing ends. (*b*) The unity and peculiar structure of the situation does not spring from the objects but from the intending acts and their emotive and valuational modes. (*c*) Situation is all-absorptive; everything may enter into it as a determinant. It is not a part or a sector of the objective world, but this world viewed from

a certain angle — the angle determined by needs, cravings, hopes, and fears. (d) Although the situation in its permanent and typical features is informed by the subject, its specific shape and its alterations depend on external factors. The subject finds the situation through which he goes unmistakably his own. At the same time he is at the mercy of the situation.

The existence of this additional “dimension” complicates matters in a peculiar way. There are now two roads open to the pursuit of our goal, the systematic explication of horizons. The philosopher’s task, the quest for an ultimate foundation (the elucidation of the “horizons of horizons”) appears to be ambiguous and we are called upon to make a choice. On the one hand, we shall have to aim at a picture of “the object as such” comprising the universal features of things at large, their spatial-temporal appearance, their interdependence, the characteristic interdigitation of wholes and parts, etc., in short, at a theory of the *noema* in general. On the other hand, we may trace the main lines of the situation, that is, those vestiges which the intending acts impress on the object, stamping it as ours, as part of the human environment. The acts relevant in this connection have a merely subjective aspect when viewed as the emotive reaction to an outward stimulus. At the same time, however, as an attitude in regard to the object, they contribute to its constitution, draw it into the ambit of our life, and mark it as an element of the human situation. The surface of the globe, then, becomes our “landscape,” the waste of salt water an ocean which we sail; the plant a vegetable or a weed, etc. Through a systematic analysis of these modes of assimilating presentation we may arrive at the universal pattern of the human situation. And this pattern would have to contain the basic conditions which render possible all imaginable world-pictures — “world” understood as a meaningful whole answering to human needs.

The question is which of the two directions of analysis will lead to a ground of experience. Is the ultimate foundation to be sought in the structure of an “object as such,” or rather in a pattern of basic human modes of dealing with objects? The reply will be that neither road leads to the desired goal.

Analyzing the structure of the total object, we encounter partial wholes such as organisms and bodies, regions of objects such as nature or society; but the totality is not given as a whole. Its status is that of a "regulative idea." As we attempt to realize this idea, we incur the danger of imposing upon the *totum* a pattern borrowed from a part. We become naturalistic or biologicistic or psychologistic metaphysicians. Nor can the foundation be found in the scheme of our human organization as determining the human situation. A pattern thus obtained would exhibit genuine wholeness and in a sense this whole would even be all-inclusive. But it would lack independence. Its all-inclusiveness would be bound up with particularity. Man who by the very fact of his awareness of things cannot help incorporating them into the orbit of his life and conferring upon them a meaning which, in the last resort, is the meaning of his existence — this creator of his world is himself only a fleeting particle of the world. And the consciousness of this fact is itself a basic feature of the human situation. In other words, the two horizons encompassing and guiding our research do not include one another. The human or instrumental meaning of things vanishes in the analysis of the world as *cogitatum*. And tracing back the human situation as a potentially meaningful whole to its source in constitutive *cogitationes*, we find ourselves put off with a terminus which, contingent and fragmentary as it is, provides no ground to stand upon.

The conclusion at which we thus arrive is, at the face of it, negative. The enterprise of phenomenological explication, however far it may be pushed toward completion, is unable to reach the layer of an ultimate foundation. Whether it starts as ontology (theory of the intended object in general, *Gegenstandslehre*) or as existential analysis (theory of the human situation, philosophical anthropology), in neither case is it able to join beginning and end. But this result may be given a positive though merely tentative form. It may be said that the concept or set of concepts postulated for the consummation of the philosophical process has to share in the two realms which, singly taken, fall hopelessly apart. It must show the

relationship of object and human situation as fundamental for both. In traditional teleological metaphysics this linkage was supplied by the idea of "art" (τέχνη), that is, the purposeful making of things — the master pattern on which the central metaphysical notions were modeled. In Husserl's doctrine the idea of "constitution," of a positing act performed by the transcendental ego, assumes the role of the metaphysical cornerstone. Under the guidance of this notion he arrived at a radical idealism not necessarily implied in his method. Perhaps we shall refuse to follow him in this supreme venture. Nevertheless it will remain true that Husserl has shown a new approach to the metaphysical problem which it is well worth our while trying. *E tenebris tantis tam clarum extollere lumen.*

PHENOMENOLOGY AND LOGICAL EMPIRICISM

Felix Kaufmann

AT FIRST GLANCE there seems to be an irreconcilable opposition between logical empiricism and Husserl's phenomenology. The former appears as the most consistent modern representative of that trend in philosophical thought which led from the Sophists and the Sceptics to Locke and Hume; the latter, as a continuation of the great philosophical tradition which issued from Plato and Aristotle and led to crowning accomplishments in the theories of Descartes and Leibniz. On one side empiricism, on the other side apriorism; the primacy of science proclaimed by one, that of philosophy by the other; a method of philosophizing orientated preponderantly according to physics on the one hand, according to introspective psychology on the other — sharper contrasts seem hardly conceivable. The logical empiricists themselves see the relation of their theory to Husserl's phenomenology exclusively in the light of these contrasts. For them phenomenology is only a modern variety of metaphysics, one that professes to have a source of absolutely certain knowledge in the pseudo-method of eidetic or essential intuition (*Wesensschau*). This is a serious misunderstanding, the removal of which might be of great significance for the development of philosophical thought. Through the unity-of-science movement the logical empiricists are well on the way to effecting a kind of alliance, a far-reaching mutual understanding, between the different empiricist and positivist doctrines. The undertaking of an *International Encyclopedia of Unified*

AUTHOR'S NOTE.—I am greatly indebted to Dr. Dorion Cairns for the translation of this article, which was originally written in German. I would have been unable to formulate the passages quoted from Husserl's *Formale und transzendente Logik* in adequate English.

Science — the first volumes of this work will soon be completed — is a noteworthy result of these endeavors, which aim particularly at coöperation with American pragmatists. On the other hand, I hardly doubt that Husserl's immense lifework will gain a most enduring influence on philosophical thought as soon as his chief publications and the most important part of his literary remains have appeared not only in German but also in other widely read languages.

This situation will give rise either to a new unfruitful strife of schools or to a mutually significant intellectual coöperation; the outcome will depend on whether the prejudices standing in the way of mutual understanding can be removed. The prejudices of the phenomenologists are largely owing to the fact that, from the misinterpretation of their doctrine by the logical empiricists, they draw an over-hasty conclusion about the level of logical empiricism as a whole and think it would not repay closer study. The logical empiricists, on the other hand, consider phenomenology as metaphysics, refuted along with the rest of metaphysics by the unmasking of metaphysical sentences as senseless aggregations of words. Their critical remarks on Husserl's doctrine are directed almost exclusively against the method of eidetic intuition and the evidence claimed for it. They refer mostly to the *Logical Investigations* and the *Ideas* and do not take into consideration the *Formal and Transcendental Logic*, where Husserl in unmistakable fashion rejects the conception of the evidence of eidetic intuition that they impute to him. A detailed discussion of the opposed theory has been undertaken by neither the phenomenologists nor the logical empiricists.

The following essay is intended to promote a better understanding between the two doctrines. I shall try to show that, if the logical empiricists are consistent in seeking their goal, namely, the analysis of scientific methods, then the problems that form the point of departure for phenomenological reflection must emerge within their field of vision. Furthermore, I shall show that phenomenology and logical empiricism are incompatible only so far as sensualistic prejudices still prevail in the latter. These prejudices, however, have already been

noticeably repressed, and one may hope that they will be removed in the further development of the doctrine.

The following brief exposition of the principles of logical empiricism will make clear what I regard as the essential content of the theory, a content that would not be affected by the removal of the theory's sensualistic components.

II

The principles of logical empiricism may be simply characterized by stating their relationship to the doctrine of David Hume, so far as it concerns, first, the relation between science and philosophy and, secondly, the relation between empirical and logico-mathematical sciences. The logical empiricists accept Hume's interpretation in its essentials. According to their view, the chief task lies in giving Hume's interpretation the form that agrees with the results of modern logico-mathematical and natural scientific inquiries. These results, they maintain, make it possible to render Hume's fundamental position in an improved form and to defend it against all objections, particularly those raised by Kant. In this connection two separate, though not unconnected, scientific achievements are considered decisive:

(1) The uprooting of the thesis that the propositions of Euclidean geometry are synthetic judgments *a priori*, that they are necessary elements in any scientific explanation of physical facts. This was accomplished by Einstein in his general theory of relativity where he described the physical world in the language of Riemannian geometry, for which the Euclidean parallel-postulate does not hold.

(2) The results of modern mathematical postulate-theory and symbolic logic, which have greatly clarified the connection between logic and mathematics and have completed the process of formalizing these sciences.

Logical empiricists interpret these scientific results as the definitive refutation of the fundamental thesis of apriorism, the thesis, namely, that there are apodictically valid propositions about reality. Einstein's famous aphorism, "In so far

as the propositions of mathematics are about reality, they are not certain, and in so far as they are certain, they are not about reality,"¹ holds likewise for all alleged synthetic judgments *a priori*. In this, all modern empiricist doctrines are agreed. The specific character of logical empiricism lies in the fact that, in dealing with the question of the meaning of philosophy and in criticizing metaphysics, it applies the results of modern inquiry concerning the foundations of logic and mathematics.

The analysis of logical deductions and mathematical proofs has shown that they can be resolved into (a) operations with a "calculus," i.e., with groups of signs to which no sense of any kind is attached, and (b) a subsequent interpretation, by which a definite meaning is given to the signs and certain combinations of signs (formulae). Carnap defines the concept of a calculus as follows:

By a *calculus* is understood a system of conventions or rules of the following kind. These rules are concerned with elements — the so-called *symbols* — about the nature and relations of which nothing more is assumed than that they are distributed in various classes. Any finite series of these symbols is called an *expression* of the calculus in question.

The rules of the calculus determine, in the first place, the conditions under which an expression can be said to belong to a certain category of expressions; and, in the second place, under what conditions the transformation of one or more expressions into another or others may be allowed.²

Thus

the system of rules of chess is also a calculus. The chessmen are the symbols (here, as opposed to those of the word-languages, they have no meaning), the rules of formation determine the position of the chessmen (especially the initial positions in the game), and the rules of transformation determine the moves which are permitted — that is to say, the permissible transformations of one position into another.³

Alongside mathematics, in which one *operates* with calculi, i.e., in which one transforms given formulae into others, David Hilbert, whose theory of proof represents the final stage

¹ *Geometrie und Erfahrung* (Berlin, 1921), p. 3.

² *The Logical Syntax of Language* (New York, 1937), p. 4.

³ *Ibid.*, p. 5.

in the formalization of mathematical thought, has set up a metamathematics in which one speaks about the calculi, e.g., stipulates the number of fundamental signs they contain. In like manner the Polish logicians (Łukasiewicz, Tarski) have set up a metalogic alongside logic. Carnap united the concepts of metamathematics and metalogic in the concept of logical syntax.

The *syntax* of a language, or of any other calculus, is concerned, in general, with the *structures of possible serial orders* (of any definite kind) *of any elements whatsoever*. We shall now distinguish between pure and descriptive syntax. *Pure syntax* is concerned with the possible arrangements, without reference either to the nature of the things which constitute the various elements, or to the question as to which of the possible arrangements of these elements are anywhere actually realized (that is to say, with the possible forms of sentences, without regard either to the designs of the words of which the sentences are composed, or to whether any of the sentences exist on paper somewhere in the world). In pure syntax only definitions are formulated and the consequences of such definitions developed. Pure syntax is thus wholly analytic, and is nothing more than *combinatorial analysis*, or, in other words, the *geometry* of finite, discrete, serial structures of a particular kind. *Descriptive syntax* is related to pure syntax as physical geometry to pure geometry; it is concerned with the syntactical properties and relations of empirically given expressions (for example, with the sentences of a particular book). For this purpose — just as in the application of geometry — it is necessary to introduce so-called correlative definitions, by means of which the kinds of objects corresponding to the different kinds of syntactical elements are determined (for instance, “material bodies consisting of printers’ ink of the form ‘v’ shall serve as disjunction symbols”). Sentences of descriptive syntax may, for instance, state that the fourth and the seventh sentences of a particular treatise contradict one another; or that the second sentence in a treatise is not syntactically correct.”⁴

The following thesis is decisive for Carnap’s interpretation of the relationship between science and philosophy:

We see, therefore, that whenever we investigate or judge a particular scientific theory from the logical standpoint, the results of this *logical analysis* must be formulated as *syntactical sentences*, either of pure or descriptive syntax. The *logic of science* (logical methodology) is nothing else than the *syntax of the language of science*.⁵

By logical analysis the sentences of metaphysics are shown to be pseudo-sentences, inconsistent with the rules of logical

⁴ *Ibid.*

⁵ *Ibid.*, p. 7.

syntax. According to Carnap, the chief source of metaphysical errors lies in the fact that syntactical sentences (sentences about language) are misinterpreted as object-sentences (sentences about things or matters of fact in the narrower sense). To avoid this error it is advisable to substitute the formal language for the object language, which gives the illusion that syntactical sentences are of the same type as object-sentences. Then, e.g., instead of the sentence, "Every color is at a place," the sentence, "A color-expression is always accompanied in a sentence by a place designation," would occur;⁶ and instead of the sentence, "Time is one-dimensional; space is three-dimensional," the sentence, "A time-designation consists of one co-ordinate; a space-designation consists of three co-ordinates."⁷

Carnap has shown (*contra* Wittgenstein, *Tractatus Logico-Philosophicus*) that one can speak about a particular language by means of that language, i.e., that a meta-language and an object-language can have the same syntax.

According to what has been said, the rules of a pure calculus can be described entirely within the limits of logical syntax; for interpreted calculi, however, and for the language of the empirical sciences in particular, the correlative definitions stating what meaning shall be attached to the signs and series of signs are also required. This meaning is determined by indicating experiences that shall constitute the sufficient condition for using the expressions in question, e.g., it is stipulated that one may use the sentence, "A blue thing is at the place p at the time t ," on the basis of an optical perception of a certain kind. Applied to the language of a particular empirical science, these correlative definitions are the criteria determining that expressions of the stated kind are recognized as sentences belonging to the science. Thus, together with the rules of the logical syntax belonging to the language of this science, they form the totality of the latter's rules of procedure. Following Charles W. Morris, Carnap now calls correlative definitions "semantic rules."

⁶ *Ibid.*, p. 306.

⁷ *Ibid.*, p. 307.

The fundamental thesis of logical empiricism may now be formulated as follows: The sole task of any theory of science, or of any meaningful philosophy, is to make the rules of scientific procedure explicit. These rules fall into two classes: syntactical rules, which concern signs and their arrangement in formulae, regardless of their meaning; and semantic rules, which establish the meaning of signs and formulae. These rules are conventions in the sense that no criteria of truth and falsity obtain for them as is the case with the sentences of the empirical sciences. They can only be more or less in line with certain goals of scientific inquiry.⁸

To be sure, when one analyzes a given science, e.g., physics, one encounters these rules; but this must not be taken to mean that they are "necessary truths." However, in the opinion of the logical empiricists, this error occurs in metaphysics and particularly in phenomenology, with its method of eidetic intuition. The task of a genuine theory of science is, on the contrary, to describe the rules of scientific procedure precisely, and to discover and remove whatever inconsistencies may be present in them. The rules of any science determine the kind of sentences that belong to its subject-matter and the conditions under which such sentences are to be acknowledged as true sentences of the science in question. Accordingly, the totality of such rules is the definition of the concept, "sentence belonging to a given science."

The identification of "philosophy" with "analysis of experience" is accepted in the following analysis. Without further examining whether it should be interpreted as assertion or definition, we content ourselves with ascertaining that it is accepted not only by all empiricist and positivist doctrines but also in the Kantian and neo-Kantian philosophy and Husserl's phenomenology. Furthermore, whether the logical empiricists' logical analysis of experience is correct is not the issue here. It is asserted, however, that the analysis of experience is not fully completed by the logical analysis of experience

⁸ One may distinguish here between "goals" definable exclusively in terms of scientific rules (theoretical goals) and goals not so definable (practical goals). The logical empiricists have not emphasized this distinction strongly enough.

and that the latter contains presuppositions the grasping of which opens one's eyes to the problems of phenomenology.

III

The task set for themselves by the logical empiricists in their analysis of scientific procedure has as its goal a most complete and systematically ordered compilation of the rules of procedure. As has already been noted, they believe that such compilation exhausts the possibilities of meaningful analysis. *But they overlook the fact that the rules themselves contain presuppositions which are open to further analysis.*

Let us begin with the syntactical rules by which a calculus is defined. In the calculus, different kinds of signs, different signs of the same kind, and different ways of combining signs into formulae are distinguished. Furthermore, rules are given which define certain sign-complexes as formulae belonging to the calculus. Signs and formulae are given as objective, i.e., are regarded as identifiable at different times and by different persons. This objectivity presents no problem for naïve realism, which has not recognized that the concept of being is to be defined in terms of possible experience. (The position is usually expressed by the ambiguous statement that objects exist independent of thought.) Nor is it a problem for dogmatic metaphysics, which operates with "things in themselves" and "transcendent ideas." The empiricist, however, who defines the "world" in terms of possible experience and bears in mind that every experience is the experience of a particular man at a particular time, should see clearly that the presupposition of an intertemporal and intersubjective harmony of experiences — a presupposition implicit in operating with objectively given signs — is accessible to, and urgently requires, further analysis.

Empiricists still do not recognize with sufficient clarity how close the kinship is between the idea of objectively given sense-data, inaccessible to further analysis, and the metaphysical ontology which they oppose. *From the viewpoint of epistemological analysis the idea of a transcendent world is to be understood as a meta-*

physical justification for the fact that the analysis of experience starts with objective sense-data as ultimates. He who regards these data as messages coming from a transcendent world, and affecting the senses of all "normal" men in a like manner, will believe that the intertemporal and intersubjective harmony of sense-perceptions requires no further analysis. But whoever rejects this pseudo-explanation cannot let the matter rest there. He must ask himself what presuppositions are implicit in the idea of an objective world of experience and how these presuppositions enter into every single experience of the individual.

He who recognizes the highly complex structure of the psychic acts by which objects are "given" also comprehends the significance of an analysis of these acts. Thus he gains initial access to the problems of phenomenology and an understanding of one of its central concepts, the concept of intentionality. He learns to see that even the simplest object-perception contains a manifold of complexly interwoven anticipations of one's own and other persons' potential perceptions — anticipations that may be fulfilled or disappointed. The refutation of naïve sensualism, with its doctrine of the "hard" (unanalyzable) data of sensation, is implicit in these insights.

As already mentioned, this sensualistic conception retains great significance in logical empiricism, though today it is less important than during earlier stages of the doctrine. In the middle 'twenties, when Wittgenstein's theory of atomic sentences (the ultimate components distinguishable by a logical analysis of sentences) was the center of discussion in the Vienna Circle — the birthplace of logical empiricism — these atomic sentences were usually interpreted as reports on simple sense-data. Careful analysis of the criteria for the truth of scientific sentences — a task in which the achievement of the logical empiricists has been outstanding — soon led beyond this purely sensualistic conception. But physicalism,⁹ which is now amalgamated with the doctrine, shares a

⁹ For a criticism of physicalism, see my *Methodenlehre der Sozialwissenschaften* (Vienna, 1936), pp. 136 ff.

fundamental error with sensualism. It operates, that is, with a dogmatic concept of the "objectivity" of sense-data, a concept incompatible with the results of an analysis of experience. According to physicalism, the results of self-observation must not enter into any science because their validity, unlike the validity of the results of sense-perception, is "merely subjective," and objectivity is essential to scientific thinking. This view overlooks, among other things, the fact that the intersubjective harmony implicit in the concept of objectivity has a highly complex structure, the analysis of which involves a number of difficult problems.

At first glance the logical empiricists will be inclined to dismiss the latter as pseudo-problems. "The semantic rules of a scientific language," so they may argue, "coördinate certain series of signs, called sentences, with definite experiences in such a way that the legitimate use of these sentences and their designation as 'sentences belonging to a particular science' are made dependent on the occurrence of these experiences. That is all; what seemed to be a problem discloses itself as a convention."

But this argument is not decisive. The problem lies in the formulation of the semantic rules. Let us assume that one such rule is as follows: Every person who sees "blue" in a definite place, p , at a definite time, t , may admit the sentence "Blue is at the locus p, t ," into the science. Now, in the first place, it is clear that when the calculus is interpreted, the experiences to which it is applied must be given independently of it. We usually say that a particular color cannot be defined, that it can only be shown.¹⁰ To show something to someone, however, is to induce him by words or gestures to engage in activities leading to visual perceptions of a certain kind. To the question, "What do you mean when you say 'blue'?" one answers, "Look! Something like this." In this reply intersubjective and intertemporal identifiability is *presupposed*, and such identifiability involves the possibility of retaining and reproducing the content in question. In his *Lectures on the*

¹⁰ The term "ostensive definition" is frequently used in this connection but, in my opinion, it is not to be recommended.

Phenomenology of the Consciousness of Inner Time, Husserl devoted profound investigations to the analysis of these factors.

If one considers, furthermore, that he who calls a thing "blue" intends to assert, not its complete likeness of color with other blue things, but only a certain measure of similarity to them, one attains the insight that a range of variation is included in every concept of sensuous qualities and, along with that range, a principle for altering the actual or potential contents of perceptions. Further analysis then leads to the structures belonging to the different classes of contents of sensuous perceptions, e.g., the "system" of colors.

The logical empiricist who desires to grasp what Husserl means by "eidetic" or by "categorical intuition" should make clear to himself what presuppositions are contained in the rules for using names of qualities, and should bear in mind that these presuppositions enter into every experiential judgment pertaining to the qualities in question. In this sense, the presuppositions are prior to the assertion made in any judgment of experience.

The logical empiricist's criticism of eidetic intuition goes astray because he falsely assumes that the method aims at absolutely certain judgments about the world and pretends to be able to reach this goal. As a matter of fact, the method aims at making certain classes of presuppositions implicit in the idea of an objective world explicit.

This misinterpretation of Husserl's doctrine of eidetic intuition is similar to that suffered by Kant's doctrine of synthetic judgments *a priori*. However great the differences between Husserl's phenomenology and the Kantian and neo-Kantian doctrine may be,¹¹ one cannot doubt that the concepts of the "a priori" in Husserl and Kant have something essential in common and that neither can be properly inter-

¹¹ Cf. Eugen Fink's essay, "Die phänomenologische Philosophie Edmund Husserls in der gegenwärtigen Kritik," *Kantstudien*, 38, pp. 319-383. The essay is accompanied by a preface in which Husserl acknowledges Dr. Fink's exposition as a faithful rendering of his (Husserl's) thoughts. Since the study contains fundamental expositions concerning the sense of the epoché and problems of phenomenological constitution, its significance far exceeds that of the discussion with the neo-Kantians which is carried on in it.

preted as a dogmatic "a priori," i.e., a statement about the world for which an irrefutable validity is claimed.

The neo-Kantian philosophers of the Marburg School (Hermann Cohen, Ernst Cassirer) have emphatically pointed out in opposing earlier interpreters of Kant, e.g., Schopenhauer, that one does an injustice to Kant's doctrine if one conceives synthetic judgments *a priori* as apodictic statements about the world. One must conceive these propositions *a priori* rather as the set of presuppositions that "make experience possible," i.e., which are included in the concept of experience. They point out that this meaning of the "a priori" only gradually emerges in the development of Kant's thought and is not so clearly expressed in the first edition of the *Critique of Pure Reason* as in the second. In the latter, the "metaphysical" sense is completely subordinated to the "transcendental" sense. Something similar is true of Husserl's eidetic intuition. At the most, the Husserl of the *Logical Investigations* may be designated as a Platonist; already in the *Ideas*, however, an unmistakable turning away from conceptual realism takes place and in the late works, above all in the *Formal and Transcendental Logic*, it is performed so clearly and decisively that it should be open to no further misunderstanding. The usual misunderstandings center around the "evidence" claimed by Husserl for certain kinds of experiences of real and unreal objects. This point plays so significant a role for the critics of phenomenology that, to show the irrelevance of their objections, I shall include here a somewhat lengthy passage from the *Formal and Transcendental Logic* (pages 139-141):

The *possibility of illusion* also belongs to the evidence of experience and it annuls neither the fundamental character of that evidence nor what that evidence accomplishes — though evident awareness of the illusion as illusory "annuls" the experience or evidence that is evidently so characterized. The previously undisputed experience then undergoes the doxic modification of annulment, of cancellation, by the evidence of a new experience. And only in this way can an evident experience be cancelled; where evidence of experience is thus modified, the evidence of a new experience is always presupposed. The conscious "dispelling" of an illusion, in the originality of the "Now I *see* that it is an illusion," is itself a kind of evidence, namely,

the evidence of the nullity of something experienced or the evidence of the "annulment" of the (previously unmodified) evidence of the experience in question. This holds for *every* evidence whatsoever and for every "experience" in the broader sense. Even an evidence that purports to be apodictic may disclose itself as an illusion; and, if it does so, it presupposes an apodictic evidence by which it is "shattered."

The hesitation that the reader may have felt throughout this exposition is owing solely to the usual, fundamentally erroneous interpretation of evidence, an interpretation made possible by the complete lack of a serious phenomenological analysis of the accomplishment (*Leistung*) common to evidence in all its forms. Thus it comes about that evidence is understood to mean *absolute apodicticity*, absolute safety from illusions — an apodicticity ascribed quite incomprehensibly to a single conscious process (*Einzelleben*) torn from the concrete, essentially unitary, context of a subjective consciousness (*eines subjektiven Erlebens*). One sees in it an absolute criterion of truth though, if it were indeed that, not only all outer evidence but also all inner evidence would be impossible. If — being unable to explicate evidence as a functioning intentionality — one effects a kind of sensualistic substitution and falls back on so-called feelings of evidence, then the attaining of the truth itself (an attainment that one still ascribes to evidence) becomes a miracle — indeed, at bottom an absurdity.

Let no one hold before us the renowned evidence of "inner perception" as an instance that is contrary to what we have stated. The itself-giving peculiar to inner perception, the giving of inner perception's "immanently perceived" itself, is (by itself alone) only the itself-giving of a preliminary to an object; it is not the giving of what may be called in the proper sense an "object" itself. Perception *alone* is in no case a complete objectivating performance, if one is to understand by the latter term the grasping of an *object* itself. Inner perception has for us the value of a grasping of an object itself, only because possible recollection, repeatable at will, is tacitly taken into account. When recollection is actualized, it gives for the first time "original certainty" (in the full sense) of the existence of a subjective *object* called a psychic datum — as the existence of something acquired *originaliter* and identifiable at will, something to which one can always return and which one can always recognize in reactivation as the Same. Naturally, the intentional co-reference to this "synthesis of recognition" plays a similar role for any external objectivity — which is in no way to say that matters of this sort make up the full accomplishment of outer experience.

As has already become apparent to us through the above account, *evidence denotes the intentional accomplishment belonging to the giving of "it itself" (der Selbstgebung)*. Expressed more precisely, it is the universal and pre-eminent form of "intentionality," of "consciousness of something," in which the objective something intended in the consciousness is intended in the wise of the itself-grasped, the itself-seen, in the wise of consciously being with-it-itself. We may also say that evidence is the primal consciousness, "I grasp 'it itself' *originaliter*" — in contrast, e.g., to "I grasp it in a picture"

or "I grasp it as an anticipation of some other kind, either intuitive or empty."

Inclined as they are to consider all philosophical problems from the point of view of the contrast between "positive science" and "metaphysics," the logical empiricists have interpreted Husserl's philosophy as metaphysics in the bad sense which they attach to the term. It must be conceded that Husserl's own terminology and the "phenomenology" of many among his pupils have favored this misinterpretation. Now, however, it should come to an end. As soon as a compilation of the most important semantic rules of the language of any empirical science will have been presented by the logical empiricists, it will be possible to establish the kinship between these rules and the results of eidetic intuition.

"But," the logical empiricists will probably argue, "the fundamental difference lies in the kind of 'validity' claimed for these sentences. We see clearly that they are conventions and that, accordingly, they are not to be evaluated by criteria of truth and falsity. The phenomenologists, however, claim necessary truth, apodictic validity, for them."

This seeming contrast vanishes if the following points are taken into account:

(1) The logical empiricists do not fail to recognize that the semantic rules of a "given language," e.g., the language of an existent science, are given implicitly (though not very precisely) when the language itself is given. The assertion that a "de facto" language possesses such and such rules can therefore be proved true or false.¹²

(2) Where Husserl speaks of the "necessary truth" or "apodictic validity" of propositions, one must not attach to these words the sense that the propositions in question contain unfalsifiable statements about the world, but rather the sense that they formulate presuppositions contained in experience. One may call these presuppositions "rules" or "conventions," provided only that one excludes the idea of arbitrariness con-

¹² Cf. Carnap's discussion of the question, "Is logic a matter of convention?" in "Foundations of Logic and Mathematics" (*International Encyclopedia of Unified Science*, vol. 1, no. 3, pp. 26 ff.).

nected with these terms. Still one must by no means believe that with this insight the problem of abstraction is solved, that the conflict centering for over two thousand years around the knowledge of universals is at last decided. For these rules point back to an experience of a deeper stratum and ultimately to a "primally institutive" (*urstiftende*) experience. Empiricist as well as idealistic doctrines — and even the *Logical Investigations* — were at fault in their treatment of the problem of abstraction, since they did not take into account the stratified structure of experience and therefore fell into circular thinking. In the *Formal and Transcendental Logic* and in Husserl's posthumous *Experience and Judgment*, however, this fault is overcome. The task of laying bare the strata in the constitution of the objective world is attacked with previously unattained profoundness. The exposition of this problem might well form the best means of access for logical empiricists to the fundamental concept of transcendental phenomenology, the concept, namely, of "epoché."

IV

While the empiricist critics of phenomenology object that it is dogmatic in claiming absolute truth for certain propositions, Husserl accuses "positive" science of being dogmatic, since it lacks radicalism of doubt and does not go back to the source of all knowledge, which is laid bare in transcendental phenomenology. Thus, in the "postscript" to the *Ideas*, which is particularly suitable as an introduction to Husserl's thought, he says:

In contrast to the presupposition-laden thinking which has as its premises the world and science and divers habitual methods of thought derived from the whole scientific tradition, one puts into effect here a radicalism of epistemic autonomy, a radicalism in which everything ready-given as obviously existing is set aside and one goes back to what is "presupposed" before all presupposing, before all asking and answering — to what thus exists necessarily, continuously, and immediately, as something first-in-itself.¹³

¹³ "Nachwort zu meinen *Ideen*," *Jahrbuch*, XI, 560

And, two pages earlier, the concepts "positive science" and "dogmatic science" are treated as equivalent. One might at first be inclined to say that Husserl's use of the term "dogmatic" is illegitimate, since it does not agree with customary usage. Always, one might argue, scientific assertions, which without exception admit of being checked, and dogmas, for which a validity independent of every check is claimed, have been contrasted as opposites. Therefore it is misleading to characterize science itself as dogmatic. But closer scrutiny shows that Husserl's usage of the term is justified, since it indicates a radicalization of the implicit problems. What he means is that, in the "positive" sciences, the examination does not go far enough — or, to speak more aptly, deep enough. To be received into a science or, in case they have already been accepted, to be allowed to remain, propositions must satisfy definite conditions. But the rules formulating these conditions imply a set of interrelated presuppositions. And these presuppositions are accepted as obvious — as "dogmas" which are not subject to any further justification. In view of this, it is legitimate to characterize the positive sciences, *qua* positive, as dogmatic, provided one can show that these presuppositions are accessible to further analysis. That this is in fact the case may already be concluded from our remarks concerning the presupposition that the scientific language — the signs, formulae, and rules of calculi — are objective. But the anti-dogmatism of the phenomenologist in exercising epoché goes much further. At bottom, he directs his attack against the dogma that the transcendental ego (in whose stream of consciousness the world, with the men in it, is constituted) and the "mundane" ego (who is a constituted object among other objects in the world) are identical.

That this separation is not a speculative construction but derives from a consistent analysis of experience may be shown by citing another important passage from the *Formal and Transcendental Logic*:

Let us begin with the fact that the world is constituted for us — more precisely, that it is constituted for *me, qua* ego — as a world that is "objective" in the above-stated sense: existent for everyone; showing itself to be

as it is, in an intersubjective community of knowledge. Then a sense of "everyone" must already be constituted, in order that an objective world can be objective to it. This implies that a *first sense of everyone*, and therefore also a first sense of *others*, must be fundamental: a sense that is not yet the usual, higher-level sense, "every man." In the usual sense, a real object belonging to the objective world is meant and thus the constitution of the world is already presupposed.

Now, according to its sense, the "Other" who belongs on the lower constitutional level points back to me myself but, as we have already observed, to me not as a transcendental ego but as my *psychophysical I*. Even the *latter*, then, *cannot yet be I, the man in the objective world*, the I whose objectivity can become constitutionally possible only through *this* psychophysical I.

This situation, in turn, points back to the fact that my *bodily organism*, which by its sense is a spatial affair and a member of an environment made up of spatial bodies, a Nature (in which I encounter the Other's bodily organism) — it points back, I say, to the fact that all this cannot yet have an *objective-world* significance. My intrinsically first psychophysical I — we are speaking here of constitutional strata, not temporal genesis — the I in relation to which the intrinsically first Other must be constituted, is, as one sees, a member of an *intrinsically first Nature* that is not yet objective Nature, a Nature the spatio-temporality of which is not yet objective spatio-temporality, a Nature that, in other words, does not yet have the constitutional traits deriving from the already constituted Other. Within the context of this first Nature, my psychic I occurs as governing in the body belonging to it and here called my bodily organism, exercising psychophysical functions upon it in a unique manner, "animating" it and it alone, according to original experience.¹⁴

Unfortunately, I dare not assume that these formulations will flatter the ears of logical empiricists. But this should not keep them from realizing the full gravity of the problem that is raised. They must ask themselves whether the way pointed out by Husserl is the only way out of the circle, whether there is another way, or whether the circle cannot be escaped in any way.

In the first of his chief publications, *Der Logische Aufbau der Welt*,¹⁵ Rudolf Carnap treated the problem of the constitution of the world of experience. However, this significant work presents no solution of our problem, since the question of the relation between the subject who carries out the constitution

¹⁴ *Op. cit.*, pp. 212 f.

¹⁵ Berlin-Schlachtensee, 1928.

and the constituted human being is not even asked, let alone answered. The book has exercised no essential influence on the further development of logical empiricist doctrine and it is a question how far Carnap himself would agree today with the lines of thought developed in it. Nevertheless, it suffices to show that he has been intensively occupied with the problem of the constitution of the objective world, and from this it may be inferred that there would be substantial points of contact for a discussion between him and his followers, and the competent custodians of Husserl's doctrine.

I am inclined to doubt that the phenomenologists would succeed in convincing Professor Carnap that (as Husserl maintained in the last phase of his development)¹⁶ the splitting of the ego into three egos — the mundane ego, the transcendental ego, and the transcendental observer who exercises the epoché — is a compelling result of the radical analysis of experience. But if they succeed in making clear to him the sense of the epoché and convincing him that "sensualistic solutions" of the problem of the constitution of the objective world¹⁷ suffer from incurable defects, that in itself would be a great gain. The way would then be open to the insight that the limits of the logical analysis on which the logical empiricists concentrate are not the limits of philosophical analysis in general, and that the metaphysical systems of the great philosophical thinkers contain substantial contributions to a profounder analysis. The logical empiricist's criticism of speculative metaphysics, a criticism by means of a logical analysis of language, would not become obsolete thereby. But they would cease to throw out the baby with the bath, to dismiss genuine philosophical problems together with pseudo-problems.

The result might be a settlement of the controversies between

¹⁶ Cf. Dr. Fink's essay, cited above.

¹⁷ The newest "solution" of this kind known to me is contained in Alfred J. Ayer's book, *Language, Truth, and Logic* (New York, 1936). In a seminar held in the winter semester, 1938-39, under the auspices of the Graduate Faculty of Political and Social Science in the New School for Social Research, I discussed Ayer's book in general and this point in particular. Within the limits of this essay, however, I cannot consider it more closely.

idealistic and empiricist (positivistic) philosophical doctrines and a fruitfully coöperative utilization of the results attained by each of them. It seems to me that Husserl's phenomenology, which has overcome the errors of idealistic doctrines while conserving their fundamental idea and tracing it to its ultimate consequences, has provided the basis for such an outcome.

PHENOMENOLOGY AND THE HISTORY OF SCIENCE

Jacob Klein

PHILOSOPHY . . . , by its very essence, is the science of true beginnings, of origins, the *ἀρχαία πάντων*. And the method of a science concerned with the roots of things, the method of a radical science, must itself be radical, and this in every respect.”¹ It may be said, not inappropriately, that Husserl, throughout his life, directed his thought to the problems of origin. His earlier writings formulated the approach to the “true beginnings”; he worked all his life discovering, rediscovering, and elucidating these beginnings and the approach to them and finally he adumbrated the aims which should control research in the history of science. It is the purpose of this paper to show the essential connection, as Husserl understood it, between these aims and the “true beginnings.”

In attacking “psychologism,” Husserl was in fact facing the problem of “history.” Any “naturalistic” psychological explanation of human knowledge will inevitably be the history of human development with all its contingencies. For in such an account any “idea” is deduced from earlier experiences out of which that idea “originated.”² In this view, the explanation of an idea becomes a kind of historical legend, a piece of anthropology. The *Logical Investigations* showed irrefutably that logical, mathematical, and scientific propositions could never be fundamentally and necessarily determined by this sort of explanation.

In order to understand the ultimate validity of logical and mathematical propositions, it is necessary, according to

¹ “Philosophie als strenge Wissenschaft,” *Logos*, I, 340.

² *Ibid.*, p. 307.

Husserl, to liberate first the problems of origin from an interpretation of mind which confuses mind with nature. "A thing is what it is, and remains in its identity forever: nature is eternal." Nature "appears": it is experienced as something that appears to us through the senses, never "absolutely," rather in different aspects, in different "adumbrations." But the object of mind "appears as itself, through itself," is in itself a "phenomenon," appears as an "absolute" and at the same time "as passing in an absolute flow, appears right now and already fading away, sinking back continuously into what is the past, and this in a way which can be perceived in an immediate intuition." Therefore, whereas a natural thing can be investigated and analyzed by repetition of an experience which is intrinsically the same in so far as the object is the same, a mental object can be reexamined only by reflection, by "retention," in memory, i.e., by a specific change ("modification") in the "manner of givenness." In other words, a natural object, although "temporal," remains constant with respect to our investigation: the object of mind is immersed in "eternal" time, "a time which cannot be measured by any chronometer."³

Naturalistic psychology ignores the distinction between the time of mind and the time of nature. As a result, mind itself and all its objects become natural objects, and all problems of origin become problems of origin within natural time. If we liberate these problems from this naturalistic distortion, they become "phenomenological" problems in Husserl's sense of the term.

A typical "phenomenological problem" consists in finding the "invariables" within the absolute flow (the "internal temporality") of the mind, in determining the "invariants" which remain unchanged by reason of an essential necessity. This can be accomplished by means of a continuous and arbitrary "variation" of a given "example," a variation that takes place in the "freedom of pure phantasy." "Through such a free and continuously modified variation the necessarily unchangeable, the invariant, comes to the fore, something

³ *Ibid.*, pp. 312 f. Cf. *Ideen*, pp. 76 ff.

that is unshakably the same in all the otherness and renewed otherness, the universal and common essence" — the "eidós," the "*a priori* form" which corresponds to the example and all its possible variations.⁴ But this is only the first step — first in the actual development of Husserl's thought, and first in any phenomenological analysis. The reflection upon this kind of analysis, its implications and its significance leads to a deeper understanding of the nature of a "phenomenological problem." Far from being complete in itself, the finding and facing an "essence" requires a further investigation into its intrinsic "possibility." Whatever we discover as having a definite significance — an essence, its "inflections," its essential characteristics, the compresent "halo," and so forth — has also a "backward reference" to a more original "significant formation." Each "significant formation" (*Sinngebilde*) has its own essential "history of significance" (*Sinnesgeschichte*), which describes the "genesis" of that mental product. It is the "history" of the "formation" (or "constitution") of that mental product.⁵ This curious kind of "history" is a peculiarity of the mind, whose manner of being is nothing but "work" (*Leistung*), a constructive work, tending to the formation of "units of significance" — an "intentionality at work." All the intended or "intentional" units are thus constructed or "constituted" units, and we can address inquiry to the perfected units as to their "intentional genesis." The discovery of the "intentionality at work" makes us understand the essential and objective possibility of each single significant phenomenon, whether it refers to true being or to mere appearance.⁶ Its being constructed (or constituted) makes up its "subjectivity." And the last step of the phenomenological analysis is the grasping of the problem of "constitution" in its universality, which in turn leads to a new understanding of phenomenology as the fundamental doctrine of "transcendental subjectivity," the ultimate goal of all possible knowledge, the *sapientia universalis*.⁷ Through it is revealed the

⁴ *Logik*, pp. 218 f. Cf. p. 26.

⁵ *Ibid.*, pp. 184 f.

⁶ *Ibid.*, p. 226.

⁷ *Ibid.*, p. 4. Cf. Descartes, *Regulae ad directionem ingenii*, Reg. I.

“constitutive work” of consciousness that determines the “ontic sense” of the world, “consciousness” being understood not as a given “thing” among all other things of the given world, not as the actual thinking of human (or human-like) beings, but as the “intentionality at work” that constitutes any possible thing as a “significant unit,” including the significant unit “world” itself. It is an immense and unavoidable task to reveal this working life in its totality, to make everything that “is” intelligible, ultimately out of its constitutive origins.⁸ It is this immense task that Husserl sets to his “transcendental phenomenology.”

However vague this general outline of Husserl’s philosophy might be, it shows, I think, that from the very outset the problem of history has a definite, if not the most important, place in Husserl’s mind. The intervention of Dilthey⁹ gave a special accentuation to that problem. The essay “Philosophy as a Rigorous Science,” which we mentioned at the beginning of this paper, is partly devoted to the praise as well as to the criticism of Dilthey and his history of human thought.¹⁰ It is quite obvious, however, that Husserl in criticizing the attitude of historicism puts it on the same level with psychologism. In fact, the former is but an extension and amplification of the latter. Now, Husserl’s radical criticism of psychologism implies anything but a simple opposition between never-changing “abstract” principles and ever-changing “empirical” things. The fact that Husserl’s phenomenological descriptions in the *Logical Investigations* were immediately interpreted as psychological descriptions (of a more subtle nature — as was readily conceded — than those which usually are laid down in psychological textbooks) shows not merely that a great many readers of Husserl were not able to understand his thought, but that there is a definite affinity between psychological and phenomenological research. Husserl himself always pointed out that Hume was the first to see the problem

⁸ *Logik*, p. 216.

⁹ Cf. the correspondence between Husserl and Dilthey published by G. Misch, *Lebensphilosophie und Phänomenologie* (Leipzig and Berlin, 1930).

¹⁰ Cf. especially the note on p. 326.

of a transcendental phenomenology, although he misunderstood its true character and therefore failed entirely to solve it. The psychology of mental phenomena must not necessarily differ from their phenomenological analysis as far as the actual description, the wording, is concerned.¹¹ The real difference can only be found in the fundamentally different attitude of the thinker toward his objects: on the one hand, the psychologist considers them in a "mundane apperception," taking them as existing elements or parts or qualities of the existing world; on the other hand, the phenomenologist deprives these same objects of their "index of existence," performs the "phenomenological reduction" (the "bracketing") and faces them as "pure" phenomena. Thus, the psychological and phenomenological description of logical operations may be identical, although their real significance differs profoundly. More exactly, we have to distinguish between psychological phenomenology and transcendental phenomenology. The first considers the mind as a "natural" object; the second, the mind as the "transcendental subjectivity." In doing so, however, transcendental phenomenology, as the universal theory of "constitution," is primarily concerned with the problems of origin, the problem of true beginnings. It is worth noting that Husserl, in the passage quoted above, uses as an image the (Empedoclean) term *ρίζώματα πάντων*, "roots" of all things, rather than the traditional *ἀρχή*. A "root" is something out of which things grow until they reach their perfect shape. The *ἀρχή* of a thing — at least in the traditional "classical" sense of the term — is more directly related to that perfect shape, and somehow indirectly to the actual beginning of the growth. The "radical" aspect of phenomenology is more important to Husserl than its perfection. This is the attitude of a true historian. But it is obvious that the phenomenological approach to the true beginnings requires a quite special kind of history. Its name is "intentional history."

¹¹ Cf. especially *Logik*, p. 224.

II

In order to clarify Husserl's notion of "intentional history," it may be useful to look at the development and the general background of Husserl's philosophy from a different angle. Husserl's earliest philosophic problem was the "logic" of symbolic mathematics.¹² The paramount importance of this problem can be easily grasped, if we think of the role that symbolic mathematics has played in the development of modern science since the end of the sixteenth century. Husserl's logical researches amount in fact to a reproduction and precise understanding of the "formalization" which took place in mathematics (and philosophy) ever since Vieta and Descartes paved the way for modern science. Husserl himself is, of course, well aware of that historical development. He realizes that the discovery of a formal symbolism by Vieta¹³ in his establishment of algebra (*ars analytice, logistice speciosa*) is at the basis of modern mathematics as well as modern science. He ascribes to Leibniz the conception of a universal and symbolic science (*mathesis universalis, ars combinatoria*) which is prior to any "material" mathematical discipline and any "material" logic.¹⁴ He does not seem to appreciate, in this connection, the importance of Stevin's algebraic work and, strangely enough, the Cartesian idea of a *mathesis universalis*, based at least partly upon Stevin and leading directly to the corresponding, if modified, Leibnizian concept.¹⁵ He recognizes the close connection between mathematical "idealization" and the idea of an "exact" nature, first conceived in the physics of Galileo. He stresses the fundamental importance of the Cartesian *cogito*, the correct understanding of which leads, in his opinion, to his own "transcendental phenomenology." In all that he is the great interpreter of modern thought — he reveals its hidden implications and presuppositions, he follows and judges its essential tendencies.

¹² *Philosophie der Arithmetik* (1891). Cf. *Logik*, p. 76.

¹³ *Logik*, p. 70.

¹⁴ *Ibid.*, pp. 70 f. Cf. *Log. Unt.*, I, pp. 219 ff.

¹⁵ See Section iv, herein.

The contingent sequence of mathematical, scientific, or philosophical theories does not concern him: he is not a historian of accidents. But in descending to the "roots of things" he cannot help meeting "history" as one of the basic tendencies of the modern period.

We should not overlook the fact that the development of modern science is closely followed by the development of "historical consciousness." The "new science" of nature has its complement in the *scienza nuova* of history (Vico).¹⁶ Modern history is neither a chronicle of events nor an edifying or moralizing or glorifying report of memorable deeds in the past, but the discovery and the description of man as a specifically historic being, subject to a "development" which transcends any individual life or even the life of peoples or nations. Modern history is not only — as ancient history is — an interpretation and dramatic exposition of "facts," but also an interpretation of the historic "movement" as such. It is, in this respect, the twin brother of mathematical physics. They are both the dominant powers governing our actual life, setting out the horizon of our thinking and determining the scope of our practice. The historicism of recent decades is but an extreme consequence of that general historic trend. We have already characterized historicism as an extension and amplification of psychologism. On the other hand, psychologism, as developed by the English empiricists of the seventeenth and eighteenth centuries, is, in fact, the first attempt to combine the new mathematical and physical sciences (in either their Cartesian or Newtonian aspects) with a "historical" outlook: Locke and Hume try to set forth the "natural history" (Hume) of our concepts upon which our science, our morals, and our beliefs are founded. This holds for the empirical schools of the nineteenth century as well. It is particularly true of John Stuart Mill, who found, as he writes, a "considerable approximation" to what he wanted¹⁷

¹⁶ For the role of history in the seventeenth century v. L. Strauss, *The Political Philosophy of Hobbes, Its Base and Its Genesis* (Oxford, 1936), especially chapter vi.

¹⁷ See his *Autobiography*, ed. by J. J. Coss (New York, 1924), p. 145.

in William Whewell's *History of the Inductive Sciences*.¹⁸ The history of science appears as a kind of prolegomenon to the system of logic, which in turn is considered mainly as an exposition of the methodical and conceptual foundations of science. It is not merely an accident that both J. S. Mill and Spencer wrote autobiographies (not to forget the short autobiography of Hume), nor that Hume is the author of *The History of England*. As to the prolific historical study in all fields of human activity, which makes up most of the scholarly work during the nineteenth century, it is intended, as it were, to fill the gap between the ever more "formalized" scientific approach to the surrounding world and our daily life, entangled, as it is, in a maze of immediate "practical" problems, difficulties, ambitions, and passions. History, in the usual sense of the term, is not a matter-of-course attitude. The origin of history is in itself a non-historical problem. Whatever historical research might be required to solve it, it leads ultimately to a kind of inquiry which is beyond the scope of a historian, whose purpose is to give the "story" of a given "fact." It may, indeed, lead back to the problem of inquiry, the problem of *ιστορία* as such,¹⁹ that is, to the very problem underlying Husserl's concept of an "intentional history."

To inquire into an object means, according to Husserl, first to "bracket" its "objectivity" and then to seek for its "constitutive origins," to reproduce its "intentional genesis." Any object, as a "significant" or "intentional" unit, contains the "sedimented history" of its "constitution."²⁰ That "history," of course, did not take place within "natural time." Yet it can be understood as a "history" because the intentional genesis belongs to the "life of consciousness," and consciousness itself is primarily constituted as an "absolute stream" determined by the "internal temporality." "Internal temporality" is thus the universal eidetic "form" of the intentional genesis.²¹ In any inner experience of an intentional object,

¹⁸ Cf. the title of his later book: *Philosophy of the Inductive Sciences, Founded upon their History*.

¹⁹ Cf. Plato, *Phaedo*, 96 A ff.

²⁰ *Logik*, p. 217.

²¹ *Ibid.*, p. 279.

that object is given originally in the mode of immediate "presence"; this immediate "presentation" is followed, of necessity, by a "retention" of the object, in which the object appears in the mode of "just-having-been-experienced"; through all the successive modes of retentional consciousness — that is to say, through a continuous "modification" — the object is constituted as persisting, as one and the same (identical, "invariant") object. But just as there is a "limit" which the continuous modification of the retentional consciousness approaches and beyond which the "prominence" of the object flows away into the general substratum of consciousness,²² there is the "past history" of the original "presentation" of the object, which is the proper domain of transcendental phenomenology. It is here that the "evidence" experienced in the immediate presentation assumes the character of a transcendental problem of constitution. It is here that the intrinsic "possibility" of the identity of an object is revealed out of its categorial constituents, that the "intentional genesis" leads back to the "constitutive origins," that the "sedimented history" is reactivated into the "intentional history." Moreover, such a transcendental inquiry into an object may reveal the essential necessity of its being subjected to a history in the usual sense of the term. In other words, it may reveal the essential necessity of a historical development within natural time.

This is the case if the object in question is in itself an "ideal formation" like all mathematical and scientific objects. Any science, in the precise sense of the term, has of necessity its own history. It is founded upon the "intentional history" of its ideal objects. The greatest examples to which Husserl himself referred are Euclidean geometry and Galileo's physics.²³ They are explicitly dealt with in two papers worked out in 1935 and 1936²⁴ and conceived as parts of a com-

²² *Ibid.*, p. 280.

²³ *Ibid.*, pp. 215, 257.

²⁴ "Die Krisis der europäischen Wissenschaften und die transcendente Phänomenologie, Eine Einleitung in die phänomenologische Philosophie," *Philosophia*, vol. 1, 1936; "Die Frage nach dem Ursprung der Geometrie als intentional-historisches Problem," published by E. Fink in *Revue internationale de Philosophie*, 1, 2.

prehensive work on phenomenological philosophy to which Husserl devoted his last years.²⁵ The problem which Husserl faced in those papers is precisely the relation between intentional history and actual history. Here again he takes up a task that psychologism could not solve with its own premises but had attacked in its own way. In doing so, Husserl actually confronted the two greatest powers of modern life, mathematical physics and history, and pushed through to their common "root."

III

The article about the "Origin of Geometry" is but a fragment the importance of which lies in the fact that the concepts of history and of tradition, especially that of the tradition of science, are subjected therein to a careful, if incomplete, analysis. An application of this analysis is given in the "Crisis of the European Sciences and Transcendental Phenomenology." We shall begin with the "Origin of Geometry," and try to connect its main problem with Husserl's more fundamental "transcendental" considerations.

We have already seen that any significant formation is constituted as an "invariant" within the absolute stream of consciousness. As an invariant, as identically the same, it seems to transcend any possible time. Its "eternity," however, is but a mode of "eternal" time: its identity is an intentional product of the transcendental subjectivity which is "at work" through all the categorial determinations that constitute a significant unit. This nexus of significance between the "subjectivity at work" and its intentional products (*Leistungsgebilde*) is thus the real problem of historicity taken in its universal and transcendental meaning. That is to say, the problem of historicity is ultimately the problem of philosophy itself.²⁶ The "intentionality at work" implies historicity (as the "historical *a priori*") which makes intelligible not only the eternity or super-temporality of the ideal significant formations but the possibility of actual history

²⁵ Cf. the introduction by E. Fink, *loc. cit.*, p. 203.

²⁶ *Loc. cit.*, p. 219.

within natural time as well,²⁷ at least of the historical development and tradition of a science. The "discovery" of geometry, for instance, as a historical event, is dependent upon a world of "things," understood and dealt with according to their "thingness." But thingness as a significant unit bears essential features, quite independently of any scientific approach to them. "Things" have "bodies," have color, weight, hardness or softness, are smooth or rough, have a shape and a size, can be measured, can be in motion or at rest, and so on. These are not merely so-called "empirical data," but characterize the intuitable "essence" of a "thing" as such. Some of those essential features are apt, by an intrinsic necessity of their own, to be made prominent, for instance their shape or their measurability. This prominence is utilized for "practical" purposes, and the practical handling of things may lead to a more or less satisfactory technique. Here again there is the essential possibility of discovering "in" them a set of somehow privileged "shapes" or "figures" which can be more perfectly measured and brought into relation to each other. The actualization of that possibility rests upon the actual handling of such "material"; and finally the "discovery" of geometry as a "science" — however great the change of attitude, the shifting from practical to theoretical purposes might be — is still dependent upon familiarity with that perfected technique.

The actual way leading to the discovery of geometry may have been entirely different from this one, to which Husserl alludes.²⁸ It is quite possible, even probable, that geometry as a science came into being as a result of arithmetical and musical preoccupations. But even so, that discovery presupposes a characteristically articulated world, presupposes the acquaintance with a definitely shaped and featured "material," presupposes, in short, the experience of "things."

But the discovery of the science of geometry presupposes *also*, on the part of the "first geometer," an "anticipation" (*Vorhabe*) of what comes into being through his "accomplish-

²⁷ *Ibid.*, p. 225.

²⁸ Cf. pp. 223 f.

ment”²⁹ (*gelingende Ausführung*). These notions of “anticipation” and “accomplishment” are most important for the understanding of Husserl’s thought. They provide us with the link between “intentional history” and actual history. They account for the “evidence” of all the “significant formations” belonging to a science such as geometry. For “accomplishment or what is anticipated means evidence to the active subject: herein the product shows itself originally as itself.”³⁰ But since the product, in the case of geometry, is an ideal product, “anticipation” and the corresponding “accomplishment,” as “acts” of the subject (the “first geometer”), are founded upon the “work” of transcendental subjectivity: the ideal formations of geometry are products of the “intentionality at work.” “Anticipation” and “accomplishment” *translate* into terms of “reality” what actually takes place within the realm of “transcendental subjectivity.” On the other hand — and this is the important point — the constitution of those ideal “intentional units” presupposes, of necessity, the whole complex of experiences leading to the situation in which geometry as a science is capable of being “anticipated” and “intended.”³¹ In other words, “*science, especially geometry, as a subjective intentional product, had to have some definite historical beginning,*”³² i.e., a beginning within the course of actual history. At this definite moment the “original foundation” (*Urstiftung*) of geometry occurred.

Needless to say, this analysis does not refer to any known or even knowable historical event. It only shows the essential connection between geometry as a supertemporal product of the mind and its “creation” in actual history. At this starting-point geometry is not yet capable of being handed on: it has not yet attained the stage of “ideal objectivity,” as a condition of its becoming the common property of many individuals. At least three steps are required in order to reach this stage. To begin with, the original evidence, experienced during the first actual production, passes over into

²⁹ Page 208.

³⁰ Page 209.

³¹ Cf. *Logik*, p. 278.

³² “*Geometrie*,” *loc. cit.*, p. 208.

a "retentional" consciousness and finally fades away into forgetfulness. But it does not disappear completely: it can be awakened, and the "active" remembrance of the original production of any ideal significant formation carries with it the evident experience of the sameness of that formation, carries furthermore the insight into its unlimited reproducibility. This experience does not, however, transcend the personal sphere of the subject. The second necessary — and decisive — step is the embodiment of that experience in words, which makes it communicable to other subjects: these others are thereby enabled to reproduce the same evident experience out of their own mental activity. The "ideal significant unit" acquires its peculiar manner of existence only through speech and in speech. A last step remains to be taken in order to secure the *lasting* existence of the "ideal objects," to establish their perfect "objectivity." It is the translation of the spoken word into the written word. At this stage the real history of a science may begin. It is, of necessity, not only the history of "progress," of the accumulation of knowledge, but also a history of failure. The means which secure the objectivity of a science, at the same time endanger its original integrity. No science, in its actual progress, can escape the "seduction" emanating from the spoken and written word. For the signifying function of a word has, by its very nature, the tendency to lose its revealing character. The more we become accustomed to words, the less we perceive their original and precise "significance": a kind of superficial and "passive" understanding is the necessary result of the increasing familiarity with spoken and written words. The original mental activity, the production of significance, embodied in sounds and signs, is not reproduced in the course of actual communication. Yet it is there, in every word, somehow "forgotten" but still at the bottom of our speaking and our understanding, however vague the meaning conveyed by our speech might be. The original "evidence" has faded away but has not disappeared completely. It need not be "awakened" even, it actually underlies our mutual under-

standing in a "sedimented" form. "Sedimentation is always somehow forgetfulness."³³ And this kind of forgetfulness accompanies, of necessity, the development and growth of a science.

To be sure, the original evidence can be "reactivated," and actually is at definite times, in order to restore the full significance of all the previous steps leading to a given stage within the development of a science. This interlacement of original production and "sedimentation" of significance constitutes the true character of history.³⁴ From that point of view there is only *one* legitimate form of history: the history of human thought. And the main problem of any historical research is precisely the disentanglement of all these strata of "sedimentation," with the ultimate goal of reactivating the "original foundations," i.e., of descending to the true beginnings, to the "roots," of any science and, consequently, of all pre-scientific conceptions of mankind as well.³⁵ Moreover, a history of this kind is the only legitimate form of epistemology. The generally accepted opposition between epistemology and history, between epistemological and historical origin, is untrue. More exactly, the problem of history cannot be restricted to the finding out of "facts" and of their connection.³⁶ They embrace all stages of the "intentional history." History, in this understanding, cannot be separated from philosophy.

Reactivation of the "sedimented history" may become the most imperative need in a given situation. The "sedimentation of significance" can reach such a degree that a particular science, and science in general, appear almost devoid of "significance." This has been becoming increasingly the state of affairs in recent centuries and is the case now.³⁷ Husserl deals explicitly with this unique situation in his "Crisis of the European Sciences." We shall confine our considerations of this matter to the special problem of mathematical symbolism as the main instrument *and* the real basis of mathematical physics.

³³ Page 212.

³⁴ Page 220.

³⁵ Pages 212, 218 f.

³⁶ Pages 220 f.

³⁷ Page 217.

IV

Husserl's philosophy, as it appears in its latest phase, is an admirable attempt to restore the integrity of knowledge, of *ἐπιστήμη*, threatened by the all-pervading tendency of "sedimentation." His analysis of the meaning of "tradition" and "historical development" is directly motivated by this purpose. The increase of "sedimentation" follows closely the establishment of the new science of nature, as conceived by Galileo and Descartes. Or rather, the new science itself, with all its amazing accomplishments and far-reaching potentialities, is basically the product of an accumulated sedimentation, the reactivation of which is usually not conceived as a possible or even desirable task. As Husserl puts it: "Galileo, the discoverer . . . of physics and of the corresponding kind of nature, is both a revealing and a concealing genius."³⁸ In analyzing the foundations of Galileo's physics, Husserl does not intend to give a detailed historical account. Galileo's name is, in this connection, somewhat of a collective noun, covering a vast and complex historical situation.³⁹ On the other hand, this analysis is intended to shed light on the origin of modern consciousness in its universal aspect.⁴⁰ The problem of the origin of mathematical physics is the crucial problem of modern history and modern thought.

We shall not follow Husserl's pattern here, but try to give a general outline of that actual historical development, referring, in due course, to Husserl's corresponding statements. It should be emphasized that Husserl's "intentional-historical" analysis of the origin of mathematical physics, although not based upon actual historical research, is on the whole an amazing piece of historical "empathy."

The establishment of modern physics is founded upon a radical reinterpretation of ancient mathematics,⁴¹ handed on through the centuries and acquiring a new dignity in the middle of the sixteenth century. The *Elements* of Euclid are subjected to careful studies, are commented upon and con-

³⁸ "Krisis," p. 128.

³⁹ Cf. p. 133.

⁴⁰ Page 132.

⁴¹ Cf. p. 95.

tinuously reëdited and reprinted. The "Euclidean spirit" spreads rapidly. Archimedes and Apollonius, newly rediscovered, are studied but are understood by relatively few. On the other hand, the discovery of manuscripts of Diophantus helps to transform the Arabic art of algebra — a dark art, comparable to alchemy — into a science accepted as a supplement to the traditional quadrivium of the mathematical disciplines. The publication and translation of Proclus' commentary on the first book of Euclid allows a fusion of the traditional theory of ratios and proportions with the "algebraic" *art* of equations. The importance of this book by Proclus cannot be overestimated. The algebra (leading back, at least partly, to a Greek tradition represented by Diophantus and Anatolius) and especially the *Arithmetic* of Diophantus are understood as an immediate application of the theory of ratios and proportions. Moreover, the (Eudoxean) "general" theory of proportions, as laid down in the fifth book of Euclid, seems to indicate that the "vulgar" algebra as well as the *Arithmetic* of Diophantus is but a remnant of a more general theory of equations, of a *true* and more general algebra. It is Vieta who works out the logical and mathematical consequences of this insight and becomes thus the "inventor" of modern mathematics. Let us consider briefly the way in which he proceeds.

The method of Diophantus consists in setting up an indeterminate equation which is immediately converted into a determinate one by the arbitrary assumption of a numerical value. This equation has a purely numerical character: apart from the unknown quantity, the "given" quantities as well as the coefficients of the unknown are definite numbers. Having solved an equation by methods which are often very ingenious, Diophantus refers in not a few cases to the easily performed checking of the result in these terms: *καὶ ἡ ἀπόδειξις φανερά* (and the demonstration [the "proof"] is obvious). Now, a "demonstration" in Greek mathematics means the "synthesis" which is the reverse of the preceding "analysis." Therefore Vieta calls the Diophantean solution an "analytical" process, referring himself to the traditional definition of

analysis as the "way from the unknown taken as a known, through the consequences, down to something which is known."⁴² This Greek definition applies, however, to the geometrical analysis, which in its procedure does not make use of any definite magnitudes, comparable to the definite numerical values of a Diophantean equation. Assuming that the "general" method behind the "Diophantean analysis" must be applicable to the numerical *as well as to the geometrical procedure*, Vieta postulates a reckoning (logistique, λογιστική) using not numbers but merely "species" (taking over the Diophantean term "species," εἶδος, applied by Diophantus to the various powers of the unknown). Thus he opposes a "restored" and "pure" algebra, the *logistique speciosa*, to the commonly used Diophantean *logistique numerosa*.⁴³ At the same time, this pure algebra represents, in his mind, the general theory of proportions. Described by Proclus as the "highest" mathematical discipline, the general theory of proportions in the form of Vieta's pure algebra becomes from now on the fundamental discipline not only of mathematics but of the system of human knowledge in general.⁴⁴ The translator of Proclus into Latin, Barocius, in order to designate this highest mathematical discipline, uses the term *mathesis universalis*, referring to it on the margin as *scientia divina*. It is from this source that Descartes,⁴⁵ and the entire seventeenth century, have derived the term and the conception of a "universal science" which includes all possible sciences of man.

This universal science bears from the outset a *symbolic* character.⁴⁶ In creating his *ars analytice*, Vieta introduced for the first time, fully conscious of what he was doing, the notion of a mathematical *symbol* and the rules governing symbolic operations: he was the creator of the mathematical *formula*.⁴⁷ In doing this, he preserved, however, the original "ideal" concept of number, developed by the Greeks out of the immediate experience of "things" and their prescientific

⁴² Pappus, ed. Hultsch, II, 634. Cf. the scholium to Euclid XIII, prop. 1-5.

⁴³ Cf. "Krisis," p. 97.

⁴⁴ Cf. pp. 120 ff.

⁴⁵ Cf. *Regulae*, Reg. IV.

⁴⁶ Cf. "Krisis," pp. 119, 123.

⁴⁷ Cf. pp. 115 f., 118, 123.

articulation. In Vieta's notion of "species" the original understanding of number is retained, as it is, of course, in the *Arithmetic* of Diophantus. But his immediate successors, Ghetaldi, Harriot, Oughtred, and Wallis (partly under the influence of Stevin and, as far as Wallis is concerned, of Descartes' *Geometry*), have already lost the original intuition. The technique of operating with symbols replaces the science of numbers.⁴⁸ Descartes, for his part, aiming at the all-comprehensive *mathesis universalis*, and following the algebraic doctrine of Stevin, transforms the traditional understanding of Euclidean geometry into a symbolic one, which transformation is at the basis of his analytic geometry.⁴⁹ His mathematical significance lies in the fact that he subjects the traditional geometry to the same kind of symbolic "formalization" to which Vieta subjected the Diophantean arithmetic.

This establishment of a fundamental analytical discipline, planned in advance by Vieta as well as by Descartes for the sake of founding a "true" astronomy and a "true" physics, inaugurates the development of a symbolic science of nature, commonly known as mathematical physics.⁵⁰ As to Galileo, he has not yet at his disposal the powerful instrument of symbolic formulae. His physics is conceived as an application of Euclid's (and Archimedes') geometry,⁵¹ especially of the Euclidean theory of proportions. But he is already under the spell of that general symbolic tendency: he anticipates mathematical physics in his concept of an "exact" nature as a great book written in mathematical characters. The implications of this concept of an "exact" nature are unfolded in his work and in the work of the following generations. But the "sedimented significance" upon which this work and the concept of an exact nature itself rest, have hardly been "stirred up,"

⁴⁸ Cf. p. 123.

⁴⁹ The analytic geometry itself is, as an algebraic geometry, a "formalization" of the methods used by Apollonius. This holds for the analytic geometry of Fermat as well. Both, however, considered the analytic geometry as an expansion, a "generalization," of the procedure of Apollonius, not as a "new" discovery.

⁵⁰ Cf. "Krisis," p. 97.

⁵¹ Cf. pp. 98 ff., 102 ff., 113.

or even touched, ever since Galileo, Kepler, and Descartes laid the foundations of mathematical physics.⁵² The "intentional history," as suggested by Husserl, may accomplish this task: it may "reactivate" the "sedimented" "evidences," may bring to light the forgotten origins of our science. A history of science which fails to tackle this task does not live up to its own purpose, however valuable and indispensable it otherwise might be.

The problem of the origin of modern science thus presents a threefold aspect. There is first the "anticipation" of an exact nature, implying the possibility of reducing *all* appearances to geometrical entities. Not only the "prominent" features mentioned above (i.e., some of the so-called primary qualities), with their essentially geometrical characteristics, but also the so-called secondary qualities, such as color, sound, odor, warmth (i.e., the "specific" sensory qualities)⁵³ as well as change and motion, are understood to be convertible either into geometrical magnitudes or at least into something that can be treated geometrically, having definite ratios and proportions. This kind of approach to all possible qualities of things can be traced back to the nominalistic school of the fourteenth century, especially to Nicolaus Oresmus (Nicole Oresme), whose work *De uniformitate et difformitate intensionum*⁵⁴ has profoundly influenced all following thinkers up to Galileo, Beekman, and Descartes.⁵⁵ The "sedimentation" involved in this "Euclidean" approach to the world consists in the matter-of-course attitude toward geometrical evidence.⁵⁶ Accordingly, our *first* task is the intentional-historical reactivation of the origin of geometry.

In trying to fulfil the anticipated conversion of *all* "natural"

⁵² Cf. p. 117.

⁵³ Cf. pp. 104, 108.

⁵⁴ The same work is also known under the significant titles: "De figuracione potentiarum et mensurarum difformitatum," and "De configuracionibus qualitatatum."

⁵⁵ Cf. P. Duhem, *Études sur Léonard de Vinci*, vol. III (1913); and also the correspondence between Beekman and Descartes in *Oeuvres de Descartes* (ed. Adam-Tannery), vol. x, and Descartes' *Regulae*, Reg. XII.

⁵⁶ Cf. "Krisis," p. 111.

appearances into geometrical entities, in trying to geometrize nature, the physicist faces immediately the problem of finding the adequate means for such an undertaking. This problem is solved through what can be called the method of *symbolic abstraction*, which is quite different from the ancient *ἀφαίρεσις*. It is the method used consciously by Vieta in his establishment of a "general" algebra and by Descartes in his early attempt to set up the *mathesis universalis*.⁵⁷ It amounts to a symbolic understanding of magnitudes *and* numbers, the result of which is an algebraic interpretation of geometry. The roots of this development can be found in the adoption of the Arabic system of numeration which leads to a kind of indirect understanding of numbers and ultimately to the substitution of the ideal numerical entities, as intended in all Greek arithmetic, by their symbolic expressions. That is to say, a "sedimented" understanding of numbers is superposed upon the first stratum of "sedimented" geometrical "evidences." This complicated network of sedimented significances underlies the "arithmetical" understanding of geometry.⁵⁸ The second task involved in the reactivation of the origin of mathematical physics is, therefore, a reactivation of the process of symbolic abstraction and, by implication, the rediscovery of the original arithmetical evidences.

Upon those combined "sediments" reposes finally our actual interpretation of the world, as expressed not only in our science but also in our daily life.⁵⁹ In fact, the "scientific" attitude permeates all our thoughts and habits, no matter how uninformed or misinformed about scientific topics we may be. We take for granted that there is a "true world" as revealed through the combined efforts of the scientists, whatever doubts the scientists themselves may have on the subject. This idea of a true, mathematically shaped world behind the "sensible" world, as a complex of mere appearances, determines also the scope of modern philosophy. We take the appearances of things as a kind of disguise concealing

⁵⁷ Cf. Descartes, *Regulae*, Reg. xiv.

⁵⁸ Cf. "Krisis," p. 119.

⁵⁹ Cf. p. 124.

their true mathematical nature. But we have “forgotten” that this nature, “anticipated” by the founders of modern science, was to be *constructed*⁶⁰ by means of ingenious methods, that the original *hypothesis* of an “exact” nature had to prove true, without ever being able to lose its character as a hypothesis.⁶¹ The “anticipation” of an exact nature is the anticipation of its history. Its history is the development of the method of symbolic abstraction. It takes the form of an *art*, consisting in the continuously perfected technique of operating with symbols.⁶² The “exact” nature is not something that is concealed behind the appearances, but rather a symbolic disguise concealing the original “evidence” and the original experience of things.⁶³ Hence a *third* task arising from the attempt to reactivate the “sedimented history” of the “exact” nature: it is the rediscovery of the prescientific world and its true origins.⁶⁴

⁶⁰ Cf. p. 107.

⁶¹ Cf. pp. 113, 114, 115, 116 f.

⁶² Cf. pp. 115, 121.

⁶³ Cf. p. 126.

⁶⁴ Cf. pp. 124 ff., 132.

PHENOMENOLOGY AND THE SOCIAL SCIENCES

Alfred Schuetz

THE SIGNIFICANCE of Husserl's Phenomenology for the foundation of the social sciences will presumably become fully known only when the Husserl manuscripts which are relevant to this problem have been published. To be sure, the published works already contain the most important themes of thought pertaining to this subject. Husserl was constantly concerned with them from the time of writing the sixth *Logical Investigation*. But these important implicit themes remain scarcely noticed, not only because the extensive discoveries of phenomenology in the realm of pure logic and the general theory of knowledge have taken first place in the public discussions, but also because only in the later writings of the master has the problem of the social sciences been attacked systematically.

Even in these later writings Husserl proceeded with great hesitation. As is known, he had completed a second volume of the *Ideen* in 1913, as far as proof-reading. In this volume the problems of personality, intersubjectivity, and culture were to have been treated. Just before publication, misgivings concerning the result of his work befell this scholar, who was always a model of conscientiousness. He recognized that the attack on these problems presupposed carrying out

AUTHOR'S NOTE. — I wish to express my gratitude to Professor Richard H. Williams of the University of Buffalo for the great interest and the untiring efforts which he has devoted to the translation of my essay. The task of reproducing faithfully Husserl's language, which in the original German offers serious difficulties even to German readers, is, I believe, really creative work. To Professor Marvin Farber I am deeply indebted for his kind interest and his careful supervision of the text. To Professor Fritz Machlup I owe valuable suggestions concerning the English rendition.

still further analyses, especially the clarification of the constitutive activities of consciousness.

It was first in the *Formal and Transcendental Logic* (1929) that an avenue of approach was opened to this new thematic field, but again it proceeded from the point of view of purely logical problems. In this work can also be found¹ the starting-points toward considerations which were carried further in the postscript to the English translation of the *Ideen* and in the fifth *Cartesian Meditation* (both in 1931), and which would have found their complete presentation in an extensive series of essays planned under the title "The Crisis of European Sciences and Transcendental Phenomenology." In the last conversations which the writer had the good fortune of having with Husserl, he repeatedly designated this series of essays as the summary and the crowning achievement of his life work. He was working continuously on them during the last three years of his life, but only the first essay appeared, in the journal *Philosophia* (Belgrade, 1936). Then death took the pen from Husserl's hand and only the penetrating fragment which appeared in the *Revue internationale de Philosophie*² on "The Question about the Origin of Geometry" gives an indication of the extent of the work which had been begun in this period.

In the following paragraphs of this essay an attempt will be made to trace in concise form the initial phases of a phenomenological foundation of the social sciences which are contained in the writings referred to above. Following this, in the second part of the essay, the question concerning the independence of the social sciences will be raised and, going beyond Husserl, an inquiry will be made concerning the contribution which phenomenology can make to their concrete methodological problems. It goes without saying that all this must be limited to inadequate intimations.

I

All sciences, be they related to objects of nature or to so-called cultural phenomena, are, for Husserl, a totality of

¹ See especially *Logik*, pars. 94 ff.

² Brussels, 1939, I, 2.

human activities, namely, those of scientists working together. The fact of science itself belongs to that realm of objects which must be clarified by the methods of the cultural sciences, which in German are referred to as *Geisteswissenschaften*. Furthermore, the basis of meaning (*Sinnfundament*) in every science is the pre-scientific life-world (*Lebenswelt*) which is the one and unitary life-world of myself, of you, and of us all. The insight into this foundational nexus can become lost in the course of the development of a science through the centuries. It must, however, be capable in principle of being brought back into clarity, through making evident the transformation of meaning which this life-world itself has undergone during the constant process of idealization and formalization which comprises the essence of scientific achievement. If this clarification fails to occur, or if it occurs to an insufficient degree, and if the idealities created by science are directly and naïvely substituted for the life-world, then in a later stage in the development of science those problems of foundation and those paradoxes appear from which all so-called positive sciences are suffering today; they ought to be remedied by an *ex post facto* critique of knowledge which comes too late.

Phenomenological philosophy claims to be a philosophy of man in his life-world and to be able to explain the meaning of this life-world in a rigorously scientific manner. Its theme is concerned with the demonstration and explanation of the activities of consciousness (*Bewusstseinsleistungen*) of the transcendental subjectivity within which this life-world is constituted. Since transcendental phenomenology accepts nothing as self-evident, but undertakes to bring everything to self-evidence, it escapes all naïve positivism and may expect to be the true science of mind (*Geist*) in true rationality, in the proper meaning of this term.

However, a whole series of difficult problems is already revealed by this point of departure. We shall select a few of the groups of problems treated by Husserl which are especially relevant to our topic.

(1) First of all, how can a transcendental philosophy, such

as constitutive phenomenology, risk the assertion that the life-world as viewed with the natural attitude remains its basis of meaning while at the same time the troublesome effort of phenomenological reduction is needed in order to bracket this natural world? This reduction thus creates the prerequisite of the investigation of the contributive intentionalities in which the world is constituted for transcendental subjectivity.

(2) If the life-world as viewed with the natural attitude remains the basis of meaning of transcendental phenomenology, then not only I but also you and everyone belong to this life-world. My transcendental subjectivity, in the activities of which this world is constituted, must thus from the beginning be related to other subjectivities, in relation to the activities of which it authorizes and rectifies its own. And to this life-world, which is characterized as the single and unitary life-world of us all, belong indeed all the phenomena of social life from the simple Thou-relation to the most diverse types of social communities (including all the sciences as a sum total of the accomplishments of those who are engaged in science). In short, all that constitutes our own social world in its historical actuality, and all other social worlds concerning which history gives us knowledge, belongs to it. But must not the attempt to constitute the world from the activities of transcendental subjectivity necessarily lead to solipsism? Can it explain the problem of the *alter ego* and thereby of all social phenomena which are founded on the interaction of man with his fellows in the real life-world?

(3) Can the assertion be justified that positive sciences have naïvely substituted idealities for the life-world, and thus have lost the connection with their basis of meaning, namely the life-world, in view of the unquestionable success of the natural sciences and especially of mathematical physics in the control of this life-world? And is a special cultural science (*Geisteswissenschaft*) at all thinkable which would not necessarily refer to natural science, since the entire world of mind (*Geist*) seems to be based on things of the natural world and the psychical appears only in psychophysical connections? Must not rather a single style be demanded for all sciences which claim to be

exact, and is not this style of the unified science precisely that of the mathematical sciences, whose remarkable successes, even in their practical application, we must always gratefully admire?

(4) If in fact the phenomenological method is able to prove its legitimate claim to the establishment of the cultural sciences, and if in this way it succeeds in bringing to light a style of thought peculiar to these sciences by an analysis of the constitutive activities of the transcendental subjectivity, would such a proof yield any contribution at all to the solution of the methodological problems of the concrete sciences of cultural phenomena (law, the economic and social world, art, history, etc.), since all these sciences are related to that mundane sphere which transcendental phenomenology has bracketed? Can any help at all be expected from phenomenology for the solution of all these questions? Is it not rather an affair of a psychology oriented to everyday life to solve this problem?

In the following paragraphs we shall attempt to draw together the answers to these questions which Husserl has given in diverse places in the writings cited above.

Ad 1. It should be pointed out at once that there is widespread misunderstanding to the effect that transcendental phenomenology denies the actual existence of the real life-world, or that it explains it as mere illusion by which natural or positive scientific thought lets itself be deceived. Rather, for transcendental phenomenology also there is no doubt that the world exists and that it manifests itself in the continuity of harmonious experience as a universe. But this indubitability must be made intelligible and the manner of being of the real world must be explained. Such a radical explanation, however, is only possible by proving the relativity of this real life-world, and of any imaginable life-world, to the transcendental subjectivity which alone has the ontic sense of absolute being.³

In order to uncover this sphere of the transcendental subjectivity at all, the philosopher, beginning his meditation

³ Husserl, "Nachwort zu meinen *Ideen*," *Jahrbuch*, XI, 562 ff.

with a natural attitude, must undertake that change in attitude which Husserl calls phenomenological epoché or transcendental phenomenological reduction. That is to say, he must deprive the world which formerly, with the natural attitude, was simply posited as being, of just this posited being, and he must return to the living stream of his experiences of the world. In this stream, however, the experienced world is kept exactly with the contents which actually belong to it. With the execution of the epoché, the world in no way vanishes from the field of experience of the philosophically reflecting ego. On the contrary, what is grasped in the epoché is the pure life of consciousness in which and through which the whole objective world exists for me, by virtue of the fact that I experience it, perceive it, remember it, etc. In the epoché, however, I abstain from belief in the being of this world, and I direct my view exclusively to my consciousness of the world.

In this universe of the experiencing life of the transcendental subjectivity I find my entire cogitations of the life-world which surrounds me, a life-world to which also belong my life with others and its pertinent community-forming processes, which actively and passively shape this life-world into a social world. In principle all of these experiences found in my conscious life, if they are not themselves originarily giving and primally founding experiences of this life-world, can be examined concerning the history of their sedimentation. In this way, I can return fundamentally to the originary experience of the life-world in which the facts themselves can be grasped directly.

To interpret all this by showing the intentional accomplishments of the transcendental subjectivity makes up the enormous area of work of constitutive phenomenology. It is thus a true science of mind (*Geist*), and claims to be a method, in fact the only method, which seriously means to be a radical explanation of the world through mind.

Ad 2. But this life-world, which has constantly been referred to above, and which may only be constituted by the activities of my transcendental subjectivity, is certainly not

my private world. To be sure, others, fellow men, also belong to it, indeed not only as other bodies or as objects of my experience of this world but as *alter egos*, that is to say as subjectivities which are endowed with the same activities of consciousness as am I. The world which is experienced after the completion of the reduction to my pure life of consciousness is an intersubjective world, and that means that it is accessible to everyone. All cultural objects (books, tools, works of all sorts, etc.) point back, by their origin and meaning, to other subjects and to their active constitutive intentionalities, and thus it is true that they are experienced in the sense of "existing there for everybody." (Of course, this is only true "for everybody" who belongs to the corresponding community of culture — but that is a problem of a quite different character, which will be discussed later.)

Thus, for phenomenology the problem of the experience of others need not be a dark corner which, to use a beautiful expression of Husserl,⁴ is feared only by children in philosophy because the specter of solipsism or psychologism and relativism haunts it. The true philosopher, however, must light up this dark corner rather than run away from it.

In the fifth *Cartesian Meditation* Husserl offered the following solution of the problem, which we shall attempt to render in its main outline, as far as possible in his own words.⁵

After the execution of the epoché I can first eliminate from the thematic field within the transcendental universal sphere all the constitutive activities which are immediately or mediately related to the subjectivity of Others. In this way I reduce the universe of my conscious life to my own transcendental sphere (*transzendente Eigensphäre*), to my concrete being as a monad. What is left by the abstractive elimination of the sense of other subjectivity is a uniformly connected stratum of the phenomenon "world" — Husserl calls it the primordial sphere — which is no longer a world objectively existing for

⁴ *Logik*, p. 210.

⁵ For this purpose we have not used the French translation but the original unpublished German manuscript. A critique of the Husserlian establishment of the transcendental subjectivity, against which, in my opinion, certain important objections can be raised, must wait for another publication.

everybody, but is my world belonging peculiarly to me alone. And thus, in the truest sense, it is my private world.

Within this reduced world-phenomenon, one object is distinguished from all other objects of the likewise reduced nature. I call it my body, and it is distinguished by the fact that I can control it in action and that I attribute sensorial fields to it in conformity with my experience. If I reduce other human beings in a similar way I get peculiar corporealities; if I reduce myself as a human being, I get "my body" and "my mind" or me as a psychophysical unity, and in it my personal I which functions in my body, or which acts on and endures the exterior world by means of it. Now, in this reduced exterior world the "Other" also appears as a corporeality, but as a corporeality which I apprehend as a body, and indeed as a body of *another* by a process of appresentative pairing.⁶

The other corporeality, once experienced, continues indeed to manifest itself as a body through its changing, but always concordant gestures, which appresentatively indicate a psychical side. This psychical side, at first only indicated by appresentation, has to be fulfilled by original experience. In this way an Other is appresentatively constituted in my monad, as an ego that is not "I myself," but a second ego which mirrors itself in my monad. This second ego, however, is not simply there and given in and of itself, but is an *alter ego*; it is an Other which, in accordance with his constitutive sense, refers back to me, the ego of this *alter ego*. This "Other" is nevertheless not simply a duplicate of myself. The alien corporeality that is apperceived as an "Other" appears in my

⁶ By *appresentation* Husserl understands a process of analogy, but this process is in no sense a conclusion by analogy. By it an actual experience refers back to another experience which is not given in actuality and will not be actualized. In other words the appresented does not attain an actual presence. For instance, by looking at the obverse of an object the reverse is appresented. *Pairing* ("accouplement" in the French translation) is a principal form of passive synthesis, which means of association. Its characteristic is that two data, distinguishable each from the other, are presented in the unity of consciousness; that means, that they constitute as a pair a phenomenological unity of similarity established by pure passivity, although they appear distinct and regardless of whether or not they are noticed. Cf. *Méditations Cartésiennes*, sec. 50 and 51.

monadic sphere above all in the mode of the "there" (*illic*), while my own body is in the mode of the absolute "here" (*hic*). That which becomes appresented in this way does not derive from my own sphere of peculiarity; it is a coexistent ego in the mode of the *illic* and therefore an *alter ego*.

The first communality which exists between me, the primordial psychophysical I, and the appresentatively experienced Other, and which forms the foundation of all other intersubjective communities of a higher order, is the community of Nature, which belongs not only to my primordial sphere but also to that of the Other. There is, however, the difference that the Other's world of Nature is seen as *illic* from my point of view, which is to say that the Other gets that aspect from it, which I should get if I myself were not *hic* but *illic*. In this way every natural thing which is experienced or which can be experienced in my primordial sphere obtains a new appresentative stratum, namely, as the same natural thing in the possible manners of its givenness for the Other.

Starting from myself as the original constitutive monad, I thus get other monads, that is, Others as psychophysical subjects. These Others are not merely related by means of associative pairing to my psychophysical being in their capacity as being bodily opposite me; rather it is a question of an objective equalization, a mutual interrelatedness of my existence and that of all Others. For as the body of the Other is appresented by me as an Other, so my body is experienced by the Other as his Other, and so forth. The same thing obtains for all subjects, that is for this open community of monads which Husserl has designated as transcendental intersubjectivity.

It should be stressed that this transcendental intersubjectivity exists purely in me, the meditating ego. It is constituted purely from the sources of my intentionality, but in such a manner that it is the *same* transcendental intersubjectivity in every single human being (only in other subjective manners of appearance) in his intentional experiences. In this constitution of the transcendental intersubjectivity that of the single and uniformly objective world is also executed, and along

with it the constitution of those peculiarly mental objectivities, especially those types of social communities, which have the character of personalities of a higher order.

Of special importance for our topic is the constitution of the specifically human, and that means cultural, worlds in their peculiar manner of objectivity.⁷ According to Husserl, accessibility for everyone belongs in essence to the constitutive sense of Nature, of corporeality and of the psychophysical human being. *But the world of culture is of a limited kind of objectivity*, and with this it should be borne in mind that the life-world is given to me, and to everyone who retains the natural attitude primarily as his cultural world, namely, as a world of signification which the human being in question historically takes a part in forming. The constitution of the world of culture, similar to the constitution of any "world," including the world of one's own stream of experience, has the lawful structure of a constitution, oriented with respect to a "null point" (*Nullglied*), i.e., to a personality. Here am I and my culture; it is accessible to me and to my cultural companions as a kind of experience of others. Other cultural humanity and other culture can become accessible only by a complicated process of understanding, namely, on the basic level of the common Nature, which, in its specific spatio-temporal structure, constitutes the horizon of being for the accessibility to all the manifold cultural phenomena. As Nature is thus concretely and uniformly constituted, so human existence itself is referred to an existent life-world as a realm of practical activity, which, from the first, is endowed with human significations. All this is in principle accessible to the explication of a phenomenological constitutive analysis which, proceeding from the apodictic ego, must finally reveal the transcendental meaning of the world in its full concretion, which is the continuous life-world of us all.

Ad 3. It was stated above that the natural sciences generally, and especially the natural sciences which use mathematics, have lost their relation to their basis of meaning, namely the life-world. How can this reproach be justified,

⁷ In this connection see especially *Méd. Cart.*, sec. 58.

when it has just been shown that it is precisely this universal Nature which constitutes itself concretely and uniformly in intersubjectivity, and which must almost be considered as the form of access to the worlds of other culture, in their manner of oriented constitution? We may reply first of all that Nature as the object of the natural sciences does not mean precisely the same thing as Nature as a constitutive element of the life-world. That which the naïvely living human being takes for natural reality is not the objective world of our modern natural sciences; his conception of the world, as valid for him in its subjectivity, obtains with all its gods, demons, etc. *Nature in this sense, as an element of the life-world, is thus a concept which has its place exclusively in the mental (geistig) sphere.* It constitutes itself in our everyday meaningful experience as this experience develops in our historically determined being.

Let us take geometry as an example. When we, in our perceptual life-world, direct our view by abstraction to merely spatial and temporal figures we experience, it is true, "solids." However, they are not the ideal solids of geometry, but they are solids as we actually realize them, with the same content which is the true content of our experience.⁸ To the world which is pre-given to our everyday experience belongs the spatio-temporal form, in which are included the corporeal figures ordered within it, and in which we ourselves live in conformity with our personal, bodily manner of being. But here we find nothing of geometrical idealities, of geometrical space or of mathematical time with all their forms.⁹ Concretely empirical figures are given to us, in our life-world, merely as forms of a material, of a "sensory fullness"; thus they are given with that which is represented by the so-called specific sense-qualities (color, odor, etc.). But pure geometry deals with solids in the corporeal world only in pure abstraction; that is to say only with abstract figures in the spatio-temporal framework, which are, as Husserl recognizes, purely ideal "meaning figures," meaning-creations of the human mind. This is not to say that geometrical existence is psy-

⁸ Husserl, "Krisis," pp. 98 ff.

⁹ *Ibid.*, pp. 125 ff.

chological or personal existence in the personal sphere of consciousness. On the contrary, geometrical existence is of the same kind as the existence of meaning structures, and it is objective for everyone who is a geometer or understands geometry.

Geometrical figures, axioms, and propositions, just as most structures of the world of culture, have an *ideal objectivity*; they can always be *reactivated* as identically the same. That is to say, the meaning-producing activity which has led to their sedimentation can be reëxecuted. But reactivation in this sense is also explication of the meaning which lies implicated in the abbreviations of this sedimentation, by referring it back to the primal evidence. The possibility always remains open to examine into the primal evidence of a tradition, for example, of geometrical or of any other deductive science, which works on through the centuries. If this does not occur, then the original activities, which are found within the fundamental concepts of this deductive science, and their foundation in pre-scientific materials remain undisclosed. The tradition in which these sciences are handed down to us is then emptied of meaning, and the basis of meaning to which these sciences refer, namely the life-world, is forgotten.¹⁰ But according to Husserl this is the situation in modern times not only in respect to geometry and mathematics, including all natural sciences using mathematics, but also in respect to traditional logic.¹¹

The fundamental idea of modern physics is that nature is a *mathematical* universe. Its ideal is exactitude, which means an ability to recognize and determine the things of nature in absolute identity, as the substratum of an absolutely identical, methodically unequivocal and discernible character. In order to achieve this ideal, physics makes use of measurement and of the mathematical methods of calculation and formulae. In this way it seeks to create an entirely new kind of prediction for the corporeal world, and to be able to calculate the occurrences in this world in terms of a compelling necessity.

¹⁰ Husserl, "Geometrie," pp. 203-226, and especially pp. 209-217.

¹¹ In relation to this last point, about logic, cf. *Logik*, sec. 73-81, sec. 94 ff.

But on the one hand the sensory fullness of solids in the life-world and the changes of this fullness are not capable of being mathematized, and on the other hand the pre-scientific intuitable nature does not lack this predictability. In the world perceptible by our senses, changes in the spatio-temporal positions of solids, changes in their form and fullness, are not accidental and indifferent, but they are dependent on each other in sensuously *typical* ways. The basic style of our visible immediate world is empirical. This universal, and indeed causal, style makes possible hypotheses, inductions, and predictions, but in pre-scientific life they all have the character of the approximate and typical.¹² Only when the ideal objectivities become substituted for the empirical things of the corporeal world, only when one abstracts or co-idealizes the intuitable fullness, which is not capable of mathematization, does the *fundamental hypothesis* of the entire realm of mathematical natural science result, namely, that a universal inductivity might prevail in the intuitable world, an inductivity which suggests itself in everyday experience but which remains concealed in its infinity. Consequently this universal causality of the mathematical sciences is also an idealization. Now it is doubtless true, says Husserl, that in the remarkable structure of the natural sciences this hypothesis holds good in infinity, and precisely in its prediction of events in the life-world. But in spite of all verification it still remains a hypothesis and thus an unclarified supposition of mathematical natural science.

The natural scientist, in unquestioned tradition, accepts the inherited idealizations and unclarified suppositions as technics (*τεχνή*) without becoming conscious of the shift which the originally living meaning of the aim to get knowledge of the world itself has experienced.¹³ In the process of mathematization of the natural sciences, says Husserl, we measure the life-world for a well-fitting garment of ideas. In just this way we get possibilities for a prediction which goes far beyond the accomplishments of everyday anticipation,

¹² Cf. "Krisis," pp. 101-105.

¹³ "Krisis," pp. 113-116 and pp. 132 ff.

concerning the occurrences in the intuitable life-world. But everything which represents the life-world to the natural scientists as "objectively actual and true nature" is clothed by this garment of symbols and disguised. The cloak of ideas has the effect that we take a method to be true being, in order infinitely to improve upon the *raw* predictions which are the only ones possible within the actual experiences of the life-world. But the proper meaning of methods, formulae, and theories remains unintelligible so long as one does not reflect about the historical meaning belonging to their primordial establishment.

With the enormous success of the mathematical natural sciences has come the fact that modern philosophy and critique of knowledge generally perceive the prototype of scientific thought in their methods. The consequence is a dualistic cleavage into a real and self-contained corporeal world, and a mental world, which latter, however, remains dependent upon the natural world and is not brought to any independent status in its own right. The further consequence is that even this mental world ought to be explained *more geometrico* according to the unclarified rationalism of the mathematical natural sciences, or, as Husserl terms it, by means of physicalistic rationalism. Above all, psychology ought to be treated objectivistically, wherein objectivistic should mean that in the realm of the world which is self-evidently given through experience one will search for the "objective truths" without inquiring about the subjective activities of the mind, out of which alone the ontic sense of the pre-given life-world is constituted. For the life-world is a subjective formation resulting from the activities of the experiencing pre-scientific life. Inasmuch as the intuitable life-world, which is purely subjective, has been forgotten in the thematic interest of natural science, and also of objectivistic psychology, the working subject, namely the human being himself who is pursuing his science, has in no way become thematic. It is only in purely cultural scientific knowledge that the scientist does not become confounded by the objection of the self-disguise of his activity. It is consequently

erroneous if the social sciences contend with the natural sciences for an equal warrant. As soon as they grant to the natural sciences their objectivity as their own independent attribute, the social sciences themselves fall into objectivism, for only mind (*Geist*) has being in itself and is independent. To regard nature as something in itself alien to mind and then to found the cultural sciences on the natural sciences, and thus supposedly to make them exact, is an absurdity. The cultural scientists, blinded by naturalism, have completely neglected even to raise the problem of a universal and true cultural science.

Ad 4. But is it an affair of the cultural sciences at all, in the sense of that term as used today, to make inquiries concerning the problem of a universal science of the mind in Husserl's sense? Is this task not specifically a philosophical, or more properly a phenomenological, problem that becomes visible only in the transcendental sphere, and thus only after that mundane world, which alone is the topic and ought to be the topic of all efforts of the concrete sciences of culture, has been bracketed? The ideal of history to recount "as it then actually was" (von Ranke) is also, with certain modifications, the ideal of all other sciences of culture, namely, to determine what society, the state, language, art, economy, law, etc., actually is in this our mundane life-world and its historicity, and how the meaning of each can be made intelligible in the sphere of our mundane experience. And should not an appeal be made to psychology in this sphere for a solution of the problem of a universal cultural science?

For Husserl there is also no doubt that all the hitherto existing cultural and social sciences are related in principle to phenomena of mundane intersubjectivity. Hence the transcendental constitutive phenomena, which only become visible in the phenomenologically reduced spheres, scarcely come within the view of the cultural sciences. However, a psychology from which a solution of the problems of the cultural sciences might be expected must become aware of the fact that it is not a science which deals with empirical facts. It has to be a science of essences, investigating the

correlates of those transcendental constitutional phenomena which are related to the natural attitude. Consequently, it has to examine the invariant, peculiar, and essential structures of the mind; but that is to say it examines their *a priori*.¹⁴ The concrete description of the spheres of consciousness as it has to be undertaken by a true descriptive psychology with the natural attitude remains, however, the description of a closed sphere of the intentionalities. That is to say it requires not only a concrete description of the experiences of consciousness, as in the Lockean tradition, but also necessarily the description of the conscious (intentional) "objects in their objective sense"¹⁵ found in active inner experiences. But such a true *psychology of intentionality* is, according to Husserl's words, nothing other than a *constitutive phenomenology of the natural attitude*.¹⁶

In this eidetic mundane science (thus in the psychological apperception of the natural attitude), which stands at the beginning of all methodological and theoretical scientific problems of all the cultural and social sciences, all analyses carried through in phenomenological reduction essentially retain their validation. It is precisely here that the tremendous significance of the results achieved by Husserl for all the cultural sciences lies. This will now be briefly carried further.

II

In the above résumé of some of the most important lines of thought of the later philosophy of Husserl, the concept of the life-world is revealed in its entire and central significance as the basis of meaning of all sciences, including natural sciences and including also philosophy in so far as it wishes to appear as exact science. Thus every reflection finds its evidence only in the process of recurring to its originally founding experience within this life-world, and it remains the endless task of thought to make intelligible the intentional

¹⁴ "Nachwort," p. 553; cf. p. 14 of Boyce Gibson's translation.

¹⁵ *Ibid.*, p. 565.

¹⁶ *Ibid.*, p. 567.

constitution of the contributive subjectivity in reference to this its basis of meaning. We, however, who live naïvely in this life-world, encounter it as already constituted. We are, so to speak, born into it. We live in and endure it, and the living intentionality of our stream of consciousness supports our thinking, by which we orient ourselves practically in this life-world, and our action, by which we intervene in it.

Our everyday world is, from the outset, an intersubjective world of culture. It is intersubjective because we live in it as men among other men, bound to them through common influence and work, understanding others and being an object of understanding for others. It is a world of culture because, from the outset, the life-world is a universe of significations to us, i.e., a framework of meaning (*Sinnzusammenhang*) which we have to interpret, and of interrelations of meaning which we institute only through our action in this life-world. It is a world of culture also because we are always conscious of its *historicity*, which we encounter in tradition and habituality, and which is capable of being examined because the "already-given" refers back to one's own activity or to the activity of others, of which it is the sediment. I, the human being born into this world and naïvely living in it, am the center of this world in the historical situation of my actual "Now and Thus"; I am the "null point toward which its constitution is oriented."¹⁷ That is to say, this world has significance and meaning first of all by me and for me.

In the following we intend to try to clarify this topic by drawing from Husserl's course of ideas some fundamental consequences not found in his own writings, for the knowledge of the structure of the social sciences.

This world, built around my own I, presents itself for interpretation to me, a being living naïvely within it. From this standpoint everything has reference to my actual historical situation, or as we can also say, to my pragmatic interests which belong to the situation in which I find myself now and thus. The place in which I am living has not significance for me as a geographical concept, but as my home. The objects

¹⁷ Cf. above, p. 173.

of my daily use have significance as my implements, and the men to whom I stand in relationships are my kin, my friends, or strangers. Language is not a substratum of philosophical or grammatical considerations for me, but a means to express my intentions or to understand the intentions of others, etc. Only in reference to me does that relation to others obtain its specific meaning which I designate with the word "We." In reference to Us whose center I am, others stand out as "You," and in reference to You, who refer back to me, third parties stand out as "They." My social world with the *alter egos* in it is arranged, around me as the center, into associates (*Umwelt*), contemporaries (*Mitwelt*), predecessors (*Vorwelt*), and successors (*Folgewelt*),¹⁸ whereby I and my different attitudes to others institute these manifold relationships. All this is done in various degrees of *intimacy* and *anonymity*.

Furthermore, the life-world is arranged into fields (*Zentren*) of different relevance according to my current state of interest, each one of which has its own peculiar center of density and fullness, and its open but interpretable horizons. In this connection the categories of *familiarity* and *strangeness* and the very important category of *accessibility* enter into consideration. This last category refers to the grouping of my environments according to (1) that which actually lies within the extent of my reach, seeing and hearing, or has once lain there and might at will be brought back into actual accessibility; (2) that which is or was accessible to others and might thus potentially be accessible to me if I were not here (*hic*) but there (*illic*);¹⁹ (3) the open horizons of that which in free variation can be thought of as attainable.

¹⁸ The translation of these terms follows the usage in an article by Alfred Stonier and Karl Bode concerning Dr. Schuetz's work, "A New Approach to the Methodology of the Social Sciences," *Economica*, iv (November 1937), 406-424. These terms are developed at length in Dr. Schuetz's *Der sinnhafte Aufbau der sozialen Welt* (Vienna, 1932). The *Umwelt* is the immediate world within which direct and relatively intimate experience of others is possible. The *Mitwelt* is a world of mediate, but contemporary, experience within which indirect and relatively anonymous experience of others can be obtained. The *Vorwelt* refers to experiences of the historical past. The *Folgewelt* refers to the future, of which no experience is possible, but toward which an orientation may exist. —TRANSLATOR'S NOTE.

¹⁹ Cf. above, p. 172.

To this it should be added that I assume everything which has meaning for me also has meaning for the Other or Others with whom I share this, my life-world, as an associate, contemporary, predecessor, or follower. This life-world presents itself also to them for interpretation. I know about their perspectives of relevance and their horizons of familiarity or strangeness; indeed I also know that with segments of my meaningful life I belong to the life-world of Others as Others belong to my life-world, etc. All this is a manifold orientation for me, the naïve human being. I posit meaningful acts in the expectation that Others will interpret them meaningfully, and my schema of positing is oriented with respect to the Others' schema of interpretation. On the other hand, I can examine everything which, as a product of Others, presents itself to me for meaningful interpretation as to the meaning which the Other who has produced it may have connected with it. Thus, in these reciprocal acts of positing meaning, and of interpretation of meaning, my social world of mundane intersubjectivity is built; it is also the social world of Others, and all other social and cultural phenomena are founded upon it.

All this is self-evident to me in my naïve life just as it is self-evident to me that the world actually exists and that it is actually *thus*, as I experience it (apart from deceptions which subsequently in the course of experience prove to be mere appearances). No motive exists for the naïve person to raise the transcendental question concerning the actuality of the world or concerning the reality of the *alter ego*, or to make the jump into the reduced sphere. Rather, he posits this world in a *general thesis* as meaningfully valid for him, with all that he finds in it, with all natural things, with all living beings (especially with human beings), and with meaningful products of all sorts (tools, symbols, language systems, works of art, etc.). Hence, the naïvely living person (we are always speaking of healthy, grown-up, and wide-awake human beings) automatically has in hand, so to speak, the meaningful complexes which are valid for him. From things inherited and learned, from the manifold sedimentations of tradition,

habituality, and his own previous constitutions of meaning, which can be retained and reactivated, his *store of experience* of his life-world is built up as a closed meaningful complex. This complex is normally unproblematical for him, and it remains controllable by him in such a way that his momentary interest selects from this store of experience those things which are relevant to the demand of the situation. The experience of the life-world has its special style of verification. This style results from the process of the harmonization of all single experiences. It is co-constituted, last but not least, by the perspectives of relevance and by the horizons of interest which are to be explicated.

All that has been said so far, however, is no more than chapter-headings for an extensive exploration. For the present, it will suffice to keep firmly in mind that a special motivation is needed in order to induce the naïve person to pose the question at all concerning the meaningful structure of his life-world, even *within the general thesis*. This motivation can be very heterogeneous; for example, a newly appearing phenomenon of meaning resists being organized within the store of experience, or a special condition of interest demands a transition from a naïve attitude to a reflection of a higher order. So-called rational action can be given as an example of the latter. Rational action is given when all the ends of action and all the means which will lead to it are clearly and distinctly presented, as, for example, in the case of economic action. If such a motivation to leave the natural attitude is given, then by a process of reflection the question concerning the structure of meaning can always be raised. One can always reactivate the process which has built up the sediments of meaning, and one can explain the intentionalities of the perspectives of relevance and the horizons of interest. Then all these phenomena of meaning, which obtain quite simply for the naïve person, might be in principle exactly described and analyzed even *within the general thesis*. To accomplish this on the level of mundane intersubjectivity is the task of the mundane cultural sciences, and to clarify their specific methods is precisely a part of that constitutive phenomenology

of the natural attitude of which we have been speaking (and concerning which this section of the essay mentions only a few topics as programmatic examples). Whether one will call this science Intentional Psychology or, better, General Sociology, since it must always be referred back to mundane intersubjectivity, is a quite secondary question.

All science presumes a special attitude of the person carrying on science; it is the attitude of the disinterested observer. In this manner it is distinguished above all from the attitude of the person who lives naïvely in his life-world and who has an eminently practical interest in it. With the transition to this attitude, however, all categories of experience of the life-world undergo a fundamental modification. As a disinterested observer, not as a private person, which certainly he also is, the scientist does not participate in the life-world as an actor, and in his doing he is no longer carried along by the living stream of intentionalities. The person living naïvely in the life-world can become, as we have said, motivated so as to raise the question concerning the structure of its meaning. But, although he reflects in this manner, he in no way loses his practical interest in it, and he still remains the center, the "null point," of this his world, which is oriented with regard to him. *But to make up his mind to observe scientifically this life-world means to determine no longer to place himself and his own condition of interest as the center of this world, but to substitute another null point for the orientation of the phenomena of the life-world.* What this null point is and how it comes to be constituted as a type (economic man, subject of law, etc.) depends upon the particular problem-situation which the scientist has chosen. Predominantly the life-world, as an object of scientific investigation, will be for the investigator *qua* scientist, the life-world of Others, the observed. This does not alter the fact that the scientist, who is *also* a human being among human beings in this single and uniform life-world and whose scientific work is in itself a working-together with Others in it, constantly refers and is obliged to refer in his scientific work to his own experience of the life-world. But it must always be clearly borne in mind that the disinterested observer

has to a certain extent departed from the living stream of intentionalities. *Together with the substitution of another null point for the framework of orientation, every meaning reference which was self-evident to the naïve person, in reference to his own I, has now experienced a fundamental specific modification.*²⁰ It remains for each social and cultural science to develop the type of such modification proper to it; that means nothing other than *to work out its particular methods*. In other words, each of these sciences must give the equation of transformation according to which the phenomena of the life-world become transformed by a process of idealization.

For idealization and formalization have just the same role for the social sciences as the one which Husserl has stated for the natural sciences, except that it is not a question of *mathematizing the forms* but of developing a *typology of "fullnesses"* (*Füllen*). Also in the social sciences the eminent danger exists that their idealizations, in this case typologies, will not be considered as methods but as true being. Indeed this danger is even greater in the sciences which deal with the human being and his life-world, because they are always obliged to work with a highly complex material involving types of a higher order. This material does not refer back immediately to the subjective activity of individuals, which is always the chief problem if it is in the sphere of mundane apperception.

In relation to these problems it is the great contribution of Max Weber²¹ in his "verstehende Soziologie" to have given the principles of a method which attempts to explain all social phenomena in the broadest sense (thus all objects of the cultural sciences) in relation to the "intended meaning"

²⁰ For example, the social scientist does not study the concrete action (*Handeln*) of human beings, like you and me and everyone in our daily lives, with our hopes and fears, mistakes and hates, happiness and misery. He analyzes only certain definite sequences of activity (*Handlungsabläufe*) as types, with their means-end relations and their chains of motivation; and he constructs (obviously, according to quite definite structural laws) the pertinent ideal personality types with which he peoples the segment of the social world he has selected as an object of his scientific research.

²¹ An excellent presentation of his theory is to be found in English in Talcott Parsons, *The Structure of Social Action* (New York, 1937).

which the actor connects with his action. At the same time he has given the main characteristics of the style of method of these sciences in his theory of the ideal type and its laws of formation. But, it seems to me, these methods can only become fully intelligible by means of the far-reaching investigations of a constitutive phenomenology of the natural attitude.

Such a science will find more than a guide in Husserl's investigations in the area of transcendental phenomenology, for, as we have already said, in essence all analyses carried out in phenomenological reduction must retain their validation in the correlates of the phenomena investigated within the natural sphere. Therefore it is to be the task of this science to apply the whole treasure of knowledge opened up by Husserl to its own area. We mention only Husserl's analysis of time, his theory of signs and symbols, of ideal objects, of occasional judgments, and finally his teleological interpretation of history. To develop the program of such a science, even in its main characteristics, beyond the mere suggestion given above, would go far beyond the limits placed on this essay.²²

²² I have presented several of the main principles in *Der sinnhafte Aufbau der sozialen Welt*.

ART AND PHENOMENOLOGY

Fritz Kaufmann

REXAMINING "the old conflict" between art and philosophy, this paper will try to elucidate and to qualify the resemblances as well as the differences between these two rivals. I want to proceed in the way of the closest possible adherence to the pregnant form which philosophy received in Edmund Husserl's phenomenology, though not quite in the span of the frame filled out by the master himself.

The leading impulse and principle of phenomenology is to revise and to vivify the, perhaps, merely verbal significations, the more or less empty intentions and the traditional positings of our actual life by means of going back to the source of their original constitution and their authentic fulfillment in self-giving evidences. We may compare this aim of the philosopher with the achievement of a proper vision of life and the world in the work of the artist.

The originality of the artistic expression, being the very maturation of the artistic vision, and the originality of the philosophical evidences in their conceptual presentation have both a subjective and an objective bearing. Phenomenology does not content itself with the straightforward evidences of naïve ontologies, but uses them as clues to the sphere of their proper origination. Phenomenology refers them to and harbors them in the intentional context and the constitutive functions of pure consciousness.

A somewhat analogous inward turn is carried through in aesthetic experience. It does not lead, however, to anything like a thematization of the immanent process of intentional constitution. It does not consist either in a subjectivistic trend or in an explicit and somewhat narcissistic reflection which the artistic process tries to get in the mirror of the work. Tendencies like these are characteristic of a peculiar style,

but not of the intrinsic nature of aesthetic experience. The true turn consists in forming (as in music) and, perhaps, transforming (as in painting) a sensory context into an emotive symbol expressing the dynamics and conveying the mood toward which — in a given situation — the lines of our experience converge. The outer-concentration¹ of the aesthetic experience, i.e., our being fascinated by an outward intuitional schema, is backed and sustained by an inner-concentration² providing an integrated feeling of what experience has proved to be like on the whole. A work of art has the powerful gift of reminding and tuning us in such a way that in its tenor the tenor of an individuated life-experience is virtually present. The impressive form of such a work focuses the impact as well as the imprint of the impressions that have formed our life and have adopted, at the same time, the form of our personal receptivity.³

While the dynamic result will be the product of both factors, it can be developed, in accordance with what the state of mind may prove to be, from the side of the subjective as well as the objective ingredient, and gives in one version or the other an epitome of the dialogue in which world and life are involved.

The work of art concentrating upon meaningful impressions shows the state of things in the state of mind and the state of mind in the concentrated, comprehensive, and sincere expression that is the very secret of the artistic form. The two states refer to each other and reveal each other in virtue of an intentional unity which is, perhaps, the highest representation and justification of intentionality as the fundamental category of phenomenological interpretation.

The originality of a work of art consists in this original

¹ Cf. Moritz Geiger, *Zugänge zur Aesthetik* (1928), pp. 12 ff.

² "Wir weilen bei der Betrachtung des Schönen, weil diese Betrachtung sich selbst ('durch die Belebung der Erkenntniskräfte') stärkt und reproduziert" (Kant, *Kritik der Urteilskraft*, sec. 12).

³ The word impression has to be taken here — as always in aesthetics — in the concrete sense covering the sensory afflux as well as the manner of our personal reaction: like the German word *Eindruck* or *Empfindung* that is related in the first case to the object, in the second one exclusively to the subject (cf. Kant, *op. cit.*, sec. 3).

discovery, centered either in the capacity of finding out the right expression, the pure style for the evolution of a certain mood, or in the boldness of its confession, the radicalism and fulness of its disclosure, i.e., in either the purity or the greatness of the artistic achievement.

The aesthetic *purity* will be measured by the specific exactness in which the lines of feeling are focused in the idiom of the work as the adequate symbol of the mood that tends to be expressed. The realization of this adequacy may be described — better than by the questionable term of Alois Riegl's *Kunstwollen* — by means of the phenomenological schema of intention and fulfilment.⁴ The work draws and leads to an ideal point at which a certain mood, touched and gradually unfolded in the process of this very experience, is fully developed:⁵ we may call it the individual aesthetic idea. Aesthetic analysis and criticism controls the conclusiveness of this result — the fulfilment of the intentions suggested by the evocative power of the elements and planes of the artistic form.⁶

The *greatness* of a work of art is rooted in the frankness and profundity of its exhibiting powers and abysses of being that were felt before but unavowed in the disguises of life. In the artist's work and in virtue of its transforming the vagueness of impressions into the elegance of expression the obsession of our mood is rendered to us as a possession of our mind.

Art, therefore, is not primarily inventive, it is imaginative in the sense of creating an image "of things unknown,"⁷ of producing in a sensory figure what was imperceptible before. As an exploration of the hidden depths of feeling in which life and the world are originally related, art bears comparison with phenomenology as converting the natural attitude toward the experienced world into the transcendental attitude toward one's experience of the world.

In spite of the differences between idiomatic expression in

⁴ Taken in this context "intention" is not the rationalistic concept rightly attacked, e.g., by G. W. Knight, in *The Wheel of Fire*, pp. 8 ff.

⁵ Cf. Fichte, S. W., VIII, p. 299.

⁶ Cf. e.g. Johannes v. Allesch, *Wege zur Kunstbetrachtung* (1921).

⁷ Cf. *A Midsummer Night's Dream*, Act v, Sc. 1.

art and conceptual analysis in phenomenology, the originality of self-perception happens to be attained by both in a similar way. The frankness of *exhibition* is made possible in both cases by an attitude of *inhibition* suspending our natural entanglement in the net of worldly interests. This inner freedom of awareness goes beyond the alleged disinterestedness of the theoretical attitude in sciences, etc., that only stops our worldly intercourse but never questions our worldly position. It has its constitutive guarantee in the so-called "indifference" of aesthetic experience and its methodical support in the phenomenological "epoché."

In aesthetic indifference our attention is exclusively absorbed by and freely devoted to a sensory context, not on account of its practical import, not as a sign of things to come, but in virtue of its intrinsic value, its symbolic conclusiveness. Producing or reproducing this consummate form of appearance in one way or the other we enjoy the "constructive excitement"⁸ of giving a voice as well as a hearing to the intimations of our deepest impressions. The productive receptivity and documentary value of aesthetic experience accounts for life holding its breath and having a rest in this interval of attentive concentration. Art being not an escape from but a listening to life, the artist is not what he is because his activity as a man is blocked, but he will rather be inclined to renounce other activities because he is given to and engrossed in the artistic one.

The phenomenological epoché, on the other hand, is an inhibition of the general thesis of being, habitually conferred on every object of whatever kind of external or externalized experience. It means a "reduction" of transcendent entities to phenomena as posited by transcendental consciousness in its intentional constitution. To the phenomenologist the thesis of being, instead of naïvely playing its leading part, has become a phenomenon to be studied in its rise, meaning, and justification. Operating no more within the bounds of any presupposition of objective being, the phenomenologist

⁸ I borrow this term from Samuel Alexander. Cf. Alexander's *Beauty and Other Forms of Value* (London, 1933).

comes near to the artistic mind and its keeping to the sensory schema apart from the reality-function of things.

Husserl himself noticed the close affinity between the artistic and the phenomenological inhibition: both illustrating, though in different ways, a universally possible modification of consciousness — that of the neutralization of the thesis of being.⁹ The reductions, methodically carried through in phenomenology, happen to find an automatic fulfillment in art.¹⁰ Husserl takes great care in distinguishing the neutrality-modification of art from the neutrality of the sphere of representation in every image. The figure in an image is, of course, not a real being; it represents merely a being that may be real, but is not present in the image itself: this substitutional character is what we mean by the neutralization of the figure. Such an image-modification belongs to our usual experience in pictorial arts or poetry; but being of no aesthetic relevancy itself, it is outweighed in artistic experience by the proper aesthetic qualities.

A work of art does not substitute, but institutes an original awareness of existence on the whole; it does not so much reproduce and represent as produce and present a total experience.

It is significant that the unworldliness of the suspense mentioned, the inner independence of the presuppositions of being, “reduces” the personal agent in the workaday world to the aesthetic subject in art¹¹ and the pure ego in phenomenology. It also motivates the well-known phrase of the aesthetic “ecstasy,” which may yield some additional insight to our comparative analysis.

The very term “ecstasy” suggests an undivided feeling of the whole of being as the very result of an alienation of man from the claims of regular life. The universality of the phe-

⁹ Cf. *Ideen*, pp. 223, 226.

¹⁰ Cf. the note on Husserl's position on this question in Oskar Becker's contribution to the *Husserl-Festschrift* (Halle, 1929), p. 36.

¹¹ The artist as a *worker* is, of course, not only a *pure* aesthetic subject. This term abstracts — with regard to us laymen — from the productive effort the artist invests in his specific craftsmanship and the material suggestions he gets from there.

nomenological approach springs from a similarly radical, though peculiar, withdrawal from the positing of being. The full meaning of being comes into sight by going back to the original source of its intentional constitution. "He bends with more cunning the boughs of the willows to whom the roots of the willows are known" — these verses of Rilke apply to the philosopher as well as to the poet for whom they were intended.¹²

The phenomenologist unfolds the actual possibilities and analyzes the actual assumptions of conscious life in order to exhibit the process of genesis which placed them at our disposal and formed the horizon in which they are supposed to work. Following this path of revision and finding out, perhaps, besides one's true achievements the artifices of a "corrupted consciousness," he may point at the essential truth that had been hidden by these deformations. The discovery of truth and the unmasking of disguise may work into each other. For this phenomenology needs not only the patience of careful analysis but also, like art, a genuine sense for original qualities and a passionately searching power for existential differences, deviations, and failures. And, again like art, the convincingness of an evocative style with its remindful appeal which is telling beyond the limits of proper demonstration.

The artist as well as the philosopher combine — both in variable accentuations — the conservative trend of integrating the truth of former experience and the reformatory trend of breaking through all conventions in order to realize the original meaning of being.

The life of consciousness being permeated and co-determined by the consciousness of life, true art and phenomenology are by their very being reformations and not merely reproductions of consciousness. While he stressed the importance of radical phenomenological thought as a supreme action of life, Husserl's personal inclination and historical mission did not lead him to stress the revolutionary possibilities involved in this attitude. His aim was to rehabilitate the true posit-

¹² Rainer Maria Rilke, *Sonnets to Orpheus*, pt. 1, no. 6 (Translation by J. B. Leishman).

ings of life by renewing their original foundations, i.e., by giving them the intuitive fulfillment of their constitutive evidences. The spirit of free acknowledgement of the qualitative richness of true experience on the one side and the insistence on the qualitative irreducibility of its essential characters on the other proved to be congenial to art, and it was helpful to art-theory and criticism. It became a decisive factor in their moving away from private inquisitiveness in accidental influences and toward a resolute concentration upon the exhibition of the inner form, the proper essence of a work of art.

The lack of incisive criticism of actual life in Husserl's phenomenology is mostly due to the specific mood and interest of the theoretical attitude that finds so pure an expression and reaches even a kind of climax in the phenomenological epoché and reduction. Since ancient times this attitude has not been concerned mainly with the *factum brutum* of our finite being and the actual manner of our indulging in it — this *modus essendi* that may be the true essence of our very existence. In this contemplative attitude Husserl elaborates the general essence of consciousness as this constitutes, in virtue of its intentional structure and functions, the main types and the general order of every possible being.

The supreme generality of this intuition and comprehension of the essence of being conscious and an object of consciousness may be compared with, and contrasted to, the artistic account of what it means to be. Having been individuated in the artistic idiom, this account is generally communicable in so far as the artist's feeling and expression rise from a common life and raise this life to a new "common sense" of the quintessence of its experiences.¹³

The individuality of a work of art and its general validity in the sense mentioned do not exclude but even strengthen each other; as a counterpart the general character of phenomenological truth bears reference to the individual facts

¹³ This latter generality is, by the way, quite independent of the trend toward objective generalization in allegorical art or in the style of the so-called classical or classicistic periods.

and the individual life from which it springs. The latter circumstance is not merely the fault of our being unable to free ourselves completely from the contingencies of our factual experience in order to reach a pure and sweeping intuition of the general essence underlying the given matters of fact. Within the frame of the phenomenological reduction the abstractum of a general essence is constituted as the objective correlate of the synthetic action of abstracting that is based upon the synthetic processes thanks to which the individual fact had been established.

This ideational abstraction of essences bears some analogy and should fructify even more a certain affinity to the imaginative process of the artist's transforming contingent empirical data into the true expression of a total experience. Through artistic variation a single individual fact becomes a universal symbol. Similarly, the phenomenologist performs a free imaginative variation of a single phenomenon (perhaps a fictitious one) while keeping its intentional identity, and discovers as the ideal and invariable center of this field of varieties the unity of their general essence. And as the aesthetic interest is a selective one because of the different suggestiveness and symbolic weight of the different impressions, so ideational abstraction differs from the inductive one by elaborating a general essence on the basis of one single, but *exemplary*, case of its realization.

To the difference of procedure corresponds a difference of results. The generality of induction is an empirical one, restricted to mere probability within the realm of actual experience. The generality of ideation is a pure and unlimited one. Its ideal entities show a form of constitution that is not restricted to the type of our real experience and the style of our actual world, but applies to every possible world and may be exemplified by purely fictitious possibilities as well as by real or really possible cases.

Though the versatility of the eidetic variation may be supported by the examples of artistic imagination, the pure ideality of phenomenological essences resides in a sphere of generality which art cannot and will not attain.

Art remains pledged, after all, not to the objects but to the meaning of reality. The essences of phenomenological intuition are constitutive forms derived from reality, but not limited to it. Art for its part reveals the essence of *reality* as we feel and grasp it in an intuitive symbol, but not as a matter of objective understanding. As felt, this essence has not the fixed character of a *forma formata*, but the dynamic character of a *forma formans* (or of a plurality of formative powers).

It will be shown how this interpretation of the artistic experience allows the forms of real appearances to be considered the very forms in which these formative powers manifest themselves to our *feeling*; the general form-types, characteristic of the morphology of real being, would thus be taken to mark for our *understanding* the main lines which these formative processes adopt and follow. And the individual form given in real experience would prove to be not just an example of a general type, but a real fulfillment of a *ὄλκος εἰς οὐσίαν*, of a tendency toward an adequate representation of the formative powers in the phenomenal world.

Art deals with these substantial *potencies* as they meet us and we meet them in their very appearance — and not with general essences or pure *possibilities* regardless of their real significance. The stirring of these powers as well as that of our feeling in their correspondence or lack of correspondence is caught in and communicated by the dynamic qualities of a work of art.¹⁴

The form of such a work is an equivalent of the dynamics and an emotional account of the constitutive forms of reality as such. This achievement is more or less independent of the question if, where, and how the representation of real forms and real objects happens to function in the artistic *presentation* itself. The constitutive essences and the main types of *real* being may play a part in the constitution of a work of art and even be stressed in the *summa poetica* of a

¹⁴ It goes without saying that to consider the merely sensory aspect of a “sensory” context means a restriction of our concrete experience to the impersonal part of its objective meaning.

Dante or the artistic research-work of Leonardo or the later Goethe "calling the single thing to universal glory"¹⁵ and considering the work of art to be produced "according to true and natural laws" as a "highest product of nature."¹⁶

The pure essences of eidetic abstraction, however, have grown beyond the immediacy of feeling as well as expression. We are not in a position to feel the inexorable and invariable fact of our existence in this world to be one of the possible variants of a general essence.

This does not exclude general categories to be used in the history and theory of art. Essential types as the lyric, the epic, the tragic, etc., may become the objects of intuition and analysis and give formal indications and technical helps to the scientist, though they will not yield any substantial insight to the lover and interpreter of art as an individual achievement.

Transcendental phenomenology does not run, moreover, the danger of leveling actuality down to a mere exemplification of general essences. The theory of these ideal objects is but an organ of the structural analysis of transcendental consciousness. It is related in this way to the contingent but "apodictic" (Husserl) fact of one's own subjectivity being the alpha and omega of ontology as well as of matter-of-fact knowledge. In the horizon of phenomenological reflection, therefore, the *variety* of pure possibilities constitutes itself in orientation toward one's own actual experience and in *variation* of its actual contents. The "real" essence of things enjoys the monopoly of a direct constitutive relation to this proper life of experience; it represents possibilities realized or realizable in the style of our world, which has not only existentially a unique position, but is also central to the phenomenological understanding.

Similarly the obvious question, what, after all, do we properly mean by the realization of an essence? finds its first phenomenological answer with reference to the process of intentional constitution. According to Husserl this process

¹⁵ Goethe, *Faust*, v. 148.

¹⁶ Goethe, *W. W.* 27, p. 108.

has in its beginning the form of a passive synthesis, responsible, first of all, for the formation of immanent unities and the rigid constitution of the time-pattern of consciousness itself. This passive synthesis reaches a new level in the constitution of objects in a proper sense — an objectivation that is motivated by a certain regularity in the sequence of the primal data of our experience, which, thus, function as appearances in our apprehension of things. Thanks to its fitting into the general pattern of such an apprehension, the sensory material acquires objective meaning. The lines along which this constitution runs may become, afterwards, the objects of an explicit thematization, and present to a comprehensive intuition the general essence of the things in question.

The objectifiability of our impressions remains, however, from this point of view, a merely contingent fact and, in the endless progress of experiencing, a heuristic presumption. The very feasibility of the intentional constitution looks, so far, almost like a piece of good luck which, besides, we can never finally ascertain. And the “realization of essences” properly referring to this constitutive process will have no direct meaning of its own as might correspond to the Platonic *γένεσις εἰς οὐσίαν*.

It is possible to stop here as in the face of a final mystery and consider the “realization of general ideas” to have its only possible explanation in the transcendental fact of such an intentional constitution. The “realization of essences” may, however, be taken also in a strictly literal sense as meaning a proper action of formative powers which are the essence and shape the face of reality.

Obviously it is not at all sure that in both interpretations of this term we actually speak of the same thing, though in different languages. Indeed, does not the intentional constitution, being the phenomenological *a priori* to reality, occupy a level altogether different from that of the constitution of reality as the work of the alleged formative powers? To Husserl the possibility of performing the synthetic operations of consciousness cannot depend on, or be elucidated by, reference to anything that belongs to the realm of objective

being. Objective being constitutes itself only as a correlate to this very synthesis.

If, on the other hand, the constitutive forces we spoke of should claim, like consciousness, to be prior to the intentional product of their objectivation, they would be involved, it seems, in a competition with the transcendental constitution of consciousness. Transcendental consciousness, however, is taken to be absolute, i.e., it rests upon itself and does not acknowledge the existence of any competitive and quasi coeval principle.

Following the inner consistency of the phenomenological method, there is clearly no other way but to declare and explain the *substantial identity* of the principles in question, i.e., of the (say) *metaphysical and the intentional constitution*. No doubt, in accordance with the phenomenological reduction the former constitution has to be discovered and probed within the framework of the latter one. This does not exclude, however, the establishment of an *analogia entis*, or rather, an affinity and even an original community of being between the two constitutive factors. In the beginning the formative powers may occur to the phenomenological reflection as worldly powers correlated with the intentional constitution and given within the horizon of one's world. Likewise another ego shows itself to my self-inquiry first of all as constituted in my own consciousness, as a part of my world. Afterwards this other subject will be recognized, however, to be — besides and even before his figuring within reality — a member of a monadic universe, i.e., of "transcendental intersubjectivity" in its "absolute manner of being."¹⁷

Just so may powers that had been experienced in some way as phenomena of my world reveal themselves later on in their being responsible not only for changes within reality but for its very origination and formation:

. . . Still is existence enchanted to us; at more
than a hundred places it originates; is the spring
of pure forces we touch when we kneel and adore.¹⁸

¹⁷ Cf. Husserl, *Méditations Cartésiennes*, pp. 74 ff.; *Logik*, pp. 210 ff., 241.

¹⁸ Rilke, *Sonnets to Orpheus*, pt. II, no. 10.

Acknowledging our communion with these original forces, we feel, like the artist, the inner essentiality of appearance as their very manifestation. We recur at the same time to a type of experience that has been familiar to us since childhood and, though critically restricted in the light of reason, has been preserved, e.g., in innumerable instances in our living language. This approaching a kind of self as the formative power in another being — this approaching another *being* in the other thing — may be also backed by the experience of ourselves and the constitutive powers of self-realization. Such an approach is nevertheless neither a childish beginning nor an anthropomorphic atavism. It does not anticipate a conscious intentionality like ours in all other beings, but on the contrary traces back the constitutive function of consciousness to the constitutive forces of the universe.

This interpretation suggests a metaphysical genesis of these *idées-forces* and, somewhat in the line of Leibniz and his followers, the unity of a constitutive movement of ever higher stages of representation.¹⁹ The attempt to give a metaphysical support to the transcendental constitution of consciousness would not mean the overstepping of the whole line of constitution, but only the descent under a certain level of its performance. The absoluteness of consciousness would be preserved by its being acknowledged as a phase of this absolute process.

The unity of this process depends on our recognition of an original relation between the metaphysical and the transcendental (intentional) constitution, i.e., between the *self-constitution* of being, having in one sense or the other a “representative” function, and *representation* as the very function by which a monad — like the ego of transcendental consciousness — fulfills its own being. There is no danger, therefore, of a revival of this hopeless *dualism* that had been transformed by phenomenology itself into an intelligible *duality* between subject and object as two poles of a constitutive process. There are not, as in the purely dualistic conception, things

¹⁹ In the following text “representation” has to be taken, therefore, in Leibniz’ dialectical sense of this term.

“in themselves” in utter separation from isolated subjects of consciousness. The same *natura naturans* — to speak with Spinoza — adds to her embodiment in the *essentia formalis* of things her representation in the *essentia objectiva* of the realm of *cogitatio*.

May I mention, moreover, that such an interpretation, reconciling transcendental subjectivism with the assertions of objective idealism, meets, as I take them, the final convictions of Immanuel Kant. While he tried to show a monadological metaphysics to be beyond the reach of theoretical knowledge, he did not cease to sympathize with monadologism representing it “taken in itself a fair Platonic conception of the world.”²⁰ The aesthetic experience and, eventually, the experience of the artistic genius convey, according to Kant, the feeling of a genuine unity between imagination as the formative center in us and the formative powers of nature — this congeniality accounting, perhaps, for the curious favor which nature grants to the requests of our empirical understanding.

On the other hand, the differentiation within the movement of representative constitution and, consequently, the establishment of distinctly different levels, may provide for a feeling of incongruity between the constitution of being in its objective state and its progressive performance. The drama in the evolutionistic nineteenth century is full of such examples. But the experience of this discrepancy is not restricted to an explicit dialectical consciousness and has its genuine expression in all art of the romantic and manneristic types.

As we witness some realization of essence in our own striving for the achievement of our proper being, we have a symbol of the universal ascent toward the clearer and clearer manifestation of the formative powers in our own progress from dark feeling to the inner clearness of mind. And vice versa: the very analysis of consciousness leads us to recognize the dark ground — the *fundus animae* — on which it rests and wherein it loses itself.

²⁰ Kant, *Metaphysische Anfangsgründe der Naturwissenschaft*, II. Hauptstück, Lehrsatz 4, Anmerkung 2.

This darkness is certainly due, to some degree, to the falling back of distinct phenomena into the indistinctness of our horizon of time, space, and attention. But it is equally due to the original vagueness of possibilities that have not yet got a precise shape in the dawning of consciousness. Its rise from unconscious life and being would achieve a conscious synthesis, passive at first, but on a higher level of objectivation — properly performed by the ego's activity. This line of representation may be felt²¹ to culminate in a representation that is not merely subjective but productive: in the work of art. The work is also self-realization and world-constitution at the same time; for it determines the individuality of the artist together with the physiognomy of his world. He feels the primordial drive of the formative powers in their very formation and renders it in the language of his creative receptivity.²² And vice versa, the stirring of these powers in his own bosom and, above all, in his own productive effort finds reply in the language of appearance. The recognition of the universality of this constitutive and representative movement provides for the recognition of the whole of being in an artistic symbol and in the true awareness of any single being — the flower in the crannied wall²³ — if only felt and taken in this representative function.

Thus the quasi-naïve constitution of being is reflected in different ways, on different levels, and to a different extent by art and phenomenology, the one evolving a synthesis of feeling of the constitutive powers in a sensory and expressive form while the other presents by way of reflection the intentional synthesis that bestows objective sense upon (relatively) formless impressions.

This attempt to join phenomenology more closely to the great metaphysical tradition does not break with the principles of the phenomenological method. The formative powers

²¹ Cf. Karl Philipp Moritz, *Von der bildenden Nachahmung des Schönen* (1788).

²² "The artist portraying the flesh discovers the origin and the journey of the soul." (Charles Morgan, *Portrait in a Mirror*.)

²³ Tennyson's feeling is rendered with a sublime application to the poet's mission in Rilke's "Der Liebende wird selber nie genug . . ." (*Späte Gedichte*, p. 42).

which I try to rehabilitate with reference to the aesthetic experience may (in their earlier stages) precede the intentional constitution of consciousness: but their methodical introduction is not prior to, nor independent of, the intentional analysis of pure consciousness and the problems it involves and imposes.

To follow these metaphysical hints of the phenomena themselves cannot but *lead to grounds* that do not enjoy any more the full light of consciousness. But it does *not* mean at all *basing phenomenology* as such *on the grounds* that I have tentatively approached; nor is there in this kind of research any question of deriving consequences from either metaphysical or phenomenological premises. The brackets of the phenomenological reduction hold tight; but they are widened in order to give place to an absolute process which is contained in absolute consciousness, and in which this is contained itself at the same time, though not in the same sense.

Is the recognition of this mutual mediation the last word of the phenomenological self-inquiry? Or does it only precede a final turn within the transcendental one (a turn in which art, again, may offer some guidance): the recognition of the "absoluteness" of the transcendental and the metaphysical constitution as instituted by Him who is the Absolute in person? Suffice it this time to have asked this ultimate question.

THE RELATION OF SCIENCE TO PHILOSOPHY IN THE LIGHT OF HUSSERL'S THOUGHT

Louis Osgood Kattsoff

THE RELATION of philosophy to science is a problem which has disturbed the minds of many thinkers from the earliest days of philosophic activity. The positions taken in defining the nature of this relation have varied from a complete separation to a complete identification; from calling philosophy the only true science to damning it as poetry or myth; from subsuming under it everything that is to identifying its only valid element to be logic.

This paper takes up the problem once again. It is inspired and directed by the ideas of Edmund Husserl in his brilliant analysis of problems on the basis of his new methods. However, this paper is not merely an exposition of Husserl's ideas. In some points it departs radically from the pure phenomenology which results in Husserl's doctrine concerning the relation between philosophy and science. In so far as it does the ideas cannot be blamed on Husserl, but only on the author of this paper.

Many of the terms used are taken from Husserl, although their meaning is transformed. The author apologizes for any confusion that may arise in the minds of readers acquainted with Husserl's doctrines. The central core of meaning in many of these terms is identical with the meaning of the terms as used by Husserl, in the opinion of the author. To retain the reference to the source of his thoughts and to avoid the task of defining a new set of terms the author retains these terms.

The point of view assumed in this paper, therefore, is not strictly speaking phenomenological. It is rather an attempt to formulate an original view partly dependent upon neopositivism. The modification of positivistic doctrines is

brought about by an adaptation for this purpose of certain phenomenological ideas.

A great number of philosophers of varying points of view agree that it is necessary to make philosophy less a conflict of opinion and more a body of scientific knowledge. Hegel, using the term in a wider sense than is common today — yet a sense close to the meaning of the term as meant in this paper — expressed this feeling in the *Phenomenology*: “The inner necessity that knowledge should be science lies in its very nature.” This emphasis on the relation between science and philosophy occurs again and again in Hegel. It occurs throughout the history of the rejection of philosophy. Since the nineteenth century, the ever-increasing array of facts in the natural sciences has been contrasted with the ever-increasing array of disagreements and expressions of opinion in philosophy. Where science was apparently giving us knowledge which everyone accepted as such, philosophy offered a conflict of points of view. It was no wonder then that the natural sciences were looked to more and more as the source of knowledge.

Meanwhile, the increasing development and use of mathematics as a tool seemed to make possible a steady and rapid acceleration in the accumulation of facts in the natural sciences. Descartes’ dream of a universal science of order and measurement seemed well on its way to realization. Mathematics and science became inseparably connected. Yet, despite this fact, the essential element in the natural sciences was taken to be the reduction to mass and motion, the techniques of experimentation and induction; and the most important feature of science was the condition that any scientist must be able to check the facts stated. Science seems to have no room for private opinions or points of view. But already two points of view were arising concerning the nature of science. Science, on the one hand, was taken as a “*body* of knowledge” and on the other as a technique of acquiring knowledge. Often also it was considered as a body of knowledge acquired by means of certain definite techniques. Still the fact remained that any well-trained scientist could

check the data offered by any other scientist, whereas in philosophy this was obviously not the case — or so it seemed. The reason for this apparently lay in the *experimental* nature of science and the *non-experimental* nature of philosophy. This experimental element in science amounted to the construction of a situation in which it was possible to have sensory experience of any datum in question, whereas it was notorious that philosophy insisted not merely on sensory experience, but also on non-sensory experience and objects. Not that science does not admit non-sensory objects; it does. Ideas, memory images, etc., all have good standing in science. But the important element seems to be that any statement made about these objects can be confirmed or infirmed directly or indirectly by experimental, i.e., sensory, operations. As to non-sensory experience of extra-mental objects, the scientist shrugs his shoulders while the positivist emphatically says, "Nonsense." So for the positivist that part of philosophy which can be reduced to sensory experiences belongs to some special science, while that part of philosophy which cannot is relegated to the garbage pail. And the slogan of the positivist becomes "The meaning of any proposition lies in the method of verifying it. That which cannot be experimentally verified is nonsense." It may be poetry or myth, but it is not meaningful. This means that it may express motivating beliefs or emotional stimuli, but these are not things that concern the scientist. Each individual may construct, if he so desires, his own poem or myth, but he cannot speak of its *truth*. Nor can he even compare, and select between his myth and his neighbor's myth. Philosophy becomes each person's own "world-view," in terms of which he deludes himself into believing he is happy or useful. Values and ideals from this point of view cannot have any reality. So there results on the one hand a complete rejection of philosophy and on the other an acceptance of a mythological character of philosophy and the construction of "world-view myths."

But this "obvious" solution runs into difficulties when we raise two fundamental questions: (1) What is a science? (2) What conditions are necessary in order to have a science at all?

Science, it has been said repeatedly by many critics of philosophy, deals with *facts*. No one quite knew or knows what an isolated fact is, nor has anyone ever come across a fact which was not in a system. The very use of mathematics indicated the inter-relationship of facts and entities. The completely atomic character of facts was emphasized to such a degree that a crisis in science became inevitable. The atomic¹ type of prediction gave way to systematic prediction. Science is not a mere collection of facts; it is a theoretical construct, a system. Here too Hegel had seen clearly: "A mere collection of facts does not constitute a science," and specifically, "Unless it is a system, a philosophy is not a scientific production." Even the logical positivist Schlick has said, "Science is a logical structure"; and Carnap, the leading positivist of the day, says that there is "a theory of science in another sense . . . namely, science as a body of ordered knowledge," where this knowledge consists of the results of the scientists' activity, i.e., the *statements* asserted by them.

The words of Husserl also emphasize the systematic character of science, for his central theme is that the mere gathering of facts and even the mere determination of regularities does not constitute science. There must be system. Superficially, at least, Hegelian idealism, logical positivism, and phenomenology agree on that one fact concerning science. Yet Hegel and Husserl insist that philosophy can and must be a science, while positivism insists that philosophy and science are contradictory terms — what is philosophy cannot be science and what is science cannot be philosophy. One thing becomes clear upon reading the positivists and Husserl closely, and that is that if science means *natural science*, then philosophy cannot ever become scientific despite the efforts of many thinkers to make it so; and the positivists are correct. So the problem returns to the two questions stated above. It is necessary to determine, if possible, what science is and what the nature of "system" is that makes possible a science.

So far as Husserl is concerned the problem of the possibility

¹ Atomic here does not refer to the physical atom but to discreteness. I use it as an adjective purely.

of philosophy as a strict science offering indubitable truths is a fundamental one. He certainly believes that philosophy could and should be guided by the idea of science even though it has never been able to satisfy the demand that it be a science. The philosopher, like the scientist, seeks *truth*, not opinion, even though the truth may be reached only by a series of approximations. Throughout the development of Husserl's thought this doctrine has altered very slightly. The importance of this to Husserl is indicated by his condemnation of Kant's remark that not philosophy but only philosophizing could be taught.

That philosophy cannot become natural science does not imply that the only other alternative is to make philosophy start from natural science as its basis. It does lead to the result that the ability to make of philosophy a rigorous science cannot depend on a reduction of philosophy to natural science. A different direction must be found, if there is one. Philosophy, if it is to become science, must satisfy the conditions for or be put into the form of science. The natural sciences themselves are sciences of specific subject-matter. They are not therefore sciences because of the subject-matter but because they satisfy the conditions necessary for *any* science. Therefore, philosophy too, if it is to become a science, must be science as applied to a specific subject-matter. In order then to answer the question "Can Philosophy be a rigorous science?" we are faced with three problems: (1) What are the conditions necessary for science to be possible? (2) What is the field of philosophy? (3) Can the facts about this field be put into a form which satisfies the conditions for science? If, after the analysis of the first two questions, the third can be answered affirmatively, then Kant will be wrong and it will be possible to have philosophic truths resting on self-evident rational insights and founded on grounds and consequences. The question "Can philosophy be a rigorous science?" resolves itself into two general problems: (1) a syntactical analysis of science to determine its constitutive properties, and (2) an attempt to establish the source and type of protocol statements in philosophy.

In order to make an analysis of given structures called "sciences" we are faced with the difficulty of discovering an instance of a complete science. It is frequently remarked that no "science" known today *exemplifies* true science, but only *aims* at it. Physics, for example, is incomplete and changing. Its ultimate facts are not known — its laws are not worked out and it is not completely systematic. This is evidenced by Einstein's efforts to discover a unified field theory. Yet the scientist seems to comprehend the true nature of science, since he apparently recognizes when his structure is approaching a more scientific form. The various sciences at any given stage are, then, only approximations to the ideal of science. In the case of the natural and social sciences the approximations seem to be approaching the ideal asymptotically. In the case of Euclidean geometry, the ideal was achieved by Hilbert. It is possible, then, to examine the approximations as well as the achieved sciences to determine the essence of science. In order to discover the essential nature of science we cannot proceed by a process of abstraction. Such a process frequently selects some element common to all exemplifications of an essence and treats that as the essence. In the case of the natural sciences this has been either *measurement* or the natural scientist's *subject-matter*.

The method of arriving at the essence of science is one which has great similarities to the phenomenological method of Husserl. It consists in an attempt to strip the exemplifications of all factors that constitute the particularity of the exemplification, in order to arrive at the essence. In this process, the element of the essence which makes possible particularization is retained. This process is directed at placing the essence of science before that which grasps essences (which we shall later call "eidetic perceptor").

Science as we know it, and as the scientist conceives it, is a body of knowledge at least. Certainly the activity of the scientist is directed to acquiring knowledge. Knowledge always means "knowledge of something." The natural sciences have as their object-domains various natural phenomena. Two results concerning science can be obtained

from these observations: (1) science presupposes some object-domain, i.e., a set of phenomena; (2) since the object-domain varies with different sciences, no *particular* object-domain is a *sine qua non* of science. The various classifications of science into *formal* and *empirical* sciences are not therefore distinctions in types of science but rather in object-domains of science. This distinction is therefore not of interest to our problem. The only thing that interests us here is that for a given science to be possible there must be an object-domain for that science. If no unique object-domain can be demonstrated, no unique science exists. If the positivistic reduction to physical languages were indubitably demonstrated, their thesis that only natural science exists would be valid. But even if this were true, the subject-matter of the science would not constitute science. For, as many have pointed out, knowledge is never a mere aggregate of facts but a systematic structure which has unity. Science is not merely knowledge but a body of knowledge. Even facts have significance only in relation to other facts. This means that no unrelated entities or events can appear. The term "falling body" has meaning only if the body in question is related to at least one other body. The path of an astronomical body is significant only in the astronomical system.

Given then an object-domain, if we can construct a unified system of propositions about that object-domain we have a science. Science as given is a body of propositions related in some way which is characteristic of propositional relationship yet isomorphic with the ontological relationships involved. (This isomorphism, which Husserl does not emphasize sufficiently, is extremely important, since it makes possible ultimately knowledge about reality.) The propositions which go to make up the science must be *grounded* propositions, i.e., propositions whose validity is indubitable. Two questions then result: (1) What is nature of the unity of the propositions that give rise to a system, i.e., to a science? (2) how are these valid propositions obtained?

So far nothing that has been said restricts science to the natural sciences. If the natural sciences are to be the only

valid sciences then the proof for this fact will lie in the problem of obtaining the valid propositions.

The best illustrations of scientific systems are to be found in mathematical physics and in the geometries. In such structures, we find two sets of propositions: (1) the bases of the system, and (2) the derived propositions. The bases of the system are *generalized* propositions, and the derived propositions may be either general or particular. These derived propositions are rooted or grounded in the bases and hence their necessity is dependent upon these basic propositions. Thus the necessity of the derived proposition is dependent upon their being recognized to be consequences of generalized propositions. If we call the basic generalized propositions "laws of the system" we can say that the unity of a system lies in the law-abiding character of the derived propositions with respect to the same laws. This may be viewed as a special case of what has been called by Husserl *essential unity* as contrasted with mere extra-essential unity which is identity of subject-matter. (The so-called descriptive sciences have the latter type of unity and are therefore not true sciences.) So far, then, as the body of derived propositions are concerned the unity consists in this law-abiding character.

In all sciences, those derived propositions which are not immediately evident must be checked with the facts. This necessity for reference to the facts is due to the incomplete character of the basic laws. If these laws were adequate then the derived propositions would be those facts involved in the laws and hence no actual verification would be needed. But no mere series of observed facts constitutes a science until these facts are also rooted: i.e., until we have what in the words of Husserl may be called *Erkenntnis aus dem Grunde*.

There remains to determine the unity of the basic propositions and to see their necessity. The basic propositions of a system may or may not themselves be grounded in the basic propositions of another science. This leads to one of three possibilities: (1) an infinite regress, (2) a basic set not grounded in any other set, and (3) a circle. If we have an infinite regress we have no science at all. Each step is contingent on

another — no step is seen to be necessary. Since we do have sciences which are known to be valid by the fact of application, an infinite regress cannot be possible. Besides, an infinite regress of deductive systems would not allow empirical reference at any point. The very process of scientific construction contradicts this possibility. On the other hand, a circle would be possible and the point at which one enters the circle could be taken as the basic set. So the problem reduces to the recognition of the necessity and (therefore) unity of the basic set of propositions. If, as seems to be felt by many, the basic set of propositions is arbitrary, what we get is an arbitrary system and not a science. This was the reason for Descartes' insistence upon finding an indubitable base and Hegel's emphasis that philosophy cannot do as the empirical sciences do but must start from indubitable foundations. It is for this reason also that the search for an adequate philosophy leads Husserl as it did Hegel to a transcendental position as basic for philosophical knowledge.

Since these basic principles cannot be arbitrary and cannot themselves be deductively rooted, it is possible that their necessity may be seen in the method of obtaining them. One result may be emphasized: the ideal form of science is that of a deductive system. This is the typical structure at which all sciences aim.

Science, in the forms in which we know it, is a body of knowledge that is given us as a set of propositions expressing judgments about an object-domain. These judgments are of two types: (*a*) judgments obtained mediately from the basic propositions, and (*b*) judgments obtained immediately through intuitional, i.e., experiential processes. We shall adopt a term used by the positivists and call the propositions of type *b* "protocol statements." Basic propositions as we have seen are not mediated. They must therefore be protocol statements. But they are not protocol statements expressing particular sense impressions, and are, for the most part, general propositions. They do not, however, express mere inductive generalizations from a given set of sensory experiences, but represent rather the grasp of the essential aspects

of the events under consideration. This is evident if we raise the question, "What degree of probability is to be assigned to the statement?" For inductive generalizations the answer will always be less than certainty even though its precise measure may not be obtainable. The immediate recognition of the essence of an event, situation, or meaning is as much experience as sensory experience. For this reason we call the propositions expressing the essence so grasped, protocol statements. As a matter of fact, it appears that the intuition of essence is fundamental to any sort of sensory experience. Experimentation, on positivist or operationalist grounds, is the exposition of a statement to make evident the meaning of that statement. This exposition takes place by the creation of a situation in which the operations indicated by the statement can be performed, or be caused to operate. The *essence* of the situation must be grasped, and this cannot be done by an infinite regress of operations. It is these intuitions to which science tries to give adequate and complete expression. The basic propositions describe these intuited phenomena by means of concepts and relations which are isomorphic with the phenomena. The essence which is thus intuited is not, then, what is the cause of the particularity, but rather is that which has been particularized. This is one important difference between eidetic intuition and other forms of non-sensuous intuition. Thus it is necessary to distinguish between sensory intuition, reflective intuition, and eidetic intuition.

The experiment sets up a situation for the mediated propositions in which this isomorphism may be "seen" to hold or not to hold. (It is interesting to note, as I have pointed out elsewhere, that this isomorphism has definite implications for the structure of reality.) An experiment is the act of placing a phenomenon in "evidence," i.e., so that it can be grasped by intuition. The concepts and propositions of a science can be transformed in this way into eidetic intuitions. The verifiability is an essential aspect of any science and only in so far as we can grasp the object in itself do we have the possibility of science. Experience gives us the object "as it is in itself." The various types of experience present to us the various types

of objects. Thus, as Husserl recognized clearly, the term observation cannot be restricted merely to sensory observation but must include essence-observation as well. Recent investigations into insightful learning and the increasing importance of *Gestalt* in contemporary psychological investigations have direct bearing in the investigation of the nature of essence observation.

The indubitability of the basic propositions lies in the fact that they express the essences involved.

That the propositions expressing these eidetic factors have non-essential unity is obvious. They all pertain to the same object-domain. They all are truths or knowledge arising from the evidential situation. In a deductive theory, this type of unity is demonstrated by means of a *consistency* proof. (This explains why the process of exemplification is the easiest form of consistency proof.) That the propositions also have a more essential type of unity is evident by reference to the object-domain it describes. This object-domain is a unified structure bound together by its very nature. Thus the basic propositions describing this unity are themselves unified. The basic propositions do not describe random facts of different object-domains but the whole of the object-domain under consideration. This is demonstrated by the ability of the basic propositions to imply a complete description of the object-domain. In the theory of deductive systems, this becomes the problem of *categoricity*. The results of this discussion of the nature of science can now be resumed.

Science is (1) a body of knowledge (i.e., a system), (2) consisting of protocol statements obtained by intuition and mediate statements obtained by deduction, (3) stating truths about a specific object-domain. (4) These intuitions can be repeatedly intuited, and (5) the meaning of the mediated statements can be placed in "evidence" by an experiment and thus the phenomenon it enunciates can be intuited also. (6) The system has two types of unity — the unity of the basic propositions (we can call this categorical unity) and the logical unity of all mediated propositions. Thus we reach a position which can be described in the words of Husserl, "Every part

of a completed science is a whole of conceptual steps each of which is immediately evident."

With these results before us we can turn to the second part of our problem. Can philosophy become a science?

The discussion we have undertaken in this paper is itself an illustration of a philosophical problem. It is not a question which occurs in any of the natural or social sciences and only in part is it a logical question. It involves the essence, or meaning, of "science" and of "philosophy" and the relation between these two essences. We arrived at the essence of science through the intuition of science as it is exemplified or aimed at in specific instances. We do not intuit this essence through sensory media but rather through some intellectual factor which may be called the "*eidetic perceptor*." The eidetic perceptor is to the essence what the sensory perceptors are to sense qualities and the mental perceptors are to reflections. It is that by means of which the essence is grasped. Eidetic perception is a process which functions only after reflective perception is transcended. It is for this reason easy to confuse eidetic perception with reflective perception (reflection). Thus the reflective perception of a sensuous or non-sensuous experience is not an eidetic perception although it may lead to one. Nor is a reflective perception of a reflective perception an eidetic perception. A reflective perception is for the most part abstractive and analytic while eidetic perception is concrete (in Hegel's sense) and synthetic.

Any concept — even the most physical — may be perceived eidetically. Thus the concept of sensory experience cannot be grasped by sensory *experience*. We may describe the patterns of sensory experience or its physiological factors, thus giving a reflective analysis of sensory experience. The process as a whole, i.e., the concreteness of this type of experience, its essence, is perceived eidetically and not sensuously. The essence of a concept is given in its unity with its ontological correlate. If the ontological correlate changes, the concept which represents it loses its ability to stimulate the eidetic perceptor. Thus intuition in its widest meaning forms the initial element in arriving at knowledge of the essence of any

thing. The essence of science is not, therefore, the body of physical science, or natural science, or mathematics, etc., but it can be intuited by an empirical examination of these various exemplifications of science. The same thing holds true of any other thing. The essence of "society" is exemplified in various societies and it can be intuited by examination of specific societies. The examination of specific societies is the science of sociology, but the knowledge of the essence of society is the task of philosophy.

The sense in which the essences are real cannot be discussed here. But the reader should not attribute to this position a Platonic idealism. Some of these essences may be real in the same way that the *ideas* are, others may not be so. Hypostasis should be held subject to the report of the eidetic perceptor. But in any case, these essences are not subjectively established. Investigations of these essences are determined by the essences and constitute a unified realm.

Here, then, we have distinguished an objective sphere of investigation, an object-domain unique to philosophy which cannot be reduced to physics and which cannot be interpreted in the physical language. Hence the most important condition not only for the possibility of philosophy as a science but for the necessity of philosophy itself, is satisfied. *There exists a unique object-domain which is the sphere of philosophy.*

Philosophy then is not a science placed beside the other sciences. Its object-domain makes it basic and fundamental to all sciences. It establishes the *a priori* conditions for any science while it itself satisfies the conditions it lays down. Not only that, but its study of the essences of the objects in the domains of the other sciences leads to a better comprehension of the rationality of these sciences. The data obtained in philosophy as an eidetic science is more fundamental than that obtained by the specific sciences. Philosophy is thus not only meta-science, but also meta-physics and meta-logic.

To a great degree this is the position of Hegel also. The development of the categories in the Hegelian logic may be interpreted as the essences involved in reality. These are to be discovered by a phenomenological investigation of the course

of development of reality. Unfortunately, the phenomenological character of Hegel's intuitions are hidden by Hegel in the form of expression. To interpret Hegel's *Logik* as a pure *a priori* system is to miss completely the method Hegel uses. As a matter of fact, Hegel said: "Logic is therefore, by its very nature, speculative philosophy, for the speculative method of investigating objects is precisely the consideration of the essence of things — the essence which is pure concept inherent in Reason as well as the nature and law of objects." And he also speaks of the "science of nature as applied science." Hegel, however, meets the difficulties of an absolute beginning by recognizing the essential circularity (non-vicious) of all systems. Husserl on the other hand meets the same problem by an appeal to the process of pure description and eidetic intuition. Ultimately, Hegel too would have to admit some sort of intuition in the recognition of the absolute system, and seems to do it by the identification of the knower and the known.

This eidetic perceptor by means of which we grasp essences supplies us with the material for the protocol statements of philosophy. These protocol statements express eidetic intuitions as valid as the protocol statements for sensory intuitions. As a matter of fact, the protocol statements of sensory intuitions themselves appeal to a non-sensory factor. The possibility of performing the operations which sensory protocols mean to express depends upon the grasp of the meaning of the symbols. And the possibility of understanding the symbols depends upon the intuition of the meaning of the operations. Schlick's objection, therefore, that philosophy can never be a system of propositions, and is on that account different from science, is difficult to understand. The same thing would appear to be true of natural science also. The rejection of an eidetic perceptor involves the theory of knowledge in solipsism or meaninglessness. And such is the result of positivism. Each set of operations would involve another set of operations to express their meaning. So we have an infinite regress of operations, and hence no meaning; or we must admit that meaning cannot be communicated, which is actually untrue.

These protocol statements have the unity required for the basic propositions. The mediated propositions grounded in them can be drawn from them by deductive methods. Thus the entire structure will have the unity required for a scientific system.

We have said that there were at least three types of intuition — sensory intuition, reflective intuition, and eidetic intuition. Each of these occurs only after the preceding one has been transcended. However, each of these may be mixed with elements of the other in any given state of awareness. Thus in the case of the sensory intuition of a mirage, there are strong factors of reflective intuition. In the case of the type of imagery investigated by Jaensch, reflective imagery is apparently mixed with many elements of sensory intuition. The existence of impure elements in any one kind of intuition will cause confusion and an impure product of the act of intuition. In the case of eidetic intuition a mixture of other types of intuition is still more disastrous. If the eidetic perceptor functions properly, then the meaning of all mediated propositions is grasped easily and no verificatory process is needed. Pure eidetic intuition grasps immediately the essence as given in the immediate and mediate propositions.

In the case of the natural sciences the transfer from sensory intuition to the reflective intuition of the deductive system is made with difficulty and attendant error. In order to keep constant check on the isomorphism the scientist resorts to experimentation. The role of experimentation thus appears to be to check the inductive generalizations. It attempts then to set up a situation in which these generalizations are exemplified in order to place them in "evidence." In other words, the function of experimentation is to place in evidence — i.e., to make available for intuition by the proper receptor — the meaning of the propositions under consideration. This constant reference to intuition constitutes one of the most important elements in all sciences which are only approximations to true sciences. Clearly, as Eddington has pointed out with respect to physics, if the basic propositions of any science were certain and pure, and the mediated propositions

were properly deduced, no experimentation would be needed.

In the case of eidetic sciences no inductive generalizations occur. However, eidetic intuition is most easily made impure by mixture with other forms of intuition. Hence it is necessary to place in evidence the essence in question. Since experimentation is the act of placing in evidence, the term experiment can be transferred to the realm of eidetic science. Experiment in the eidetic sciences is a necessary check on the protocol statements in these sciences. This means that an eidetic intuition can be experienced by any individual trained in the particular science in which the intuition occurs.

Philosophic methods of verification are empirical observations, either direct or indirect, of essences. The question of evidence is obviously of tremendous importance for the position outlined in this paper, as it is for phenomenology in general. It is through the question of the nature of evidence, coupled with our discussion of the nature of science, that we are led to specific implications concerning the nature of reality. These implications point to the systematic character of reality. The principles which are constituents of systems have correlates in reality. We do not have space here to develop in detail the proofs of this position, and therefore have merely stated that it is possible to enunciate propositions about reality within reality, without being involved in the difficulties of *transfinite* statement. Propositions of this kind can be supported by the principle of the "convergence of evidence." A consideration of the way in which scientific systems are descriptive of natural systems will supply the evidence.

HUSSERL AND THE SOCIAL STRUCTURE OF IMMEDIACY

Charles Hartshorne

ALTHOUGH there are many things in Husserl that seem to me magnificently right and valuable, I shall in this essay be concerned chiefly with some features in his doctrine which I am inclined to view as partly erroneous. Husserl is a subtle philosopher, and it will be difficult to quarrel with him without committing the straw-man fallacy. My primary aim, however, is not to prove the incorrectness of certain of his ideas, but to show that some ideas which he did *not* hold deserve much more careful consideration than he gave them, leaving it to other students of his work to estimate the exact extent to which he deviated from these ideas, and the exact reasons for his doing so. There is always danger that the greatness of a man's thought in some directions will give prestige to his blind spots and weaknesses and thus become a barrier to inquiry, just as there is the opposite danger that his weaknesses will serve as the excuse for shirking the labor of assimilating his real achievements. It is not easy to combat both of these dangers at the same time, and I shall leave largely to others the counteracting of the second mentioned.

The view which I wish to contrast to Husserl's is that experience is *immediately social* in a sense which Husserl apparently did not allow. Doubtless Husserl would have verbally agreed that experience is immediately social, that is, immediately in relation to other minds, or that other minds are immediately given, but he would not have meant by this all that I have in mind, or all that such thinkers as Whitehead or Peirce, or I think Bergson or James, would have meant. The issue may be suggested by saying that for Husserl other minds are directly given in, but not real constituents of, one's

own stream of consciousness.¹ Or again, that they are immediate but not immanent, rather "transcendent," factors of the stream, as indeed is one's own ego as a human personality. The alternative doctrine, therefore, is that one's own experience contains the actual experiences of others as real, immanent elements.

The very statement of the issue brings out a strong point on Husserl's side of the argument. How can, say, feelings of another become ingredients of my conscious life without becoming my feelings, and thereby ceasing to be the feelings of the other? This argument, however, though it is suggested by Husserl himself, is hardly a phenomenological one, since it argues not from the given but from vague associations of words, from ideas merely as such, ideas like "my" and "other." Naturally, therefore, Husserl does not rest his position on such a consideration alone, or even chiefly. Were it otherwise, he would show himself a dialectician rather than a phenomenologist.

The "transcendence" rather than immanence of other minds is to be interpreted in connection with Husserl's doctrine of physical objects as also transcendent of immediacy. Yet they, too, are immediately given. What does this mean? I may not succeed in saying. But two points are unmistakable. The physical object is more than any real ingredients of the stream of consciousness in two respects. First, in addition to the aspects of the object actually given there is always an infinity of others virtually or potentially given, though *as* virtual these too are somehow given. Thus the actualities of experience never exhaust the object. But second, Husserl seems to hold that both actual and potential experiences of the object are always experiences *of* the object, not the object itself, even in part. The experiences are the references, not the referent, in the meaning situation. So far, so good. There must be experiences in this sense of meanings which are distinguishable from the thing meant, though perhaps there must also be a sense of

¹ Husserl says, for example: "There is no absurdity in the possibility that all foreign consciousness which I posit in empathic experience may not exist. But *my* empathy and *my* consciousness is originally and absolutely given. . . . Only of an ego and an experience-stream in relation to itself . . . is there such a thing as immanent perception." (*Ideen*, sec. 46; my translation.)

“experience” in which both meaning and referent are contained and unified, and doubtless Husserl would grant this in his own way. But what is the object, if it is not actual or potential experiences? In the social case, the object is, for Husserl, in part at least really constituted of feelings and the like, though not of those which constitute my, the subject’s, experience. But the physical object as such, even the other person’s body, is for Husserl not made up of feelings or other psychic acts or states. What is it made up of? He uses the phrase “unity of meaning,” which suggests to me the paradoxical view that what is meant is the unity of “what is meant” as such. The atmosphere is for me thin at this point, but when I get my breath I seem to see Husserl trying to escape both horns of a, to me, rigorous dilemma. The dilemma is this: the being of the object consists or does not consist in being meant; if it does, then the object is most intelligibly viewed as an act of meaning which must be *enacted* to really exist or occur, but then either meaning is its own object, really has no object, or it has as its object another meaning (more generally, feeling, willing, or psychic state), this being the social solution; while if the being of the object does *not* consist in being meant, then we have a dualism of acts of meaning (including feeling, etc.) which exist only as enacted, actualized, and of objects only accidentally related to psychic acts of any kind. The latter horn of the dilemma is a somewhat generalized statement of Cartesian dualism, and is not avoided by eschewing the word “dualism,” or by other such verbal abstentions. The former horn has two branches: (1) Though consisting in psychic acts, the object of a given act has its being not through relation to *that* act, but through other acts in such wise that the “being meant” which is essential to it is not that of which it is object, but that of which it is subject; not what is meant by or about it, but what it itself means (and feels and wills) — although it may be coessential to things that they be meant, felt, and willed by one supreme subject, God, and sometimes important to them to be meant by other finite objects. (2) The object does not itself mean; it is the “passive” terminus of meaning, a mere idea, or unity

of meaning, as such, or even the mere act of meaning initially under consideration. The first of these, 1, is the social solution of the dilemma, on the whole a recent rather than traditional doctrine. The second, 2, is a generalization of Berkeleyanism, the contrary extreme to Cartesianism.

How does Husserl escape from the dilemma? Apparently not in the Cartesian direction, for he is an idealist in the broad sense of making meaning essential to existence. Yet also not in the Berkeleyan direction, at least in the form in which the object is a real part of the psychic state in which it is meant. Yet perhaps the historical Berkeley is not far from Husserl, whose object seems to be a "passive idea," a something meant whose essence is to be that. It is almost, if not quite, as though the *of* relation produced its own term, aided somehow by "unity," or as though a "below" constituted the being of the thing so related, a "that which is below as such." It seems possible that one of the paths which led to such a conception is the argument, in dreams and illusions there is nothing which is meant apart from the acts of reference themselves, therefore the *of* relation does not essentially presuppose its term. But dreams may on the contrary be interpreted as setting us in relation to entities whose existence has no dependence upon the dream, partly to realities in nature, such as the cold air that makes me dream of being cold, partly to possibilities, also in their fashion real factors in the cosmos apart from the dreamer. I know that Husserl has his ways of recognizing all this, but I do not know that he never yields to the fallacious argument indicated; on the contrary, I fear that in his intricate subtleties he may somewhat lose track of the simple logical outlines of the problem.

Of course, the physical object is for Husserl something more particular and definite than just the meant as such in general, for it may be round, colored, heavy, in particular. But I am asking what the physical object in general is, in relation to mind in general. And it seems that mind as enacting meanings refers to something whose being is to be meant (as having unity of "aspects," etc.).

There are two alternatives to such a view. The object may

be essentially something more than the meant, and only accidentally in any such relation. This is what I mean by Cartesian dualism, perhaps unduly generalizing the meaning of this expression so that it includes views which would not describe themselves as dualistic, but are so in just the sense I have defined. Or, the object may be composed of such psychic states or acts as feelings, thinkings, and the like other than those of which it is, in the case in hand, the meant object. (The psychic constitution of the object may include, as essential aspects, potential as well as actual states.) This I should call the social view of the physical object. It can, I think, hardly be denied that it is a real alternative to both the dualistic and the subjectivistic views. It is as realistic as dualism, for it makes the object quite as real as the given subject, and real in the same generic sense since it is the same generically (though as different as may be specifically) in nature. But the view agrees with Berkeley that apart from all experience there is no reality whatever. In a clear, simple sense, then, the view mediates between the two extremes. Husserl's view (like that of Hegel, to one reader at least) gets between them in a way which to me appears now as a subtle and elusive refinement of Descartes, now as such a refinement of Berkeley, and at all times as an unconscious confusion, not a real higher synthesis of them.

But how about the "phenomena," the "evidence" from the given, to which Husserl of course appeals? In his *Cartesian Meditations* he gives an extended treatment of our experience of other minds, and from this we can see part at least of the evidence in question. We know other persons through a form of immediate apperception of their bodies as akin to our own. The experiences belonging to these other bodies are not our own in any part, if for no other reason, because, being in a different part of space, the other body imparts to its experiences a perspective different throughout from our own. It is notable that from this it seems to follow that if two bodies could overlap in space, their experiences might, so far at least as this factor is concerned, overlap to the same degree. Now the defenders of the social view of objects of course do hold

precisely to such bodily overlapping. A man's cells and still smaller individual constituents are for such thinkers sentient individuals (with varying degrees of individuality and independence) which occupy the same parts of space as the man's body, in part, occupies. Of course such "other minds" are only in the broadest sense, the strictly generic sense, minds or psychic monads at all, but philosophy is concerned precisely with those generalities so broad that to one in a non-philosophical mood they seem tenuous to the point of triviality. (The more particular and juicy universals are the field of science.) But radically sub-human mind is one extreme of which the contrary pole is the radically superhuman, or perhaps the divine. Now either the divine is "disembodied spirit" or its body is the universe. In either case it is not spatially separated from ourselves; so that again we see that the notion of direct overlapping is not excluded by the bit of evidence which Husserl adduces, along with others to be considered presently. Finally, even human bodies need not be considered as without qualification separated in space, if one admits that there is no "simple location," and that everything is in some degree everywhere. What then is true is that human bodies are primarily in separate places and only secondarily, or in faint degree, overlapping, with the implication that their experiences are likewise only in minor degree (perhaps beyond the reach of introspection) immanent to each other. In that case the phenomenal evidence for the overlapping must be chiefly indirect, for instance, through analogy with the mind-body relation as social and given as such. Husserl himself employs a similar type of apperception through analogy. The question is whether or not it is a faithful description of the experience, say, of feeling a pain "in" one's body to say that it is a direct, though decidedly indistinct, awareness of the sufferings of some of the bodily parts, which sufferings, through this sympathetic participatory awareness — this social overlapping — are made our own. To me this is the only description I can identify as faithful, though in view of the obscurity of the experience (an obscurity in principle recognized by Husserl in other cases), it is understandable how doubt and controversy should arise.

How, granting for supposition the truth of this description, do we distinguish between the feelings of the social other, as *its* feelings, and our own, if the former become the latter? It must be noted here that a double distinction remains possible. With a radically sub-human mind, what for us as immediately intuiting its experience is a more or less negligible part is for the "other" the whole; with the superhuman other, we might be the part and the other the whole. But, also, what in the other is active, in us might be passive (again concepts which Husserl seems to accept), since in receiving as valid for us what was spontaneous decision in the other we would be playing a relatively passive role. There is also the question of temporal order. According to Whitehead, all immediate sociality is in the form of memory, of direct apprehension of the past, and such apprehension differs from its object by adding to its content certain new relations and values without altering the old, so that the distinction is that between x and $x + (y \supset x)$; that is to say, the added factor involves the original factor but not vice versa. We cannot here further consider the tenability of this doctrine.

That all individuals are sentient, as Leibniz and others have held or do hold, is a notion which Husserl is reported to have said is not perhaps without phenomenological justification, since the analogy with our own body admits of degrees and may never reach a strict zero. But Husserl seems to feel that something more than its own inner experiences, in themselves and as apprehensible by us, must still be involved in the physical object, this more constituting its materiality. I cannot see what is left, however, if one takes into account *all the ways in which we might be able to mean all the ways in which other sentient individuals might mean and feel*, in relation to each other and to us.² The mere "extendedness" of matter is simply a pattern of interaction between individuals, and our

² Some of what Husserl says about the difference between physical objects and experiences describes, I should say, the difference between the properties of aggregates and of individuals. The different sides and aspects of objects are also different objects (atoms, etc.). Then there is the difference between individuals directly communed with and those (outside the body mostly) mediately represented through such communion. A social world is not poor in distinctions.

scheme of active-passive sympathetic overlapping of individuals allows for such a pattern, in which individuals are "near" each other if their interaction is intimate and relatively independent of the interactions of other things. All geometrical ideas can be generated from such a scheme, as has perhaps been in principle fairly clear since Leibniz, or at least since Peirce, who certainly must have known the meaning of the geometrical problem, if anyone ever has.

Why does Husserl hold the contrary view? In an absolute sense, no one could answer. But one may guess. Practically the whole of the tradition, even the idealistic tradition, is either on Husserl's side or ambiguous with respect to the issue. Peirce is really the first clear exponent of a social view of experience, or in his own phrase, of "agapism," though many before him had verbally professed to make "love" a leading principle in philosophy. Then there is the plausible traditional dualism, in some form accepted by Husserl, of secondary and tertiary qualities, of sensation and feeling, given fact and given value. Heidegger has attacked this dualism, which is closely associated with the dualism of psychical and physical, and with the denial of the social character of experience. Behind all this is a dualism derived from practical life, not perhaps adequately overcome in the "phenomenological reduction," that between the attitude of manipulation, or exploitation of "tools" or "materials," and the social attitude of sympathetic participation and coöperation. The dualism appears as secondary if we admit that fellow beings can be used as well as sympathized with, and that thus the social view includes and explains exploitation while exploitation cannot explain sympathy.

Every society involves order and interdependence, and the possibility of "mechanical" manipulation follows deductively, though somewhat intricately, from these ideas. Hence the manipulability of things is no proof of their non-social character, and adds nothing whatever to such character, while it abstracts from or neglects much of it. This abstraction seems to me to explain dualistic theories which it nevertheless is incapable of justifying.

The illusion of a real dualism arises easily because of: (1) our absorption, with reference to physical objects, in exploitation; (2) our inability to have *immediate* and vivid social relations with entities outside our own bodies; and (3) the largely unconscious character of the immediate social relations we do have within the body. Through the body we indirectly know and manipulate external objects; the body itself we do (in part) directly intuit and move sympathetically, but in a manner which biological needs require to be largely out of the focus of attention. The subject-object relations we chiefly attend to are those in which the mere patterns of interdependence (the space-time properties) as alterable by us are alone important, because the only inner qualitative feelings of things we need to worry about are those we directly share through the mind-body relation, and these we take for granted, our problem being to get the ones we like by arranging objects outside the body in such a way as experience shows will produce them (by what bridges of sympathy we need not in practical life consider). Thus the cards are stacked by nature to produce dualistic doctrines. The smell of a certain chemical may enable the chemist to recognize it, and so aid in its control; but it seems reasonable to suppose that the quality of the odor tells us more directly what is going on in some of the bodily cells than what the chemical is like in its individual parts. The cells are not manipulated, but communed with intuitively; the chemical is manipulated and represented (mediately given) through this communion. But consciousness is upon the manipulation, not the communion. I do not believe that anything essential in this account is extra-phenomenological, though a more general term than "cell" would be required to bring this out. The mind-body communion is given, and none the less so because its objects are not distinct in the phenomenon. And the external object *as immediately given* is not the object which we "see" or "hear" and handle, but the body as actually in a certain state which is in a "unity of meaning" with what we are immediately aware of as potentialities of existence which, through the bodily state, are medially perceived or known

(probably) to exist in actual form outside the body. This may not seem phenomenological, but I cannot see that Husserl's account is any more so. It is indeed a datum that *something* is immediately given in perception as outside the body *as given in that perception*, but it does not follow that the perceived body itself is here (say the seen hand in the visual field) given immediately, or that much of anything is immediately given except actualities well within the body (especially in the optic nerve and brain) and possibilities of actuality elsewhere. These actualities may all be actualities of feeling and the like, and the possibilities may similarly be of psychical states. They include an inexhaustible system of possible perceptions which could be had of the object by minds like ours. I seem to see a place for all Husserl's data, so beautifully described, in this scheme, except his alleged datum of an irreducible difference between the physical as such and the psychical.

There is the "intentionality" of experience and there is its sociality. For Whitehead the intentionality is the sociality; for Husserl there are intimate relations, but somehow a metaphysical gulf, between the two.

I am aware that Husserl puts great stress upon the social or intermonadic character of the physical world. It is for him essential to physical existence to be capable of being perceived by a plurality of subjects as their common world. Still, something more is perceived than the members and interrelations of the world-society. This more I do not find as a phenomenon. The question is, does Husserl find, or merely verbally postulate, it? I venture to think the latter.

Apart from the social issue there seems little that is fundamental dividing Husserl's philosophy from that of James, Peirce, Whitehead, or Bergson. The essential methodological element in phenomenology, broadly conceived, is common to these men. James had his radical empiricism, Peirce a formal doctrine of phenomenology (or "phaneroscopy" as he also called it), Whitehead perpetually emphasizes the appeal to immediate intuition, and Bergson's doctrine is also put forth as a description of the essential characters of existence as directly intuited. I emphasize these names deliberately,

for if such men, with their unsurpassed equipment and genius, with all the resources of modern logic and scientific temper, together with sufficient learning in the history of thought and a devotion to truth not likely to be surpassed, were unable to give any indication of what a rigorous metaphysics should be, then I should vote for the positivistic explanation of their failure — that the task is impossible, or meaningless. The main possibilities for metaphysics in the coming century or two at least must have been set forth by these men, just as Descartes, Leibniz, and Spinoza set forth these possibilities for the Newtonian era which even Kant could not transcend (but only curtail and set in doubt). The question is whether or not the metaphysical founders of our time have arrived at a more consistent and generally acceptable view than did these earlier giants. To me it is a patent and hopeful fact that among the four recent metaphysical geniuses mentioned there is a fair degree of harmony, and further that there is less conflict between their doctrines and the practical beliefs of men in general than was the case with the sixteenth-century metaphysics. If we add Husserl to the list of recent thinkers mentioned, there is still considerable agreement, for instance upon the Bergsonian dictum that time is creation — open alternatives, objective indeterminacy — or nothing. The chief alien element that a devotee of the other men finds in Husserl is his at least apparent denial of the social structure of immediacy. I wonder if it could fairly be held that Husserl had actually devoted enough attention to this problem to make this disagreement, if it exists, constitute an argument against the social doctrine itself? To raise this question has been the purpose of this discussion.

What is the importance of the question? There is a formal and a general philosophical side to the answer. On the formal side, the non-social doctrine takes us back to the idea of separate monads, each with its own private states (Husserl, immanent ingredients or experiences), that is, in effect, “substances” in the sense which has led to so many difficulties. (On this point I think Whitehead, James, Peirce, and Bergson could be shown roughly to agree.) Husserl’s

doctrine that what transcends the stream of experience is yet directly given in it may seem to overcome the difficulty, but there is the question of whether or not this escape is not really either unreal or an inconsistency if real. Turning to the more than formal side, the social idea is without doubt our essential conception in the realm of values. If there is an absolute of value, it is love. Of course love must be so construed as to include beauty and appreciation of the truth, but love is indeed the most explicit and complete form of beauty, since it is "unity in contrast" between minds or experience-streams as wholes, and in such contrast all conceivable differences are included. And truth is a form of love in that it is loyalty of one mind to the operations of other minds, including one's own at other times, and in that truth about nature is truth about other minds, including the divine, *if* the social view of reality is true. This social view, though it by no means identifies the real and the ideal, as if all must be for the best, does say that there is some degree of value, however slight, in all reality, and thus it unifies knowledge of fact and value under one principle, without at all denying the tragedy of unrealized values, or real but negative values, disharmonious social relations.

A MATERIALIST APPROACH TO HUSSERL'S PHILOSOPHY

V. J. McGill

HUSSERL'S *Logical Investigations* was in large part a reaction against Hume's empiricism and psychologism, which enjoyed wide influence and many followers at the time. Partly, too, this work was a reaction against his earlier volume¹ in which he had attempted to psychologize arithmetic. Apparently it was Frege who convinced him that logic and mathematics cannot be grounded in psychology. Against a profuse variety of pragmatic, empiricist, nominalist, and skeptical positions, Husserl maintained that there are invariants and necessities which can be discovered *a priori* in consciousness. For example, he held that there is a necessary *a priori* relation between the "quality" of a mental act (i.e., either feeling, desire, assertion, denial, or hope, etc.) and its "material" (reference to the object), whereby each can vary while the other remains the same. It is easy to see that the material can vary while the quality remains the same. Any series of assertions, or of desires, or of doubts, is an illustration of this. The converse is also obvious. In the series: Are there men on Mars? That there are men on Mars is doubtful, That there are men on Mars is to be hoped, the material remains the same while the quality of the acts is different in every case.² Similarly, even if we keep the quality and material of the act unchanged, variations are still possible. Thus, "Equiangular triangles exist" and "Equilateral triangles exist" have the same quality and material but differ descriptively, or with respect to their meaning-essence (*bedeutungsmässigen Wesen*). An act has still another factor, i.e., the vividness or richness, the clarity or distinctness, of its content,

¹ *Philosophie der Arithmetik*.

² *Logische Untersuchungen*, II, 1, pp. 411-416.

a factor which can apparently vary while the quality, material, and meaning-essence just referred to remain the same. For example, the richness and vividness of the sensuous content of an act of imagination may increase or decrease without changing the material, quality, or meaning-essence of this act.³ And the material of an act can persist unchanged while the other three factors are varied *ad libitum*.⁴ Such relations between the components of acts are not empirical, for they persist independent of empirical changes. Husserl regards them as necessary and essential *a priori*.

The sixth investigation also furnishes many examples of *a priori* necessary relations in consciousness. For example, Husserl draws the distinction between (1) the pure "intuitive content" of the act, i.e., the determinations ascribed to the perceived object which "make an appearance" in the act, and (2) the "signifying content" of the act, i.e., the determinations ascribed to the object which do not make an appearance. The conclusion reached is that the intuitive content of an act, i.e., the imaginal or sensuous content, is combined in most acts with the signifying content, but that each can vary within certain limits without altering the other. For example, the assertion that France is a beautiful country may be accompanied by a rich envisagement of castles and countryside, but if these images fade, the original signifying content of the act can remain unperturbed in its meaning.⁵ In the same way, the signifying content can be partially withdrawn from an act, leaving the intuitive content, that is, the mere picture or image in the mind, just as it was before.

A fuller understanding of these examples requires a word about Husserl's theory of intentionality. This theory embraces, as Husserl points out, the whole of phenomenology.⁶ Its development is perhaps the most original and valuable of his contributions. Although the idea that the defining property of the mental is its intentionality — its reference to something beyond itself — was borrowed from Brentano, Husserl's development of this idea went far beyond, opening

³ *Log. Unt.*, II, 1, p. 419.

⁴ *Ibid.*, p. 429.

⁵ *Ibid.*, II, 2, p. 80.

⁶ *Ideen*, p. 68.

up a whole new field for research. In the first place, it meant a sharp break with common empiricism which assumes that perception is nothing but sensation, patterns of color or sound, while imagination is nothing but images. Husserl's contention that sensations can vary while the perception remains the same effectively disposes of the idea that the two are identical. Thus my perception of a wren remains the same perception even though the wren is seen to fly away from the limb on which it was sitting, and the perception of an approaching locomotive remains a perception of an approaching locomotive though sounds and sights continually change. This is because the intention (directed upon a wren or an approaching locomotive), which is the essence of mental acts, remains identical. The same is true of other mental acts such as memories or imaginations. Our imagination of Warsaw in ruins is not essentially changed by variations in the imaginal content, in the details of the envisagement of what, after all, is the same city in ruins. Intentionality can also take the form of expectations elicited by the appearance "in" consciousness of partially strange and familiar objects. Like other intentions they are continually being partially fulfilled or disappointed. Thus, if we walk around a building we are constantly fulfilling and disappointing our expectations with regard to details of the other side, whether we have a concrete image of them or not, and whether we attend to these expectations directly, or have our mind upon something else. Even if one stands still and regards the building, one intends it as a structure with more sides than one can sensuously perceive. When a perception slips into the past it retains its intentions and expectations. If we "live through" a past experience passively we find ourselves expecting developments in the future of that experience which may be the past of our present experience, and the whole situation is reflected in the grammatical complexities of tense. The relationship between the two pasts and the two futures involved here is an essential one, invariant with respect to empirical changes. So is the fact that one cannot live through a past experience passively in the reverse order, or in any

other order than that in which it was originally experienced. Husserl believed that no conceivable experiment could discredit these insights. He maintained that the results of his analysis, of which we have given a rough intimation above, are *a priori*, but not in the sense that they are dead certain, or that he is infallible, but in a very different sense. By *a priori* essential relations he means relations which can be known as invariant with respect to any conceivable empirical or factual changes; or relations such that their negatives are intuitive eidetic impossibilities.⁷

It would be well, therefore, to inquire whether Husserl's conclusions measure up to his own criterion, for many critics would accept these conclusions as true in the main and yet deny they are necessary, essential, or *a priori*. Even though it were admitted that a statement such as "The material of an act can vary while its quality remains constant" is a necessary *a priori* statement, it might be claimed that this is so only because certain definitions have been arbitrarily chosen which yield the results deductively; that, therefore, the *a priori* in question is not synthetic, but only analytic. It would follow that if other definitions of such terms as "material" and "act" had been employed, other results than Husserl's might have been obtained. But Husserl himself repeatedly dissociated his procedure from the hypothetico-deductive method. He insisted that phenomenological truths result from an investigation of the essential forms given in consciousness (i.e., forms which remain constant when their material is freely varied), or that they are to be discovered by a method of reduction, whereby the truth of a judgment is confirmed by tracing it back genetically to its originally founding (*urstiftende*) experience which is always an intuition, or the intuitive phase of some other kind of act. Evidence for phenomenological truth is always regarded as a kind of "seeing" of essential relationships in consciousness, or the adequation of our judgment to this "seeing."⁸

But here is precisely where critics have sharply disagreed. The reason is that subjective methods of testing truth, which

⁷ *Logik*, pp. 220 f.

⁸ *Ibid.*, p. 130.

are unaided by confirming prediction or by other objective evidence, have a bad record. In psychology the old introspective methods are almost completely discredited. Everywhere, especially in this country, more objective methods are sought as psychology moves closer to biology, physiology, anthropology, sociology, politics, social work, and other fields. The hope has grown that psychology, like the physical sciences, can achieve successful prediction and even practical importance by objective methods. Naturally, the doctrine that theories can only get their final documentation through scrutiny of the private facts of consciousness met with much resistance. Scientists, of course, have their private lives. No one denies that mistakes which occur in their private consciousness would affect the validity of the scientific operations they carry out. But it by no means follows that the best way of removing these mistakes and of documenting scientific evidence is to plunge deeper into subjectivity. It may be that private blunders and delusions are more often removed by practical experience than by the most careful analysis of the pure forms and structures of consciousness.

If Husserl's subjective method led to a new field of *a priori* truth, it would be vindicated. Consider the alleged *a priori* relation between the quality and material of an act. On reflection, this relation seems undeniable. If the material of an act could not remain the same while the quality varied, it would be impossible first to doubt a proposition, then to consider it possible, and finally, to assert its truth. It would be impossible to entertain a proposition in the premise of a hypothetical syllogism and then to assert the same proposition in the conclusion. It appears that in this instance, as in others cited above, Husserl renders valuable service against empiricism in demonstrating the presence of unvarying entities and relations in consciousness. These invariants not only explain the continuity of experience, but provide the basis for intersubjective agreement and disagreement. That they are *absolutely* permanent and *a priori* necessary may be questioned. The constancy of an act when its quality is freely varied may not be absolute. It may be that in changing

the quality, slight changes take place in the material which, by the very nature of the case, could not be easily detected so long as we attend only to the material and the changing quality. What convinces us of the approximate truth of the quality-material relationship is not only the possibility of freely varying the quality while the material remains identical, but also the improbability of any alternative hypothesis which sets out to explain memory, reasoning, human communication and coöperation, etc. Husserl's conclusions pointing to constant reiterable, intersubjectively shareable relations in the mind (of the kind listed above) do not depend for their plausibility merely on the use of "free variation" and isolated insights, but also on the high relative probability of a broad hypothesis covering many social and biological as well as psychological facts. To maintain that every final question can be settled by *a priori* insight into an isolated relationship in consciousness is to forget that many things are taken for granted — the relative invariance of the brain in the course of evolution, the continuity not only of one's own mind but of other minds, the long history of successful human communication and coöperation, etc. Thus it is possible to set a high value on typical conclusions of the *Logical Investigations* and yet to deny that they are *a priori* necessary and that their evidence derives from subjective sources alone.

But the phenomenological trend toward subjectivism, to which we object, has only reached its first stages in the *Logical Investigations*, where, as Husserl explained, there was still no clear distinction between psychological and phenomenological description. In the *Ideas* and especially in the *Logic*, evolving motives end with the triumph of subjectivism and the elaboration of a science of subjectivity, proclaimed as the final testing ground of all knowledge whatsoever. Since it is this particular claim which we wish to contest, our interest naturally centers upon these later works.

Husserl's later philosophy is a quest of absolute and final evidence which he had failed to find in other philosophies, past or present. The variety of irreconcilable systems of his

time did not drive him to skepticism or perspectivism, or leave him content with special investigations such as he had carried out in the *Logical Investigations*. He became convinced that not only the empirical sciences, but also the *a priori* sciences, make suppositions of which they are unaware, and that this naïveté blinds them to the need of seeking deeper foundations, even of logic and mathematics. Descartes, Hume, and Kant had challenged the existing foundations of knowledge, but they had taken the customary Aristotelian logical principles for granted, and had made no attempt to criticize or to vindicate them. Hegel had subjected these logical principles to a devastating criticism, but Hegel was perhaps too “naïvely” historical for Husserl to consider, and belonged to a tradition which (apart from his enthusiasm for Schelling) he almost wholly ignored. Aside from the post-Kantians, most philosophers took common logic as the final basis of knowledge. Husserl, on the other hand, endeavored by a critique of the presuppositions of logic to erect a science in which logical evidence, and indeed all scientific evidence, would get its final warrant. This he called “the science of transcendental subjectivity.” Not only is this science the absolute foundation of knowledge; it is the *only* science, for in it all other sciences have their basis.

There is only one philosophy, one actual and genuine science, within which the genuine special sciences are only incomplete parts (mere preliminary stages to the one science). The universal science of transcendental subjectivity, in which all conceivable sciences of actuality and possibility appear as essentially demarcated transcendental patterns, . . . also gives the only correct and conceivable meaning to the ideal of grounding knowledge without presuppositions or prejudice. Everything that is (that has and can ever have meaning for us), is intentionally constituted in a hierarchy of intentional functions. . . . Everything that is, is relative to transcendental subjectivity.⁹

All objective being, all truth, has its ontological and epistemological ground in transcendental subjectivity. We can only attain this truth by a retreat to pure subjectivity by the method of “reduction.”

⁹ *Logik*, pp. 240 f.

Husserl's method of transcendental reduction by which we are supposedly led back to final evidence of all knowledge need not be described in detail. Like Descartes, Husserl resolved to doubt everything which could be doubted, including, of course, the existence of the external world. Rather, he proposed to refrain from positing the existence of this world. Descartes had found everything doubtful but the existence of the soul, and therefore grounded all knowledge in subjectivity. Husserl took the same course, but went much further. His more "radical" method of reduction not only questioned (or rather refrained from positing) the existence of the external world but also challenged the logic which Descartes had assumed. Husserl's final method of reduction excluded *all* transcendentals, those of the empirical sciences and those of the *a priori* sciences as well. Logical structures and categories are transcendentals, strictly speaking, and so is the ego, the transcendental ego as well as the empirical. But if all transcendentals are excluded, all ideas and essences would disappear. Only the absolute existing, self-given, *constituting* acts would remain, while all transcendentals *constituted* in these acts would be eliminated. But this would be pouring out the baby with the bath. Husserl saw that while this procedure would clear the field of everything but pure subjectivity, it would also remove the possibility of a science of pure subjectivity. Essences and laws are necessary to this science, and so is the transcendental ego. Husserl admitted, but he failed to explain adequately why, some transcendentals are tolerated by the method of reduction and others not. If he meant that only those transcendentals should be admitted which are necessary to the science of pure subjectivity, our answer will be that many other "transcendentals" are necessary which his method excludes (or brackets), *viz.*, a brain relatively constant in the evolutionary process, biological history, past experience, and social life, in which hypotheses are continually tested. Could logic be as useful as it is if it did not prove itself far more satisfactorily in the give-and-take of coöperative social life than in the private purlieus of the consciousness of a few logicians?

Husserl's subjective starting-point, like Descartes', has been the target of much criticism. *Cogito ergo sum* has often failed to convince as an argument, and the "I think" has seemed no more self-evident than simple propositions of arithmetic. Similar criticisms have been leveled against Husserl's more intricate subjectivism. With much of this we are in agreement. It is Husserl's claim that "The 'I am' is *the intentional primal ground of my world*,"¹⁰ as, also, of the intersubjective world, which we wish particularly to challenge. What arguments does he employ to prove that all meaning is constituted in pure subjectivity and that the science of subjectivity thus embraces within it all the positive sciences as partial and incomplete sciences? (Husserl's method, however, being, as he claims, eidetic-descriptive rather than deductive, one would expect to find analyses of eidetic structures in consciousness rather than arguments. Arguments, when they occurred, would serve merely to facilitate intuitions.)

In the *Ideas*¹¹ we have a concrete approach to the problem. We are asked to consider the perception of a budding apple tree which arouses our pleasure. Viewed with the natural attitude, the apple tree is a transcendent in actual space and may be, of course, an illusion or hallucination. With the phenomenological attitude, on the other hand, the natural positing of the existence of the tree and its qualities is suppressed so that illusion and hallucination are also circumvented. With the exclusion of the existence of the whole physical and mental world as something posited, the existence of real relations between perception and perceived is also excluded; and still the relation between the perception and the perceived (as also between the pleasure and the object of the pleasure) remains the same as before. If we eliminate the positing of their existence, the tree and the garden and all their appearing qualities are still intended in the phenomenologically reduced perception. It therefore makes no difference to the phenomenological method whether the external world exists or not. A similar claim is made by idealists,

¹⁰ *Logik*, p. 209.

¹¹ *Ideen*, pp. 182-183.

and positivists of all varieties. To us it appears more than doubtful.

Is it possible in practice to perceive the apple tree without positing its existence? Isn't this just as difficult as believing the soul is immortal *because* it is our right to believe what will work out well in practice? We do not form beliefs unless we have what at least appears to us to be supporting arguments. Similarly, we cannot withhold ontological assent unless there is evidence of illusion, and not always even then. If the "tree" presents itself in a low grade of clarity or distinctness, or in the mode of "distant-givenness," it may reveal itself as not a tree, but a horse. Existence is still posited, however, only now it is referred to the horse rather than to the tree. Perhaps, if there are such things as genuine hallucinations in which we are aware that we are deluded, existence-positing is withheld. But surely these are typically difficult, or even harrowing, experiences. Under the pressure of strong evidence of the kind that the philosopher does not usually have in his quiet study, Macbeth cried: "Is this a dagger that I see before me?" In other words, Macbeth declined to posit the physical existence of the dagger. But he does not on that account refrain from all positing. He only questions whether to ascribe physical or mental existence to the dagger. Indeed it would perhaps be quite difficult to find complete abstentions from existence-positing in perceptions.

But perhaps the phenomenological reduction would be best described, not as a suppression of the natural existence-positing inherent in perceptions, but rather as a process of reflection which is directed upon acts in which the natural existence-positing is carried out, although it itself does not carry out this positing. It may be that while with the natural attitude we carry out our perceptions and posit the existence of the perceived objects, with the phenomenological attitude, on the contrary, we step back a bit and reflect upon our perceptions and other such acts without affirming their objective reference. Instead of affirming (as we might put it) that "this is a tree existing in the objective world," the phenomenologist merely entertains this judgment, and just

as the logician can see the essential relation between the judgments "This is a tree" and "This is a plant," without asserting either one of them, so the phenomenologist can see an *essential* relation between the judgment that "All trees are plants" and the original founding perception of a tree without ascribing existence to trees or plants. On this interpretation, therefore, the shift from the natural to the phenomenological attitude is simply a shift from perceptions, imaginations, and other acts, to a reflective consciousness of them; and is analogous to the shift of the logician from the assertion of propositions to the mere entertaining of them in deductive systems. It might be argued then that just as the logician can, by abstracting from the *factual* truth and falsity of his propositions, arrive at *a priori* and essential *logical* truth, so the phenomenologist can, by abstaining from existence-positing, and by abstracting from all the *factual* objects and relations intended in the acts he studies, obtain *a priori* and essential *phenomenological* truth. Thus phenomenology could be regarded as an outgrowth and extension of logic from propositions, relations, functions, etc., considered in their formal relations, to the whole field of mental acts in their eidetic constitution. But the analogy of phenomenology with logic has its limits. For one thing, although we can refrain from asserting propositions, it is still doubtful whether we can systematically abstain from positing the existence of objects presented in our perceptions. The Stoic theory of "assent," it will be remembered, was laughed out of court. On the other hand, it is no doubt possible, as we have seen, to discover relations which appear to be invariant between acts and components of acts. The relation between the quality and material of acts discussed above is an example. It was pointed out, however, that in so far as such relations are not merely the analytical result of selected definitions and deductions, the evidence for them derives in large part from a broad theory into which they fit and from the improbability of any alternative hypothesis into which they don't.

An example or two will illustrate the point. Husserl claims that if the glance of the I (*Ichblick*) seizes reflectively upon a

given inner experience (*Erlebnis*), it is *a priori* possible for it to seize upon other inner experiences within the same field.¹² Does he mean that it would still be *a priori* possible if the brain deteriorated? In either case this *a priori* would depend, if it is to be relevant to human consciousness, upon the relative constancy of the brain in the evolutionary process. It is our knowledge of evolution and of psychological and social facts, and not an isolated intuition, which gives us our real assurance. The same point could be made with regard to Husserl's essential law stating the *a priori* possibility of turning our glance from the pictures we once saw in a gallery to the memory of them, or even to the memory of the memory, etc. Does this not depend upon the relative constancy of the brain structure? It appears in short that if the "I think" must be able to accompany every intuition,¹³ so must the brain. Yet Husserl assures us that "the given investigations establish the absolute independence of phenomenology from all sciences, including the eidetic-material sciences."¹⁴

The question whether Husserl's *a priori* is analytic or synthetic, whether his conclusions result from definitions and deductions, or from a sort of final and absolute description of essential relations in consciousness, is brought to a head sharply by the following example: It is an *a priori* necessity, says Husserl, that "no inner experience can end without a consciousness of this ending and of its having ended, which is, in turn, a new concrete now. The stream of inner experience is an endless unity. . . ."¹⁵ The conclusion of this argument is that the soul is immortal. Once we admit that Husserl, in his analysis of the consciousness of time, is *describing* invariant relations between essences, it follows not only that the individual stream of consciousness can never come to an end, but that it never had a beginning. Fortunately for those who are reluctant to live forever, these relations do not seem to be necessary or essential. It may be a fact that experiences do not typically end without a consciousness of the ending (except perhaps when we fall asleep), but why this should

¹² *Ideen*, p. 166.

¹³ *Ibid.*, pp. 109-110.

¹⁴ *Ibid.*, p. 115.

¹⁵ *Ibid.*, p. 114.

be regarded as *a priori* necessary is not clear. And it appears impossible that anyone could accept this conclusion as a certainty unless he had witnessed innumerable times an inner experience followed by the consciousness of its having ended, studied the subject of the *a priori*, and brought the two falsely, we think, together.

That the evidence for Husserl's conclusions does not come solely from isolated intuitions, as he seems to claim, or even chiefly from them, is further suggested by cases in which, because of his knowledge of the historical development of logic and mathematics, he made important contributions. Husserl's contention, for example, that formal logic presupposes a possible world just as material science presupposes a material world, is a welcome emphasis. So also is his view that logical principles are only valid for propositions whose subject and predicate are meaningfully related and point back to a genesis in a unitary ground of experience. The inference from this, that the law of contradiction and especially the law of excluded middle have only a restricted validity,¹⁶ has exerted an important influence on logicians and on the mathematical intuitionists. But surely the evidence for such conclusions does not derive solely from a private insight, isolated from history and practice. As a matter of fact, such insights, after one has labored to put all contexts of factuality out of play, seem very thin and potentially tricky. Is it to be expected that the history of logic and long familiarity with logical operations furnish no direct evidence whatever for the *final* insights for which they pave the way? Can the end process of intuition be supposed to stand alone, presenting full evidence for itself and final evidence for all the historical and practical acquisitions which came before and made it possible? Husserl was well aware, for example, that the doubts concerning the applicability of the law of excluded middle have a long history which goes back as far as Aristotle. He knew of the practical difficulties which attend the application of this law in the theory of aggregates and in the social sciences, and it is hard to believe that knowledge of this kind

¹⁶ *Logik*, pp. 191-196.

did not only furnish the motivation but also a good part of the evidence which gives his findings their plausibility.

It is of interest to observe that in those rare instances in which Husserl had not profited by a special study of recent developments in logic, his intuitions in the phenomenologically reduced consciousness were no adequate substitute. Thus he completely missed the "contradiction" involved in reflexivity so much discussed since the appearance of *Principia Mathematica*, and assumed without argument that his transcendental philosophy could validate itself. Likewise, he states that "every judgment is in itself decided."¹⁷ In psychology too his conclusion, now largely disallowed, that having pleasure is transitive, so that if pleased we *must* always be pleased *with something*, again demonstrates that Husserl's results (this one appears to be *deduced* from Brentano's definition of the "psychic") can be successfully challenged by science, even by psychology, and that Husserl's philosophy is not independent of scientific developments, which he followed in many instances, very closely. In pushing his fight against naturalism and historicism he attempted to blast his way, by the phenomenological reduction, through the natural sciences with their naïve assumption of a material world, through the *a priori* sciences with their naïve assumption of a possible world, down to the rock bottom of *a priori* certainty on which all final questions are answered. There are different layers of naïveté, he thought, that of the logician being on a higher level than that of the natural scientist. Transcendental phenomenology, on the contrary, represents presumably absolute sophistication. All naïve assumptions have been left behind.

This appears especially doubtful. For there are different orders and directions of naïveté. There is the naïveté which does not see that "final" intuitions get what strength and stability they have, and even their original possibility, from history and practice and from the assurances and leads furnished by scientific developments. There is a naïveté which overlooks the fact that a philosopher is historically conditioned,

¹⁷ *Logik*, p. 175.

that he has inherited a set of dated problems and approved methods of solving them, that he lives in a society which prefers one kind of philosophy to another (idealism to materialism, for example). This historical naïveté, as it might be called, cannot be overcome by the traditional demotion of historical facts to a lower sphere. Only a historical philosophy can escape from history, i.e., from the corrosiveness of history. Unhistorical philosophy, on the other hand, has always tended, whether consciously or not, to give permanence to the existing stage of knowledge, to crystallize present assurances as a kind of defense against an uncertain and threatening future. Such philosophy regards change as unessential, accidental, or unimportant, and is hostile or at least ill prepared for it when it comes. But the eternal systems which held history in contempt have become purely historical. Intuitive certainties have also been overturned or made irrelevant by scientific developments. Consider for example Aristotle's insight that space must be bounded or infinite. What could be more certain than that? And yet it is now shown to rest upon nothing more than a poverty of mathematical imagination, historically conditioned. Does not Husserl's method run the same risk of fixing as *a priori* certainties what may be merely imperfect formulations and expedients of present-day science? Since there are no objective tests, the chance exists that even quite personal preferences might come into play. The danger is well illustrated in the ethical work of Husserl's brilliant but incautious follower, Max Scheler. Essential analysis, as employed by this author, seems to establish everything which, on private, social, or political grounds, he wishes to believe: that love is the chief virtue, that persons can only be known through love, that people cannot be loved for their virtues, that it is immoral to put any value above the value of persons, that the nation, which is a super-person, does not menace personalities but Bolshevism does, etc.¹⁸

Descartes also came out with conclusions he had held all along. His revolutionary method of doubt, which he feared

¹⁸ *Formale Ethik und materiale Wertethik.*

might be socially dangerous if indulged in by common men, resulted in conclusions in the main quite respectable and unobjectionable to his period. Similarly, Husserl's method of reduction challenged the very foundations of science and knowledge in general, and proposed to refer all ultimate questions to the private intuitions of the individual. But the conclusions he reached by this revolutionary method, while often very original, showed an altogether understandable similarity with other philosophy produced in the same German and Austrian philosophical traditions. When the Samkhya philosopher carried out his "reduction," and demonstrated that evil and pain attach not to consciousness itself but to the objects of consciousness, he likewise fulfilled the major expectations, and met a basic need of his time and tradition. For if evil and pain attach only to the objects of consciousness, salvation can be attained through a strict discipline which detaches consciousness from its objects. By these brief remarks it is not meant to suggest that truth is relative to history, and that there are accordingly many truths, but only that the gradual historical approach to fuller truth can be best advanced by a recognition of the limitations imposed, and the advantage conferred, upon human understanding by given historical periods and trends.

Husserl's subjectivism went back to Descartes, Berkeley, Hume, and Kant, and it is interesting to observe how often their arguments for subjectivism turn up in Husserl's writings, taking the place of the *a priori* intuitions and pure descriptions which one had been led to expect. Thus, according to Husserl, all objectivities, including other egos, and even my own psychophysical self, are constituted subjectively, or at least so constituted *for me*. Is this statement merely a pure description of something lying plainly exposed in consciousness? This would be very difficult to maintain. It is interesting to observe that at this point Husserl resorts to the traditional arguments for idealism. How does it happen that these objective meanings arise in my mind? he asks. How can they have arisen except through the constitutive work of my own subjective ego? Can anything which has sense for me derive

its meaning from any other source than my own ego? These questions involve an assumption not very different from Hume's dogmatic view, taken over by Kant, that all we get from the external world are crude formless data of sense. It follows if this assumption is made that all meanings must be derived from consciousness, that the "material world" itself is constituted in transcendental subjectivity. Again, Husserl almost agrees with Berkeley that a non-mental thing is an impossibility. He believes that an experience of an entity alien-to-consciousness would be contradictory or impossible.¹⁹ However, it is not a formal impossibility, he explains, but rather a "material" impossibility. Thus if he draws away from Berkeley, it is only to agree the more with Kant. Husserl also makes use of Kant's argument in the "Transcendental Deduction": "Either the object alone makes the representation possible, or the representation alone makes the object possible. In the former case, the relation is only empirical, and an *a priori* representation is impossible."²⁰ Transcendental subjectivism, Husserl argues in much the same way, gives the only possible explanation of the *a priori* aspect of experience. It is not our purpose here to show Husserl's full dependence upon the work of earlier idealists or to undertake to answer arguments which have been so often, in our opinion, refuted; but merely to point out that these much disputed arguments are apparently necessary, in the absence of plausible intuitions, to set up the science of transcendental subjectivity. In rejecting Husserl's subjectivism we are therefore questioning these arguments, and not the facts of consciousness. Only one remark may be made: From the fact that one cannot have knowledge of the objective world without carrying out certain mental operations, that forming ideas, making judgments, and using categories are *necessary*, does not at all imply that these mental processes are *sufficient* to a knowledge of the objective world. What is also necessary is the existence of an independently enduring objective world, a process of organic evolution which has brought the brain, and social evolution which has brought

¹⁹ *Logik*, p. 206.

²⁰ *The Critique of Pure Reason* (Meiklejohn tr.), p. 73.

society, to the point where such activities are possible or even necessary. From the fact that all evidence *occurs in* the mind, it does not in the least follow that all evidence, or final evidence, is subjective; or that one can only attain it by abandoning the natural attitude, and by confining attention to the conscious acts isolated from their objects. Nor would the fact that an erroneous intuition (such as might be cited by a critic of phenomenology) can only be overcome by another intuition giving evidence of the falsity of the former²¹ (if it is a fact) prove that the intuitive method in Husserl's sense is inescapable or less fallible than other methods. While we cannot escape from consciousness, it is very easy to escape from subjectivism. R. B. Perry's "ego-centric predicament" is a real one. But neither Berkeley's subjectivism, nor Husserl's, follows.

If we consider what Husserl has to say about solipsism this becomes more apparent. In the *Logic*²² he states that "I, the 'transcendental ego,' am 'prior' to everything worldly. I am the I, namely, in whose conscious life the world is first of all constituted." As transcendental ego I constitute not only the natural world, and myself as psycho-physical self, but also other selves. In fact, everything is constituted by the transcendental ego except this ego itself, and here Husserl finds himself in the same vulnerable position as Berkeley, who said that "being is being perceived" and yet was obliged to talk about spirits. In any case, solipsism seems unavoidable, and Husserl himself admits a grave difficulty. In my ego, he claims, every other ego has its meaning and validity.²³ In my ego every other ego is constituted. This appears to be solipsism. But Husserl undoubtedly means to say also that my ego is constituted by other egos. And this seems to avoid solipsism, but to contradict the former assertion that I constitute other egos. The solution is that the meaning and validity *for me* of other egos is constituted in my ego, while my meaning and validity *for them* is constituted by them. Here the contradiction disappears, but also the argument

²¹ *Ideen*, p. 155; *Logik*, pp. 139 f.

²² *Logik*, p. 211.

²³ *Ibid.*, p. 210.

for transcendental subjectivism. Indeed a materialist could readily admit that an individual's knowledge of other individuals and of all the properties he ascribes to them is, in a sense, "in" this individual's mind. It appears that either I constitute other selves, in which case we have solipsism, or all selves constitute other selves in the sense that every self forms its ideas of other selves within itself. In the latter case we do not seem to have subjectivism any longer, but rather a view which is consistent with materialism and common sense. For if what is meant is only that the world *for me* is my idea, then that the world is my idea, in Schopenhauer's sense, is not implied and things could exist, not only other egos, but trees and stars as well, which have not been constituted by me. The only alternative would be to say, as Berkeley did, that *some* things can exist which are unperceived, namely, spirits. Unfortunately this contradicted his leading principle. Husserl's admission that some things exist which I do not constitute, namely, my ego, appears to be equally fatal to his subjectivism and idealism. But this is not the end of the matter. In order to escape from some consequences of his subjectivism Berkeley added to ideas and spirits a God who perceives the world while we mortals turn away. The difficulty here was that God, like other spirits, cannot be perceived. Similarly, Husserl in his later writings added a transcendental observer which again is not constituted by me. Every attempt to escape from the solipsism entailed by the subjectivistic principle that "I constitute the world" led to the establishment of a new transcendent which contradicted that principle.

In this brief essay we have attempted to show that Husserl has offered no new or compelling arguments for subjectivism but only the old familiar ones in subtler dress. We have also criticized his theory of evidence (inspired by certain mathematical ideals) for restricting "final" evidence to intuitive moments with the result that the vast cumulative evidence supplied by the whole social and biographical background is denied any contributory weight. Only a historical philosophy, we maintained, can completely correct this narrow and rather oracular concept of evidence and make full use of two tests

of truth which Husserl so much neglected, *viz.*, coherence and prediction. But we have also seen that it is possible to take up a historical, materialist, and socially oriented position of a sort which Husserl's whole philosophy aimed to destroy, and yet pay tribute to his remarkable insights into the logical and psychological nuances, and the ostensible *a priori*, of the stream of consciousness.

OUTLINE-SKETCH OF A SYSTEM OF METAPHYSICS

William Ernest Hocking

THE FOLLOWING propositions are put forward not as proofs of a metaphysical doctrine but solely as statements of a position. To this position I hope, within the next few years, to give not alone a more ample statement but such defense as metaphysical positions are capable of. In widely different ways, the thought of Husserl, Royce, Santayana, Whitehead, has advanced our thought regarding *Wesen*, Essence, the Universal. They have all noticed that these developments have required corresponding further attention to the nature of the Particular, the Factual element of being. I am attempting to deal with this problem, and to call attention to what appears to me its crucial position in any present-day construction.

A. METHOD

(1) Metaphysics is empirical to the extent that it takes a presented world as the object of its reflection. Its aim is to understand this actual world, so far as it can be understood. To understand is not a purely empirical operation: conversely, the pure empiricist renounces understanding, as the human being never does.

Description of the world is properly the business of the sciences. Metaphysics inherits and adopts the several partial descriptions of science. It seeks to create of the fragments a total description. But this, too, is but preliminary, a meta-science which subserves the essential work of understanding.

Exact description always does more than describe: it yields a measure of "explanation." A phenomenon is explained in so far as it is shown to be necessary (under the circumstances) or significant. The discovery of descriptive laws is,

in this sense, explanatory of whatever the law calls for, whether or nor the law is itself "understood." The unification of mysteries is partial enlightenment. Systematic description of nature is thus a relative explanation.

Metaphysics, utilizing the explanatory force of the systematic descriptions of science, enquires whether any further necessities can be discerned in the total system, or, beyond necessity, meaning. Understanding is the perception of meaning: it is a *Wesensschau*, in which *Wesen* is not alone factual "essence" but also significance.

(2) As the mark of man's will to understand his world, metaphysics need not begin with the postulate that the world is throughout "intelligible." It may be so, but a partial intelligibility is enough to justify the pursuit. Metaphysics must postulate simply that the world is not meaningless: it is fact, but not "mere fact." If the world were mere fact, *ergo* meaningless, metaphysics would be meaningless with it: conversely, whoever pronounces metaphysics meaningless confesses thereby that for him the world is devoid of meaning. This may argue a deficiency in the world, or alternatively a blind spot in the observer.

Metaphysics, therefore, in its nature cannot adopt "Being" as an ultimate character of things, calling for pure acceptance: "The world is there; it is as it is: take it, make the most of it, but ask no question Why?" On this principle, Carlyle has been much applauded for his retort to Margaret Fuller's "I accept the universe": "Egad, she'd better." Carlyle is here playing the realist, making his nest in things as they are. To this extent he closes the door of metaphysics. Realism based on the dogma that "to be is to be, and nothing else" (Moore's "refutation of idealism") is acquiescence in the ultimate opacity of fact. It is not a variety of metaphysics: it is the negation of metaphysics.

The empirical attitude, as a scientific standard, was once a defense against dogmatic and scholastic pretenders: it set the authority of facts against the authority of priests and rationalizers. But the authority of facts, if it means not alone that we must recognize them but also that we dare not stir beyond

them, may be more oppressive than the authority of priests, for it is, in that case, the authority of death and the mute. Metaphysics rejects both authorities as final. There is some light to be had about "Being," some *rationale* of the world.

(3) There is no logic which can make out of whole cloth a system of metaphysics. Deductive logic requires something to deduce from, an assumption or an insight to serve as a premise. "Inductive logic" is not logic; it is a leap from facts (or from lesser generalities) to a premise which, deductively, will absorb them. Its distinctive character lies in the leap, not in the deductive relationship; and the leap is extra-logical. (The term "leap" is here used to suggest not effort but discontinuity, a passage from not-seeing to seeing the premise, i.e., the law or essence or *Wesen* of the data before you. Rules may be given for assembling these data so as to facilitate induction: for the leap itself no rules have been given or can be given.)

The premise reached by induction may be an ingenious guess (hypothesis) having no guarantee that it is the true premise, still less the only possible premise: it is then a working *assumption* clothed with a degree of probability. It may however, in the ideal case, be an abrupt insight into the "true" understanding of the fact. Induction then approximates "intuition." The distinction between successful induction and intuition would be simply that in induction the leap is preceded by a survey of relevant experience; in intuition, the perception is presumed to be direct: but since there are few intuitions not occasioned by a given subject-matter, and few inductions wholly unguided by insight, the distinction tends to be gradual. In general, induction only gropes toward intuition, and its typical product is an assumption adopted more or less tentatively.

In any case, metaphysics must be based on either intuitions or assumptions; and what is an intuition for one may be for another, who is trying to follow him, a mere assumption.

(4) Systems of metaphysics based on intuitions are "ways of seeing"; systems based on assumptions only are "ways of groping," acknowledging an initial blindness.

Systems based on seeing would naturally tend to converge, and do tend to converge.

Systems based only on assumptions need have no tendency to converge, and as a rule do not converge. New assumptions, new systems.

Hence it is natural that assumption-systems present most of the experimental novelties in metaphysics. As "ways of groping" they seem to themselves to be displacing the "ways of seeing," which because of their relative stability tend to permanence and have continuities with ancient and even primitive ways of seeing.

Assumption being a tool of a purely experimental method, it lives in the hope of verification; but the best verification is not corroboration of deductions from the hypothesis; the best verification is to arrive at an insight. Hence "ways of seeing" may naturally adopt "ways of groping" as subsidiary tools whose destiny it is to give way to perceptions. The empirical hopes to lead to the *a priori*. For the seeing we speak of is not mere perceiving that something is, but also discerning that it must be.

(5) In saying that systems based on seeing tend to converge, we imply that seeing, which is always an individual activity, reaches an object which is not private.

Metaphysics, in common with all objective science, postulates that what is true for the initial thinker is true for all other thinkers. Descartes' course of meditation carries him toward his subjective "I-think" as his sole certainty; yet he publishes his meditations in the confidence that the same course of doubt and its result will be valid for all his readers. This confidence modifies his result: it destroys its solipsism. A completer expression would be: "(I say to you all and sundry), Whoever doubts, thinks; and whoever thinks does exist."

The postulate that there is a common real for all thinkers includes the postulate that there are thinkers other than myself. If these postulates are taken as assumptions, they are *necessary assumptions* in every metaphysics. I should present them rather as the primary intuitions on which all metaphysics proceeds, and which an adequate self-consciousness will reveal.

We thus escape the error of supposing that the course of doubt necessarily leads to solipsism, as the natural beginning of a circumspect metaphysics. And resisting the reduction of experience to the ego-pole¹ we resist the implications of epistemological idealism.

(6) There are certain intuitions common to the race: it remains true that individual intuitions differ in scope and detail.

If such differences were final, metaphysics would have a large factor of inexpugnable personal variety. It would have the character of a confession or a poem, in which one expressed as an artist his perception of the world. It would be report, with no effort to persuade.

As self-conscious, metaphysics must recognize that it has this preliminary character in its unfinished and explorative regions: the scrupulous metaphysician will follow Plato in avowing here and there that he passes into the realm of myth — he will confess that he is but confessing.

But metaphysics retains responsibility to be true and to persuade. The circumstance that individual intuitions differ is precisely the circumstance that renders metaphysics as an objective discipline necessary. If intuitions were identical, argument would be superfluous. The private perception marks the task: it must become the private gift to the general fund of insight. The intuition which cannot eventually be shared must be suspected.

The first essential in this process of communication is a language, a set of discriminable objects in the common world usable as signs for unambiguous meanings.

(7) There is difficulty in finding fit signs either for what one sees (especially when it is a variant perception) or for what one assumes. Differences among metaphysicians commonly arise from carelessness at this point, using the categories of common speech without setting guard on their ambiguity. Two ways are commonly resorted to for overcoming this difficulty, exact definition, and the adoption of a special terminology.

These devices are both useful and necessary: but neither

¹ Cf. Husserl, *Méditations Cartésiennes*.

singly nor together can they sustain the hopes rested upon them by logicians. Definition cannot fix all terms used, since every definition is in terms (supposed understood but) fit candidates for further definition; and the series thus indicated is either infinite or cyclical. It comes eventually to "indefinables," which are precisely the terms most in need of metaphysical clarification. Definition in any case, if it is to be useful, requires to be agreed upon; and in practice tends to lose its edge in an infinitude of unresolvable differences.

The invention of new terms is limited in use by the capacity of the mind to acquire and retain their distinct meanings: unless there is a path from common speech to the new term, it cannot be understood; and if there is such a path, then whatever can be said in the technical speech can be said in common speech, more clumsily if you are a John Locke, less so if you are a Plato. The good faith of metaphysics with logic is that it is ready to accept the language of exactitude as an instrument of analyzing its reasonings. The good faith of metaphysics with mankind is that its answers shall be given to the questioners in the language of their questions.

The assumption has to be made that the mind is on its guard against the pitfalls of the sign, and is reading from the context while attending to the term. Given this, the best way to reach unambiguous concepts in a shifting medium is a third way, namely, to begin not with the minutest, but with the widest distinctions offered in experience. For broadly contrasting terms tend to clarify one another.

(8) Experience may be dichotomized in various ways: body and spirit, the one and the many, facts and values, the universal and the particular.

Each such duality, since it arises from dividing a continuum called experience, raises a question as to how the two elements belong together, become associated, work together. That is, dualism offers itself as an unfinished philosophy: the analysis of experience appears to be a preliminary step to a significant synthesis.

For our own purposes, we elect to consider the duality of the universal and the particular.

B. ANALYSIS: UNIVERSAL AND PARTICULAR

(9) The content of experience consists of (*a*) particulars exemplifying or embodying (*b*) universals, and (*c*) the fields in which these particulars lie.²

The particular is indefinable; it is pointed to as "this-now." Attempts to define it, that is to say, to isolate it by mentioning its qualities (white, round, solid — universal characters) only emphasize the ancient truth that no combination of universals can identify a particular so that no other particular could satisfy the description. But everything that exists has the character of particularity, which is therefore a universal character of existing things.

(10) The universal, being the medium of definition, is likewise, strictly speaking, indefinable except in a circle.

Classes of objects are universals not in respect to their population, but in respect to the set of marks which constitute an object a member of the class. Class names denote particular multitudes; they connote the general character, which is independent of any particular embodiment. This is a circuitous way of uttering the truism that classes are universals so far as they are universal, and not particular! If we wish to get beyond this, we fall back on exemplification: we invoke the class "dog"; we remark that it is not universal in respect to the existent, or even the possible canine population of the universe, but only in respect to dogness.

We say that there are also value-universals, as "beauty," "morality"; and there are universals which unite fact and value, as "food."

(11) The indefinable character of universal and particular has led certain thinkers to declare one or the other non-existent. The nominalist asserts that the universal is only a particular with a universal meaning! Mr. Santayana asserts that the particular is only an essence referred by faith to a particular!

The formulation of these positions which I have here chosen

² Since these fields (such as space, time) are particular fields, namely, the fields of these particular events, they may be dealt with for the present discussion as particulars.

is obviously not the formulation which they themselves put forward: for each attempts to bury under a verbal covering the absurdity here exposed. Each attempt to negate assumes what it denies. We turn our back on these ill-judged simplifications, adhere to the simple contrast with which we begin, and clarify it by reminding ourselves of certain implications. The first of these is the commonplace observation:

(12) *No universal requires any particular.* When I am hungry, I want food. But this universal does not indicate a specific menu. And if it specifies its desires in detail — oysters on the half shell, etc., — these are still universals and do not reach the point of demanding particular oysters, except in the universal sense that the food required must be particular food.

(13) *No particular requires any universal as its essence.* The proof of this proposition calls for the observation that to each particular an infinite number of universals pertain. We do not exhaust the qualities of a pearl by mentioning its color, weight, size, fitness for ornament, and the like. Its solubility, opacity, elasticity, specific heat, and electrical conductivity are not qualities we ordinarily enquire about, but they clearly belong to the being of the pearl. The actuality of the pearl implies that whatever questions it may occur to us to ask of such an object are already answered in its being: it is “determinate.” Now it can never be predicted which of these inexhaustible qualities may become the essential role of the pearl in any specific event. It may serve as a piece of money, a poker chip, a weight in an apothecary’s scale, an ingredient in a medieval medical prescription. Hence the inspection of the particular object, while always a recognition of character, a classification, is never at the same time an unambiguous inspection of essence, a *Wesenschau*.

This becomes most patent in the case of concrete mental or social events. There is no final determination of the essence of a historical event. There is a degree of willfulness in assigning to any public debate, campaign, war, its “essential issue”; every high-sounding universal is to be distrusted. The interpreters have an infinite field for dispute. Hence history can never be a definitive science. And the prophets who profess

to interpret their own times are always vulnerable to displacement by "deeper" prophets.

(14) This non-congruence of particulars and universals may be simply expressed in the phrases: To each universal an indefinite number of particulars; to each particular an indefinite number of universals.

(15) Hence there is no such thing as a deduction of particular fact from general premises.

(Sir James Jeans suggests that the physical world is a set of mathematical equations; but equations are generalities, and no equation could specify itself in any particular event. Given one set of particulars, the mathematical relations may indicate what other set will follow; but without this gift, the mathematics indicate simply nothing at all.)

(16) Now the world as a whole may be taken as a highly complex particular fact.

Hence the world as a whole cannot be deduced from any set of general considerations. So far as universal principles go, this particular world, far from being the only possible world,³ is but one of an unsurveyable infinitude of possibles.

And since *desiderata* are general considerations, universals, no congeries of desiderata could specify any particular world, any more than the desire for food could specify the meal as served. Hence even if "the best of all possible worlds" could be defined in terms of its qualities (as it cannot be) it could not identify a particular world as required by the definition. Hence there is no such particular object as the best of all possible worlds.

(17) There thus appears a type of gulf between the universals and the particulars which we must designate as *irrational*. There can never be an adequate reason, a sufficient reason, for the particular this-ness of this world or for any thing or event in it.

It follows that if, and so far as, idealism is committed to rational deduction as an eventual ideal, rationalistic idealism is impossible. So far as realism and experimental pragmatism are committed to deriving the universals from the run of

³ Cf. Husserl, *op. cit.*

particular experience, realism and experimental pragmatism are impossible.

C. SYNTHESIS: WILL AS FIAT

(18) But dualism (and neo-realism with it) is likewise impossible. For after all, the universals and the particulars are together; and their inherent reference to one another forbids the position that they are independent beings.

(19) Hence our metaphysical problem calls for a type of being which holds universals and particulars together, and plies between them across the irrational gap, giving this gap a concrete significance.

The solution will not take the form of an assumption; for assumptions are built of universals, and can do no work in this situation. It will have to take the form of an intuition. The being which answers the question is to be found in what each person intuitively knows as *will*.

We are not here referring to will in the form of purpose (Schopenhauer, Royce), which is a time-form tending toward the future as containing a (universally defined) goal. We are referring to the will as *fiat*. Deliberation deals with possibilities, and possibilities are universal. Decision limits the field of possibilities to one, still a universal. Fiat translates decision into action, and therewith the universal necessarily becomes particular, for action as taking part in the world of existence must be particular action. Fiat moves through this infinite distance silently and timelessly; in the will act, the space-time world of a free imagination slips timelessly into the actual space-time context, and thereupon loses its freedom, while gaining "existence." I sign my name to the deed; my decision affirms the general meaning; my act in its particular surroundings takes on all the irrelevance of "history," and the relic-hunters make away with the pen and inkstand. When Gandhi's fast in the fall of 1932 had resulted in opening the temples to the Untouchables, the goblet from which he drank the orange juice which broke the fast was spirited away as a sacred emblem for future India.

The irrational element in the fiat is recognized as the ultimate mystery of the world, in which the word becomes

flesh; it is prized as divine not because it is irrational, i.e., meaningless, but because *this* meaningless thing is lifted by the fiat into that alliance with meaning without which meaning itself is empty and impotent. Fiat is that marriage of spirit and fact in which *both* for the first time realize their meaning.

(20) The meaning of the ontological argument is explained on this ground.

Among the merits of any desideratum must be included the merit of existing, the culminating and decisive merit.

When Kant pointed out, in refutation of the ontological proof, that one hundred dollars in the pocket were no more dollars than one hundred dollars in idea, he was making a purely numerical comparison of two universals. In terms of existence, the dollars in pocket are one hundred dollars more than the same number in idea. The essences are *not identical*, for to the ideal-dollars the pocket-dollars add the essence of existence; and this is an indispensable element of perfection. It is in this sense that we can accept Spinoza's dogma that the perfect has an inherent power to exist; but this is true only if the universe has as a whole the character we know in ourselves as will.

(21) We thus reach an *idealism of the will* which is the precise counterpart of Schopenhauer's.

For the irrational element, which to Schopenhauer meant that the will is blind, means rather that in the will alone lies the principle of dissolving blindness. The irrational is what the rational requires for its existence, and cannot of itself obtain; but when through the will it is obtained, then the irrational becomes an element in a rational world-order, a symbol.

The self includes the non-self, as the non-self never includes the self.

(22) We gain an outlook upon the meaning of evil, in so far as the irrational contains the possibility of evil.

The irrational can never include nor control the rational; it can only resist or defer being included by the rational, which eternally seeks its own body. All fiat is a partial solution of evil, and all such solution is a personal creation. But if the world is ultimately resolvable into meaning, that also is a fact.

MEN AND THE LAW

Gerhart Husserl

HOMINUM *causa omne ius constitutum est* — All law has been established for the benefit of men.” This saying by the Roman jurist Hermogenianus, who lived during the reign of Diocletian, expresses a universally valid thought, although the language does not reveal its full extent.

Law is for men. Its purpose is to further the peaceful, harmonious, social life of free men by solving conflicts arising between man and man according to the standard of justice. On the one hand it restricts a man's freedom of action: certain groups of acts are singled out to receive the stigma of illegality. To commit such an act is to evidence a state of mind in discord with law. On the other hand, the establishment of a legal order opens a new field of activity to man in that it equips him with tools to attain practical ends which previously might have been attained, at least in part, by the operation of custom; let me cite the case of a man who wishes to adopt a child, to found a business corporation, or to draw up a will.

Law concerns everyone. No one can claim that he is outside the legal order. Of the world in which we live, law is an integral part. But law has not descended upon us as a gift of the gods without our striving toward it. The particular legal system that is in force at a definite time and place is a creation of man. Once erected, it does not stand, however, like a house of stone which the builder has rigidly set upon solid ground. A legal system is continuously dependent upon the attitude of men who live under the order it establishes; laws which are refused compliance will ultimately collapse. Hence it becomes an important task to set up special agencies to keep law intact and effective. The legal system is under the guardianship of men entrusted with the enforcement of the rules of law.

Law concerns everyone in yet another sense. All men are equal before the law.

Equality before the law demands that all men irrespective of birth, or of social and economic status, should be given equal protection in the pursuit of their lawful interests and should suffer no discrimination before the bar of justice. To equal rights correspond equal duties. So far as the establishment, maintenance, and enforcement of the law are concerned, everyone has theoretically the same duty to cooperate therein. Legal reality, however, necessitates a division of the legal functions. No one, at the same time, may be judge and a party to a particular legal dispute. The law of our day is a vast complex of norms, not all of the same dignity and not all equal in their bearing upon everyday life. The constitution of one's country is of much greater concern to the ordinary man than the law of bills and notes. Theoretically, everyone could have an adequate knowledge of the law but actually only a few do. The majority of the people have lost direct contact with the body of laws. Thus in our time arises the particular problem of conveying needful understanding of the law through men who possess legal craftsmanship; such men are more than specialists in that they give articulate expression to the voice of justice, latent in all of us.

The expression "all of us" is not meant to include all men living on the earth. The belief that by addition of all peoples and nations the world over mankind is obtained is fallacious. The union of all living men under one and the same legal order would create a world-state, by no means identical with mankind. Mankind is no association comparable to and of a parity with states and nations. It is rather an ideal entity, manifesting itself in various human communities in so far as they are governed by humanity. The community of law is such a manifestation of mankind. Man before the law is man as a member of the community of law.

What is meant by a community of law? At first sight one might be tempted to identify it with the state. I shall show that the social phenomenon called the state and the community of law are not equivalent.

The establishment of every legal order is a new attempt at the fulfillment of the eternal task of combating injustice and making justice prevail in the social world. The reality to be molded after the image of justice is that region of social life where a common will has established itself, bent on the accomplishment of practical aims. Such will is characteristic of the political community.

Not every association which pursues joint practical aims is a political community. What is it then that gives a community that specific nature of a *political* community? ¹

A political community comes into existence on the basis of a general outlook on life which recognizes certain social values to the extent of sacrificing the selfish will to power of individuals for the good of the community. Such a sacrifice lays a definite obligation upon the community and its functionaries to administer the power so delegated in accordance with these social values. The community discharges this obligation by setting up a suitable power-organization and making the use of organized power serve as a means to attain these social aims. From this point of view the power-organization reflects the leading principles of political life, defining the form, the extent, and the distribution of governmental power. We call the body of such principles the *constitution* of a political community.

We know of no political community that would exist without being possessed of a political constitution. But it is not true that a political community must at all times have a *legal* constitution. So long as a community is animated by the consciousness of a common past which is derived from a stock of purely traditional values, to be handed down from father to son, there does not exist a power-organization under the law. The formal character of the social life of primitive men who live under the sway of rigid norms of conduct rooted in religious tradition is inherent also in their political existence, and thus the use of political power is limited. Even the most primitive community as represented by an African tribe

¹ For the following see Gerhart Husserl, "The Political Community vs. the Nation," *Ethics*, XLIX (1939), 129, 136 ff.

is already organized in so far as there is a distribution of functions between the chief of the tribe and other political functionaries. Even in primitive times political power could not be exercised arbitrarily; on the contrary, it had to fit in with the traditional social and religious scheme of life. At this early stage of human history we find political constitutions of a pre-legal character. It is only at the end of a gradual process of rationalization of social life that we have a legal status, i.e., the state. The state comes into existence when the political community adopts a *legal* constitution (not necessarily a written one), embodying such principles of political action as are derived from the concept of justice.

The political community which sets up a legal order shall use it for the furtherance and protection of the common good. Thus a community confronted with the problem of unemployment sees that the necessary legal provisions are enacted to combat this social evil. From this point of view the state has the character of an instrument in the hands of the political leaders.

But this is only one aspect of the functions of the state. The political community is never free to make an arbitrary and unrestricted use of the legal machinery. Where a full legal status has developed, the political community has placed itself under the law. The administration of public affairs has become — to speak with Sir Edward Coke — “a ruling under God and the law.”

This being so, it would seem that the state is in a peculiarly ambiguous position. On the one hand, the state serves the political community in the pursuit of its goals; on the other hand, it claims a superiority over the political leadership which must recognize the supremacy of the law as rooted in the constitution.

It may be helpful for an understanding of this dilemma to draw a parallel between a community which has assumed a legal status and an individual who has decided upon a definite course of action. Take the case of John Doe who has decided to study law. The decision, once formed, continues operative in him as a maxim of conduct. It has taken on the character of a norm of conduct which persists even while he is

sleeping or playing bridge. John Doe is bound by his own decision. How far is he bound? A general line of conduct has been laid down for the next several years of his life. From the general resolution follow other decisions which may be regarded as concrete applications of the established norm — decisions by virtue of which the plan to study will be translated into the reality of daily life. In this connection he still retains a certain liberty of action. Thus he may choose at will where he shall study, what textbooks he shall buy, how he shall organize his spare time, etc. One thing he cannot do without inconsistency is abandon his law study. To do so would imply the annulment of his former resolution and the ensuing norm of conduct. This might follow either from a positive act of revocation of his resolution or a gradual decay in its strength: thus John Doe, not an apt law student, decides to sell insurance, or, working during the summer as a newspaper reporter in order to earn money for his law study in the fall, finds the work increasingly absorbing as the summer goes by and gradually loses interest in law.

What constitutes the binding force of the decision — as long as it lasts — upon his future course of life, what gives it the specific power of a norm of conduct? The phenomenon of subjecting oneself to a self-imposed norm of conduct is not comprehensible unless we realize that there are different planes of our inner life. To be sure, it is the same John Doe who forms the resolution to study law and later attempts to carry out his plan. But John Doe, in that he forms the resolution and sets it up as a norm for his future guidance, reaches a level distinctly higher than when he translates it into terms of daily life. In the formation of a resolution which shall establish a rule for future conduct, a man must perform an act of reflection whereby he is abstracted from the sphere of daily experiences, and must activate ethical forces in himself. Such reflective and ethical activities take place on a higher level of his being to which belong such phenomena as self-conflict, voice of conscience, etc. Here dwells the higher ego, to whom the John Doe of the level of everyday life must give an account of his actions.

It is precisely the general attitudes toward life created by such resolutions that form a man's personality. These attitudes are by no means identical with mere habits: we can account for them. The course of our life, though not definitively or exclusively, is determined by them in a general way, in so far as such attitudes prevent man from merely muddling through under the guidance of instinct and momentary urges. The very ability to create norms of conduct is what characterizes a human being and distinguishes him from beasts. And only a person who is free and mature can make up his mind to establish such norms. Only a fully responsible person is expected to adhere to his resolutions, to keep his promises.

So the political community must have reached a stage of maturity before it adopts a *legal* status. The adoption by a political community of a body of principles by which political life thenceforth shall be guided implies the establishment of a new attitude toward social life, indeed comparable to the change of attitude in an individual who determines upon a new course of life. But the mode of procedure is a different one. We are concerned now with the attitude of a group of men, and more especially with a group which is not an aggregate of definite individuals, A, B, C, but rather a community which is to persist as essentially the same in spite of death, withdrawals, and other changes in its membership. We cannot know anything of a community's general attitude toward social problems until the basic principles underlying the attitude have been ascertained in an objective way, if not in written form, and the application of such principles has been secured by the establishment of suitable public institutions. The community can never possess the flexibility of which an individual disposes in the adoption of new points of view and attitudes. John Doe was enabled to set up a self-imposed norm of conduct by forming a resolution which may come into existence without any immediate outward manifestation. This cannot be so in the case of a community whose rules of conduct are designed to bind even the offspring of present members and new entrants.

The creation of a political community takes place on a definite level of social existence, i.e., the political level. The attempt of the community to reach a higher level would carry with it the repudiation of its very nature as a body politic and would be clearly *ultra vires*. If a political community pronounces a definite course of political action, it does no more than bind itself to rules of conduct which the will to political power may at any moment alter or set aside. And yet we say, the political community is able to adopt a legal status, thereby establishing a supremacy of law. What an individual is capable of achieving alone and by his own strength requires in the political world the intervention of a second community, the community of law, which has its being on a higher level of social existence. It is *not* its own will that binds the political community to law, as little as it is the will of John Doe of the level of daily existence which habituates itself to some permanent maxim of conduct. It is the will of the community of law which asserts itself successfully against the will to political power. A meeting of these two wills of unequal strength results in the creation of the state. And just as John Doe retained a certain liberty of action within the practical execution of his decision, so the political community retains the freedom to decide in detail what specific legal provisions are to be enacted for the purpose of making applicable and effective the principles embodied in the legal constitution.

An attack upon the binding force of constitutional provisions is equivalent to a revolutionary attempt to destroy the state. Whether or not such attempt proves successful will depend upon the strength with which the political community is bound by law, i.e., upon the power of the law community.

The term "community of law" sounds somewhat mystic. What is its field of operation, how does it come into being, what are its organs? The particular situation in which it must be shown whether or not there is a community of law is that in which the political community undertakes an action contrary to constitutional principles. Such action provokes reaction, if the legal status is to be retained intact; and the

reaction must take the form of rendering the discrepancy between the political action involved and the constitution evident. It is the judge who has this task. The judge acts as a representative of the law community rather than of the state. If a court overrules the will of high functionaries of the political community and the state — be it the chief executive of such community or its legislative body — because their action is held contrary to a constitutional provision, it is obvious that the court is acting as an organ of a community superior to the state. Only on such theory is the preëminence of the judicial over the political decision intelligible and justifiable. If it were merely a matter of conflict between functionaries of one and the same community, then merely the question of relative power would determine the winner. But, actually, it is as if in the case of John Doe, who has for a week neglected the study of law in order to play tennis, conscience begins to stir and he returns to work. The higher ego as guarantor of the resolution to study law has triumphed over the ego on the level of every day. Whereas within our John Doe the discussion takes place informally, on the other hand, in the corresponding political field the discussion as to the constitutionality of a public action assumes the shape of formal proceedings, in which the functionaries of the political community and the community of law take part.

To be sure, not all political communities which have adopted a legal status possess the institution of judicial guarantee of the constitutional principles. In the absence of such guarantee the necessary reaction to violation of the constitution must take other form. Every member of the political community and the state is at the same time a member of the community of law. Conscientious members of those aware of their duties will raise an outcry against the political action that impairs the legal order. If this reaction fails to occur or is ineffectual, then the legal order will decay and justice be imperiled. This, however, may involve merely a temporary darkening of the idea of justice during a period of transition to a new legal status which may be a better or purer manifestation of justice than the previous system.

Destroy the constitution and you destroy the state. The end of the state does not, however, necessarily mean a breakdown of the community of law. There exists a European community of law built up on Greek civilization and Christianity. This European community of law has survived many centuries and the downfall of many political communities and states. Its existence is bound up with that cultural entity that we call Europe, a section of which is the United States of America.

Although this community of law forms a unit, yet within it there are subdivisions, thus the community of common law countries in contradistinction to that of civil law states. That a European law community exists is evidenced by the fact of international law, however deficient it may be; there are general supra-national principles of law which form the foundation of legal intercourse between the nations belonging to this community. Not merely the law of nations but also private international law — the law of conflict of laws — is unthinkable without common, underlying, legal principles without which no comparison between the various national systems of law and the application of foreign law would be possible. Through the fact that the European community of law is based upon supra-national ideas of law and justice, and not upon race, geographical position, etc., access is open to non-European nations, e.g., Japan, provided they are willing to acknowledge those principles as binding. Such access can be obtained by the spread of European culture to these nations. The reverse, however, is also possible: a European political community may antagonize the cultural entity of Europe by the adoption of an essentially un-European ideology. That would mean that it dissociates itself from the ties of the European law community, to which its citizens therewith — possibly against their own inclination — cease to belong; in effect they are no longer Europeans. It may be asked whether since the first World War there has not occurred a successive secession from the European community of law on the part of several nations under political leaders who have abjured the basic principles of justice essential to the European

concept of political activity. We shall not take it upon ourselves to answer this question.

There is, however, another word to be said concerning the relation of the law community and the particular political community. The community of law assigns certain tasks to the political community; the latter takes on these tasks, and thus the constitution and the state arise. The formulation in the constitution of the guiding principles of political action is the expression of the concept of justice, dominant at the time and clamoring for formulation.

We may draw a parallel between the religious community and the church on the one hand, and the community of law and the state on the other hand. The founding of a religious community does not *per se* involve the creation of a church. But religious ideas cannot assert their full power in the social world without the medium of the church. In other words, the religious community needs a worldly institution which by its concrete and lasting form shall further human striving towards religion and make religious ideas effective in social reality. In similar fashion the community of law has need of an institution to make the principles of justice effective in the social world. The institution which the law community creates is the state; and the constitution of the state formulates the program of political action according to the concept of justice as revealed to the fathers of the constitution. The constitution is, so to speak, the bridge which the idea of justice must cross in order to reach political reality.

The judge is an envoy of the community of law; he is commissioned by it and empowered by it to represent the law community within the sphere of the political community. In a realm where inequality and injustice prevail, he serves to establish equality and justice.

The judge is called upon to settle legal conflicts. He is not to set up general rules for the decision of an indefinite number of future cases. The judge is no legislator. The decision of a court from which there is no appeal is the final word in a dispute, and yet the judgment is more than the solution of a particular case. What is a case before it is brought to court?

It is an aggregate of facts fixed in time and place and belonging to the reality of our daily experience. Suppose a month ago X borrowed \$400 from Y — both being residents of Boston — and as security gave him an automobile, concealing the fact that the automobile had on the previous day been left with him for repairs by its owner Z. These facts are the main elements of that piece of social reality of which the individual case consists. Y bases on these facts his suit against X for breach of contract. Thereby what really happened in the past is transformed into a legal case. The facts on which the plaintiff grounds his action are selected and ordered from a legal point of view; they are facts in issue. They have furthermore the character of alleged facts. What actually had occurred, however, were actual, not alleged, facts. In social life outside legal proceedings we experience factual events in regard to which contradictory statements may be made but which are what they are irrespective of such statements. The facts which the court must establish in order to derive legal consequences are such facts in issue as are stated by word of mouth or in writing according to the rules of legal procedure governing the case. In that the court finally establishes a fact it ceases to be a merely asserted fact. Is it then identical with the real fact as it actually occurred? In some cases, to be sure, it will not be so, for the very reason that the finding of the court will not correspond to the factual truth. But even when the finding of the court is perfectly correct, there does exist an essential difference between the legally established and the extra-legal real facts. The facts on which the final decision is founded become indisputable so far as the particular legal relation between the parties to the case is concerned. Suppose A brings a suit for damages against B on the ground that B in fulfillment of his contractual obligation has delivered spoiled corn to him. The plaintiff has failed to prove that the corn was in bad condition at the time when the defendant made delivery under the terms of the contract, and the court therefore dismisses the suit. Between A and B it has now been settled once and for all that the corn was in good condition when the risk of loss passed to A. In the world which

we experience in daily life there are no social facts established once and for all and indisputable for all of us, or even for some of us.

Uncertainty and lack of clarity are essential characteristics of everyday life. We live in a world of ever fluctuating valuations and viewpoints in regard to almost everything that we encounter, in a world where advertising, propaganda, rumor, distort the truth with impunity. In order to obtain finality of any sort a great step must be taken out of the sphere of everyday life. There are various attainable degrees of clarity. The experience of a great passion, the confrontation with a grave conflict of duties, the first experience of scientific thought, all these give insights which, if their true meaning has been realized, will open up regions of certainty, unattainable in the naïve course of life under the sway of daily routine. One of the paths leading out of the world of inadequate understanding of the values that make life ultimately worth living, toward a region in which conduct receives rational guidance, is the path of law.

Thus far we have considered merely the factual side of legal proceedings. The settlement of facts by the court, however, represents only the first step in the fulfillment of the judicial task which is to effect a final solution of the *legal* problems involved. Until the decision has been handed down the legal situation at issue remains debatable. A doubt has always subsisted as to the legal relation between the parties even though it becomes acute only with the inception of the controversy. Suppose X five years ago bought a house from Y, having complied with all the formalities required by law for conveyance of real property. X, who has occupied the house since the time of purchase, regards himself as owner and is so regarded by his neighbors. X's generally accepted ownership of the house is a fact belonging to the social reality in which X and the others live. Generally accepted ownership is not, however, identical with ownership according to law. Everyday life is as a rule quite satisfied with ownership of the first type, i.e., apparent ownership, evidenced by possession. In a world lacking certainty in regard to social

facts, there is no place for ownership in the strict legal sense. The latter does not exist before the court has spoken. Until then nobody is more than a probable owner, since the possibility ever exists that his title may later be contested in a lawsuit which may be decided against him. Such uncertainty inherent in every legal interest is the price that law must pay for access to the social world in which everyday life takes its naïve course. Were this otherwise, all legal facts would be a foreign body in the social world. The idea of a law claiming absolute clarity and certainty in every case — before the judge has spoken — lacks reality in that it is at variance with the essentially fluctuating character of life as lived in the sphere of the average man who goes to the movies, reads newspapers, and does his daily work as a policeman, bus driver, clerk, etc.

It is the judge who terminates the condition of legal uncertainty and creates certainty by his decision, i.e., certainty for this particular legal dispute. It is obvious that in every case something new is created by the court's decision. The general idea, however, that guides the judge in rendering judgment is that he should give an authoritative statement of what the law is: what is has been from the beginning in this particular case.

It is not the verdict of the jury that makes the murderer guilty but the murder itself. There remains an essential difference between the status of a murderer before and after he has been found guilty of murder. The verdict lifts the set of relevant facts into a new region in which they assume a quality of certainty wholly foreign to social life outside legal proceedings. The pre-legal case loses its individual features which constitute it as an aggregate of unique, never-recurring facts. Everything not legally relevant is pushed aside in court. The relevant residue is transformed into a legal configuration which by virtue of its juridical structure automatically becomes a link in a chain of similar cases. Of this the judge is aware in rendering his decision. His glance runs back in retrospect over previous decisions in related circumstances.

No mere question of judicial routine is concerned here.

The case at hand is seen from the viewpoint of possible recurrence. The point is not that today the judge should reach this particular decision, but rather that he would always reach the same decision. The judgment is a decision once and for all, not only in the sense that it is the final word in this individual case; it is also a decision once and for all in the farther-reaching sense that whenever in any future legal dispute based upon legally equivalent facts the same legal issue arises it is to be decided in the same way. The decision handed down today theoretically covers all future cases in which the same legal problem is involved.

The judge renders his judgment in the conviction that it gives the law in such a case for everyone who knows what the law is and for all times. The judge is merely drawing an inference from this line of thought when he ascribes to a previous judge the same ability correctly to interpret the law. Such is the inner sense of the doctrine *stare decisis*, which for its part is based on the principle of uniformity in the law. This doctrine has materialized in very different ways and degrees in legal history, but no legal order can exist that would renounce the idea of uniformity. The finality of the judicial settlement of a controversy is manifested in yet another respect. Every question of law must be answered by the court with a definite *yes* or *no*. In a particular action a number of questions may be involved, of which some are to be answered in the affirmative and some in the negative; it may happen also that the plaintiff claims a thousand and is awarded a hundred; it is furthermore possible that the decision is conditional, as a decree of a court of equity often has been — all of this does not alter the fact that there are no final decisions midway between *yes* and *no*. Compromises may exist quantitatively speaking, but not qualitatively.

Thereby is manifested a basic attitude of law. All legal rules of conduct operate at the two poles of the lawful and the unlawful. *Tertium non datur*.

Social life outside the sphere of law knows little of this excluded mean. It is characteristic of our daily existence that we handle the situations that arise in a practical manner,

which usually means by way of compromise. Political decisions in particular are more often than not of that sort.

The man of politics is constantly concerned with changing circumstances in the unstatic political world. The man with a legal mind is not likely to make the best statesman. The handling of a delicate political situation requires a special feeling for nuances and for the individual features of the case. Diplomacy seems to mean precisely the ability to dispose of a situation without saying a clear *yes* or *no*. True statesmanship is characterized by a flexibility of mind that is incompatible with the functions of a judge. The judge is no actor on the political scene, nor is he a figure on the stage of daily life. That in a dispute between me and Mr. X a certain Mr. Y who has happened to be appointed judge shall possess the authority of rendering an irrevocable decision of the controversy is an absurd idea. The judge as judge speaks to us from another region than he inhabits when as Mr. Y he eats his lunch. For the same reason it is utterly misleading to say that nine old men having such and such names possess the power to declare a political measure of Congress and the President of the United States unconstitutional.

He who is to pronounce upon the law must through reflection and study disengage himself from the domain of everyday life and leave the prejudices of daily life behind him. Not the individual Y renders a decision, but the community of law using Y as its mouthpiece. It is not otherwise than when a great actor portrays Hamlet and enters the consciousness of his audience only as an incorporation of Shakespeare's idea. What the actor is in his private life is no concern of the audience and may safely be left to the curiosity of certain magazines.

Like all truly productive work, the judge's function is a task which will never be fulfilled with perfection. There are no perfect judges. What matters is that at a time when more perhaps than in other periods of history good judges are needed the consciousness of what constitutes a true judge should be kept alive undimmed. This, unfortunately, is too often not the case. There is a tendency noticeable in our days

to stress the personal aspects of birth, education, environment, and the resulting prejudices of judges, and thereby to concentrate attention upon precisely such characteristics as a true judge should put behind himself. There are respects, to be sure, in which birth, education, etc., are of significance in determining the intellectual and moral atmosphere of the bench; and, moreover, the development of jurisdiction within a certain period of legal history depends necessarily upon an understanding of the social background of the judges involved.

Granting all this, I have considered it my task here to bring into light the eternal aspect of true judgeship.

THE GHOST OF MODALITY

Hermann Weyl

HUSSERL's philosophy developed from his endeavor to lay bare the phenomenological roots of arithmetic and logic. The present occasion might therefore not be unfitting for a mathematician to survey the attempts made in symbolic logic to account for an idea of such paramount importance as that of *possibility*. Symbolic treatment is neutral to philosophical interpretation; there is no reason why it should remain the monopoly of the positivistic school. So thought O. Becker when he first attacked our question by combining logical calculus with phenomenology.¹ My conjuration of the evasive ghost of modality will follow a somewhat different plan.

I. THE FIRM GROUND OF CLASSICAL LOGIC

The classical logic of propositions as formalized by G. Frege, and later by Russell and Whitehead in the *Principia Mathematica*, is based on the assumption that a proposition puts a question to some realm of reality whose facts answer with a clear-cut yes or no, according to which the proposition is either true or false. Up to the time of the *Principia Mathematica* everybody believed, or at least hoped, that mathematical propositions were of this nature, leaving no room for indeterminacies expressed by the modal words "possible," "may be," and the like.

A proposition then is capable of only two "truth values," 1 (yes or true), and 0 (no, or false). The meaning of \sim (not), \cup (or), \cap (and), \rightarrow (if, then), is defined by the following "matrices" which assign one of the truth values 0, 1 to the propositions

$$(1) \quad \sim a, \quad a \cup b, \quad a \cap b, \quad a \rightarrow b$$

¹ Oskar Becker, "Zur Logik der Modalitäten," *Jahrbuch für Philosophie und phänomenologische Forschung*, XI (1930), 397.

whenever the truth values of the arbitrary propositions a, b are known:

(2)	$\begin{array}{c c} a & \sim a \\ \hline 1 & 0 \\ 0 & 1 \end{array}$ <p style="text-align: center;">negation</p>	$\begin{array}{c cc} a & b & \\ \hline 1 & 1 & 0 \\ 0 & 1 & 0 \end{array}$ <p style="text-align: center;">$a \cup b$ disjunction</p>	$\begin{array}{ c c } \hline 1 & 0 \\ \hline 0 & 0 \\ \hline \end{array}$ <p style="text-align: center;">$a \cap b$ conjunction</p>	$\begin{array}{ c c } \hline 1 & 0 \\ \hline 1 & 1 \\ \hline \end{array}$ <p style="text-align: center;">$a \rightarrow b$ implication</p>
-----	--	---	--	---

The peculiar importance of \rightarrow lies in the following fact, which we call the *scheme of inference*:

(F) *If the propositions a and $a \rightarrow b$ hold, then b holds.*

The unary operation \sim and the binary operations \cup, \cap, \rightarrow are termed elementary logical operations for the reason that the truth values of (1) depend only on the truth values of the arguments a and b . We could save two of the binary operations because they are expressible in terms of the third one and negation.

The following fundamental combinations are true whatever the truth values of the arguments a, b, c may be:

TABLE CT²

I (Implication)

- 1) $a \rightarrow (b \rightarrow a)$.
- 2) $(a \rightarrow (a \rightarrow b)) \rightarrow (a \rightarrow b)$.
- 3) $(a \rightarrow b) \rightarrow ((b \rightarrow c) \rightarrow (a \rightarrow c))$.

II (Negation)

- 1) $(a \rightarrow b) \rightarrow (\sim b \rightarrow \sim a)$.
- 2) $a \rightarrow \sim \sim a$.
- 3) $\sim \sim a \rightarrow a$.

III (Disjunction)

- 1) $a \rightarrow \cdot a \cup b$.
- 2) $b \rightarrow \cdot a \cup b$.
- 3) $(a \rightarrow c) \rightarrow ((b \rightarrow c) \rightarrow (a \cup b \cdot \rightarrow c))$.

² This table is copied from D. Hilbert and P. Bernays, *Grundlagen der Mathematik*, I (Berlin, 1934), 66.

IV (Conjunction)

- 1) $a \wedge b \cdot \rightarrow a.$
- 2) $a \wedge b \cdot \rightarrow b.$
- 3) $(a \rightarrow b) \rightarrow ((a \rightarrow c) \rightarrow (a \rightarrow \cdot b \wedge c)).$

I and II may be looked upon as the axioms for implication and negation, while III and IV, as it were, define \cup and \cap in terms of them.

Following von Neumann,³ we avoid the introduction of propositional variables and an attending rule of substitution. A formula like I, 1) is rather meant to convey this communication: If you are given two propositions a and b , then you may be sure that the proposition $a \rightarrow (b \rightarrow a)$ is true (without inquiring into the truth of a and b). According to Hilbert's convention, German letters serve throughout as "communicative signs." Without being objects of the theory itself, they are used for the short and distinct communication of facts or directions, mostly of hypothetic generality.⁴ In a completely formalized system, propositions will be replaced by *formulas*, and an exact description of what a formula is will be given. Formulas are sequences of certain symbols among which \sim , \cup , \cap , \rightarrow occur, and according to the description, (1) will be formulas if a and b are. Formulas are *proved* according to two kinds of rules working together: an *axiom* is established by means of one of the axiomatic rules; a formula is derived from two already proved formulas by means of the rule of inference (F). Our Table CT consists of axiomatic rules. The rule I, 1), e.g., says: Take a formula a and a formula b and combine them into $a \rightarrow (b \rightarrow a)$, which thereby is established as a proved formula (axiom). The rule of inference becomes operative if one has two formulas a and b and if a and $a \rightarrow b$ were proved before; then it authorizes one to put down b as a proved formula. In any concrete theoretic discipline the logical axioms I–IV will constitute only a part, presumably the most trivial part, of the whole axiomatic system. In this game of constructing valid formulas the meaning of the

³ *Mathematische Zeitschrift*, xxvi (1927), 1.

⁴ A very lucid and detailed exposition of Hilbert's fundamental ideas is given in Hilbert-Bernays, *Grundlagen der Mathematik*, I and II (Berlin, 1934 and 1939).

formulas does not matter. One has to distinguish clearly between the symbolic formulas, which are meaningless in themselves, and the rules of procedure which tell us how to deal with the symbolic material and whose meaning must be understood by whoever applies them. In a certain well-defined sense Table CT is complete.

Perhaps Russell was unfortunate and invited misunderstandings by calling the operator \rightarrow implication. The implication expressed in the first antecedent of the syllogism:

$$\begin{array}{l} \text{All men are mortal} \\ \text{Socrates is a man} \\ \hline \text{Socrates is mortal} \end{array}$$

states that

$$x \text{ being man} \rightarrow x \text{ being mortal}$$

holds good for *all* individuals x . We are here concerned with propositional functions $\mathfrak{A}(x)$ or predicates referring to an arbitrary element x in a certain "field" or "space" ω of individuals or "points." For instance, x may range over all integers or over all points of a geometric space. If we choose as our space the phase space of a physical system, then the argument x indicates any phase or state of that system. Complete knowledge of a point x consists in knowing its position; any sort of incomplete knowledge, in knowing that it lies in a certain region a of the space ω . The regions or "sets" a thus correspond to the possible predicates $\mathfrak{A}(x)$ concerning a variable point x in ω ; a is the *extension* of $\mathfrak{A}(x)$ encompassing all points x for which $\mathfrak{A}(x)$ holds. The logical operators \sim , \cup , \cap , \rightarrow apply to the propositional functions and can be interpreted as operators working on the corresponding sets; the first three are then called complement, join (or union), and meet (or intersection), respectively. $a \rightarrow \beta$ is the join of β and the complement of a . Not this operation, but rather the relation

$$a \subset \beta, a \text{ is part of } \beta,$$

deserves the name of implication. The rule of inference (F) reads here:

(F) If a point p lies in a and in $a \rightarrow \beta$, then p lies in β ,

while the *syllogism* says:

(S) If p lies in a and a is a part of β , then p lies in β .

The link is provided by the fact:

(\bar{F}) $a \subset \beta$ states the set $a \rightarrow \beta$ to be the whole space ω .

(F) gives the most complete answer to the question: how much more must I know about a point p in a so as to be sure of its lying in β ? Indeed $a \rightarrow \beta$ is the *largest* set γ whose common part with a is contained in β ; i.e., any such region γ is contained in $a \rightarrow \beta$.

So much about the connection between the *operator* \rightarrow and the *relation* \subset . The calculus of subsets of a given space ω satisfies the axioms of Table CT in the sense that each formula of the table represents the whole space ω whatever the subsets a, b, c may be. For many purposes it is more convenient to put down the axioms of sets in terms of the operations \sim, \cup, \cap . The axioms then deal with a class of objects called sets, two special sets (the "empty set" o , and the "total space" ω) and the three operations \sim, \cup, \cap . The sign $=$ designates identity. The arrangement of our Table CS exhibits an inherent dualism according to which the axioms on the right-hand side follow from those on the left, and vice versa, by applying the involution \sim .

TABLE CS

$\sim \sim a = a.$	
$\sim o = \omega.$	$\sim \omega = o.$
$\sim (a \cap \beta) = (\sim a) \cup (\sim \beta).$	$\sim (a \cup \beta) = (\sim a) \cap (\sim \beta).$
$a \cup o = a.$	$a \cap \omega = a.$
$a \cap o = o.$	$a \cup \omega = \omega.$
$a \cup (\sim a) = \omega.$	$a \cap (\sim a) = o.$
$a \cap \beta = \beta \cap a.$	$a \cup \beta = \beta \cup a.$
$(a \cap \beta) \cap \gamma = a \cap (\beta \cap \gamma).$	$(a \cup \beta) \cup \gamma = a \cup (\beta \cup \gamma).$
$a \cap (\beta \cup \gamma) =$	$a \cup (\beta \cap \gamma) =$
$(a \cap \beta) \cup (a \cap \gamma).$	$(a \cup \beta) \cap (a \cup \gamma).$

These axioms are true for any sets a, β, γ . If one wishes to interpret $=$ not as logical identity but as a material relation among sets which enters into the axioms on the same level

with \sim, \cap, \cup , one will have to add the axioms expressing $=$ to be reflexive, symmetric, and transitive, and furthermore that any sets $\alpha, \alpha', \beta, \beta'$ for which $\alpha = \alpha', \beta = \beta'$ also satisfy the equations

$$\sim \alpha = \sim \alpha', \quad \alpha \cap \beta = \alpha' \cap \beta', \quad \alpha \cup \beta = \alpha' \cup \beta'.$$

It would not be amiss to introduce $\alpha \subset \beta$ (α part of β) as a fundamental relation beside $=$, but this \subset could also be defined by either of the equations

$$(3) \quad \alpha \cap \beta = \alpha \quad \text{or} \quad \alpha \cup \beta = \beta.$$

Their equivalence follows from the axioms CS. So does the fact that the relation $\alpha \subset \beta$ defined by (3) obeys the following laws:

$$\alpha \subset \alpha. \quad (\alpha \cap \beta) \subset \alpha. \quad \alpha \subset (\alpha \cup \beta). \\ \text{If } \alpha \subset \beta, \beta \subset \gamma, \text{ then } \alpha \subset \gamma.$$

So far the axioms deal with but one class of objects, namely sets.⁵ Points and their relationship to sets could conveniently be introduced by expressing the fact that a point x lies or does not lie in a set ξ as

$$(4) \quad (\xi; x) = 1 \quad \text{or} \quad (\xi; x) = 0$$

respectively. We shall then have certain axioms concerning the universal function $(\xi; x)$ which is capable of the two truth values 1 and 0 only, and whose arguments ξ and x range over sets and points respectively. E.g., the equations

$$(o; p) = 0, \quad (\omega; p) = 1$$

⁵ If one introduces $\alpha + \beta$ as the remaining set after taking $\alpha \cap \beta$ away from $\alpha \cup \beta$, and $\alpha \cdot \beta$ as the intersection $\alpha \cap \beta$, one has to do with a *ring* in the ordinary algebraic sense (Boolean algebra) whose every element α satisfies the conditions $\alpha \cdot \alpha = \alpha, \alpha + \alpha = 0$. Cf. B. A. Bernstein, *Transactions of the American Mathematical Society*, xxvi (1924), 171. Our system of axioms is far from characterizing its objects as (all) sets in a certain point space. How far is revealed by M. H. Stone's thorough investigation of Boolean algebras in *Transactions of the American Mathematical Society*, xl (1936), 37-111. General axiomatic investigations of such appallingly "existential" nature have hardly any bearing upon the fundamental epistemological issues. In mathematics we must suffer them; for at least until the time when the question of the foundations of mathematics shall be definitely settled — if that time ever comes — nothing but arbitrary dictatorial commands could draw the line between sound and unsound mathematical activities — and this price is too high in science and art, no less than in politics.

are valid for any point p . The most important feature of this calculus is that

$$(\sim a; p), (a \wedge \beta; p) \text{ and } (a \vee \beta; p)$$

are uniquely determined by the values $(a; p)$ and $(\beta; p)$, namely, according to the tables (2) for \sim , \wedge , \vee .

One can pass from the predicates and sets with one argument to two or more arguments (relations) by the standard device of forming (ordered) pairs, triples, and so on. If the points x, x' vary over spaces ω, ω' respectively, then the pair (x, x') ranges over the so-called product-space $\omega \times \omega'$.

II. THE GHOST'S DIFFUSE APPARITION

The first serious attempt to reopen the way to a logic of modality which had been barred by the *Principia Mathematica* was made by C. I. Lewis's system of "strict implication."⁶ Lewis missed in Russell's "material implication" \rightarrow the binding moment of valid inference. For Russell the statement

$$(\text{Caesar is alive}) \rightarrow (\text{the moon is made of green cheese})$$

holds good. Says Lewis: "But to suppose it false that Caesar died would not bind one to suppose the moon made of green cheese." Maybe, but there is certainly nothing wrong in introducing the elementary logical operator \rightarrow by (2) and in pointing out the fundamental fact (F). Moreover, implication in the traditional sense of the syllogism means the relation $a \subset \beta$ among predicates or sets a, β , and I see no ground on which to refute the analysis of \subset in terms of \rightarrow and "all" as stated under (\bar{F}) — whatever name you give to the set operator \rightarrow .

I quote two other criticisms leveled by Lewis against \rightarrow . He finds this implication insufficient to support an indirect proof, for "a hypothesis whose truth is problematic has logical consequences which are independent of its truth or falsity." And he comes to the conclusion: "Not only does the calculus

⁶ See now C. I. Lewis and C. H. Langford, *Symbolic Logic* (New York, 1932). Aristotle's logic deals in detail with the oblique modes. A predecessor of C. I. Lewis is Hugh MacColl in his *Symbolic Logic and Its Applications* (London, 1906).

of [material] implication contain false theorems, but all its theorems are not proved. For the theorems are implied by the postulates in the sense of 'implies' which the system uses. . . . The assumptions, e.g., of Principia Mathematica, imply the theorems in the same sense that a false proposition implies anything." I believe that this argument has lost all power by the clear distinction between the formulas of the system in which the symbol \rightarrow occurs and the rules of procedure including the rule of inference (F) according to which the game of deduction is played. "Valid inference" is established by my acting upon the formulas according to rules which I understand how to apply; while \rightarrow is part of the meaningless formulas. Thus Hilbert's distinction between mathematics and metamathematics seems to contain a more complete and radical formulation of what Lewis was aiming at by opposing strict to material implication.

Lewis himself holds that the true or strict implication expresses the *necessity* of $a \rightarrow b$; and thereby he resorts to the correlative modal ideas of necessity and impossibility. (Impossibility of a is equivalent to necessity of $\sim a$.) In the light of our above remark, this necessity — a word wrapped in a shroud of ambiguities and doubts — could be interpreted as *deducibility*: When I put the sign of assertion \vdash in front of a formula a I want to convey thereby the historical fact that *I have succeeded* in deriving this formula a in a game played according to the rules. Yet this assertion or necessity is relative to the axioms from which the formula has been derived. Within mathematics itself we can thus talk of several degrees of mathematical necessity, according to the axioms which we admit, starting with the elementary logical axioms CT ("analytic" necessity) and then adding one after the other the transcendental logical, the arithmetical, and finally the set-theoretic axioms. Outside the mathematical sphere, this list could be prolonged. Take, for instance, the following statements about a train leaving Seattle, Wash., at 10:15 P.M. (Pacific Time), January 18, 1940:

- (1) It will arrive and will not arrive in Chicago at a certain time.
- (2) It will arrive in Chicago the same day at 9:15 P.M. (Pacific Time).

- (3) It will arrive there 0.002 seconds after it leaves Seattle.
 (4) It will arrive there at 11:45 P.M. (Pacific Time) of the same day.

The first is logically impossible. The second is *a priori* or *wesensgesetzlich* impossible (Kant, Husserl) because it is against the nature of time that effect precedes cause. The third is physically impossible (considering the distance from Seattle to Chicago), the velocity of light being an upper limit for all speeds of propagation. Finally, the fourth is, at least at present, technically impossible.

Another point is still more important. The assertion $\vdash a$, unlike a itself, is not a formula within the system, but a meaningful statement or communication about a . In consequence of this *metabasis eis allo genos* it makes no sense to apply to $\vdash a$ the operators within the system like \sim , \cup , \cap , nor does it make sense to iterate the sign of assertion \vdash . This is at variance with Lewis's intentions: he wishes to have two operators P , N (possible, necessary) which carry a formula into a formula and combine with the other logical operators.

Hume in his analysis of causality replaced the statement that an event A is *necessarily* followed by B , involving the obscure notion of a necessity uncontrollable by experience, into the inductively verifiable statement that *when and wherever* the event A occurs, it is followed by B . Similarly, a mathematician maintaining that a number n necessarily satisfies the equation

$$n + 1 = 1 + n$$

probably wants to say simply that all numbers satisfy this equation. However there are subtle shades in the meaning of "all." One way is to look upon the last proposition as a collective statement of the infinitely many equations

$$1 + 1 = 1 + 1, 2 + 1 = 1 + 2, 3 + 1 = 1 + 3, 4 + 1 = 1 + 4, \dots$$

The intuitionistic standpoint doubts that such an "infinite logical sum" makes sense. It interprets our sentence as one of *hypothetical* generality, and one could defend the thesis that the word "necessarily" alludes to this sort of generality: *If* you are given a concrete number n , then you may be sure without

further examination that $n + 1 = 1 + n$. This is no proposition stating a fact; it tells something only if . . . , namely, if you are actually given a number. It makes bold to predict something about n before one knows what that number n will be. When one raises the problem on what ground its foresight is based, many will answer that it is based on an insight into the general nature of numbers. Whatever merits such a reference to the general nature of things may have, our viewpoint that *necessary* is a fitting word to indicate hypothetic as opposed to factual generality could be supported by the observation that one hesitates to use the word where that distinction disappears, namely in the case of a finite set given by exhibiting one of its elements after the other. I for my part can hardly discern an essential difference between the two statements: "A number which equals 1 or 3 or 5 is necessarily odd," and "One is odd and 3 is odd and 5 is odd." In what way does the inclusion of "necessarily" modify statements like "Three is (necessarily) odd," "This sheet of paper is (necessarily) white"?

Let us return to fundamentals. The basic assumption of the strict alternative of true and false, characteristic for classical logic, leaves no room for bridging the abyss by "perhaps" or "possibly." However, the major part of statements in our everyday life which have a vital meaning for us and our communicants are not of this rigorous nature. A given hue may be *more or less* gray instead of pure black or pure white. We may find it too arbitrary or even impossible to set exact boundaries in a continuum. By far the most important examples are provided by statements about the *future*. A question of this sort, say: "Will a large-scale European war break out within the next year?" does not point to a verification by any reality, and is nevertheless discussed and judged right now, under such aspects as possible, likely, inevitable, rather than true or false.^{6a} The statement will be verifiable, indeed, after one year, but then in the modified temporal form: "*Did* a large-scale war break out in the past year?" We make plans by mentally pre-figuring future possibilities and basing our decisions on weighing and deliberating them. Whoever drives a car has to do

^{6a} This was written late in 1938.

this almost instinctively at every moment. We strive for certain ends, run risks, dangers hang over our heads; besides hard facts we depend on expectations which often bear the emotional accents of hope and fear. One may hesitate to speak here of knowledge and judgments, but these things have the structure of judgments and mean something vital to us. (If we are to believe pragmatism, all knowledge has only this "vital" sense by which it directs our actions.) A message, "Father passed away this morning," conveys a crushing fact; a telegram from my sister saying "We must prepare for the worst, come at once" is no less important for my actions, though it expresses only an expectation.

A plain statement, "This is so," e.g., "This table has this green color," calls for *facts* as its justification; the answer to one questioning this statement should be in principle: "Here, look!" But he who maintains that something is impossible will be asked *why*. His statement calls for *reasons*. Thus in the above example of the telegram calling me to my father's sickbed, the conclusion that his life is in danger has its antecedents, first, in the fact that he is very ill with such and such symptoms, and second, in medical experience finding its expression in a judgment of hypothetic generality: Such symptoms (frequently) indicate approaching death (the element of uncertainty being due to its inductive rather than deductive character).

In classical logic there is no doubt about the meaning of any combination of arbitrary propositions a, b, c, \dots by the operators $\sim, \cap, \cup, \rightarrow$, however complicated the structure may be, and we have a perfectly clear combinatorial criterion by which to decide whether such a combined proposition is generally (analytically) true: if its value turns out to be 1 whatever combination of values 1, 0 one assigns to the arguments a, b, c, \dots . The twilight in which the oblique modes P and N move is revealed most strikingly by the many hesitations we feel when we come to formulate the axioms governing their use. We are sure of their correlation as expressed by the double implication

$$(5) \quad \sim Pa \quad \Leftrightarrow \quad N \sim a.$$

Moreover

$$(6) \quad a \rightarrow Pa \quad \text{and} \quad Na \rightarrow a.$$

We may still agree upon the further principle

$$(7) \quad N(a \rightarrow b) \rightarrow (Na \rightarrow Nb):$$

“If a necessarily implies b and a is necessary, then b is necessary.” But doubts begin with the iterations: Is it true that

$$(8) \quad PPa \rightarrow Pa,$$

or is it even true that

$$(9) \quad Pa \rightarrow NPa?$$

The last axiom would mean that statements about possibility or impossibility are themselves not subject to the modal gradations, but are either impossible or necessary. The further one penetrates, the more one seems to move among empty shadows. The only reasonable path to follow will be to examine important “models” in which there is no doubt about the meaning of P and N and in which these operations combine freely and unambiguously with \sim , \cap , \cup and among themselves. If in several such models we encounter the same complete set of axioms, then we have reason to believe in the usefulness of a universal logic of modality. In the opposite case our hopes will be nipped in the bud. It is upon this enterprise that we now embark (Sections III–VI).

III. FIRST ATTEMPT TO STAY THE GHOST: PROBABILITY

Under the most favorable circumstances likelihood will be *measurable probability*.⁷ In a calculus of probability we therefore assign to a proposition or an “event” a a probability a which may be any real number within the limits $0 \leq a \leq 1$, rather than a truth value 0 or 1. The probability of the event “ a and b ” may have any value between 0 and $\min(a, b)$. An italic letter here indicates the probability of an event denoted by the corresponding German letter;

$$\min(a, b), \quad \max(a, b)$$

⁷ O. Becker, *loc. cit.* note 1, uses to great advantage for the purpose of modal logic the classical model of drawing balls from an urn.

are the smaller and the larger of the two numbers a and b respectively. In order to obtain a closed calculus of probability in which the values of

$$\sim a, a \wedge b, a \vee b$$

are determined by those of a and b , we agree upon these definitions in terms of probability values:

$$(10) \quad \frac{\text{Proposition} \parallel a, b \mid \sim a, a \wedge b, a \vee b}{\text{Value} \parallel a, b \mid 1 - a, \min(a, b), \max(a, b)}$$

Let $a \subset b$ indicate the relation $a \leq b$ ("b is at least as good as a"). Can this, in analogy to (\bar{F}), be expressed with the help of a certain operator \rightarrow , by stating that $a \rightarrow b$ has the value 1? One would then expect this \rightarrow to play in the calculus of probability a part similar to that played by its synonymous operator in the calculus of truth. $a \leq b$ is equivalent to

$$\min(a, b) = a \quad \text{or} \quad a - \min(a, b) = 0.$$

The left side of the last equation is indeed a "probability function," i.e., a function the value and the arguments of which range over the interval $0 \leq x \leq 1$. We therefore venture to complete our table by the convention

$$(11) \quad \frac{\text{Proposition} \parallel a \rightarrow b}{\text{Value} \parallel 1 - a + \min(a, b) = \min(1, 1 - a + b)}$$

This calculus does not necessarily require that the values range over the entire interval $0 \leq x \leq 1$. Any subset closed with respect to the replacement of a by $1 - a$ would do; for instance, the finite set

$$0, \frac{1}{n}, \frac{2}{n}, \dots, \frac{n-1}{n}, 1$$

(n a given integer 1 or 2 or 3 . . .). This is Łukasiewicz's ($n + 1$)-valued logic.⁸ For $n = 1$ we fall back upon the calculus of truth and then the definitions (10), (11) are in agreement with those given previously. $n = 2$ gives rise to a 3-valued-logic whose three values 1, $\frac{1}{2}$, 0 are conveniently interpreted as "certainly, possibly, certainly not."

⁸ *Ruch filozoficzny* (Lwów), v (1920), 169; *Comptes rend. Soc. Sc. et Lett.* Varsovie, cl. III, xxiii (1930), 51.

It is gratifying to observe that our calculus of probability satisfies all the axioms of the table CT, except I, 2), in the sense that these formulas have the value 1 whatever the values of the arguments a , b , c . Hence our model shows that axiom I, 2) is independent of the rest. By the same method of valuations one establishes independence for each of the logical axioms in that table.

It would be natural to define:

Pa has the value 1 if $a > 0$, 0 if $a = 0$;

Na has the value 1 if $a = 1$, 0 if $a < 1$.

This has the consequence that propositions of the form Pa , Na are capable of the two values 1, 0 only, and thus do not participate in the gradation of probability values: besides (8) the strong axiom (9) holds good.

Any probability function of one, two or more arguments can serve to define a corresponding elementary logical operator in the calculus of probability. The operators \sim , \cap , \cup are only a few picked at random from an infinite host of operators which may claim equal rights. Viewed from this angle our calculus shows little semblance to logic; rather it appears as a special chapter in the theory of real functions. One example is important enough to deserve special mention: the combinations $a \wedge b$, $a \vee b$ with the values $a \cdot b$, $a + b - a \cdot b$ respectively. These are the probabilities of "a and b", "a or b" in the case of *statistically independent* events a , b .

We are thus reminded of the fact that the probabilities of "a and b" and of "a or b" are actually not determined by the probabilities of a and b . This whole calculus is therefore of very little extrinsic significance, in spite of its attractive intrinsic mathematical features.⁹

IV. THE SECOND ATTEMPT: TOPOLOGY AND THE MORE OR LESS

Because of the inevitable vagueness of localization in a continuum, the logic of predicates or sets, of which the reader was

⁹ Reichenbach, *Sitzungsber. Preuss. Ak. Wissensch.* (1932), p. 476, has tried to remedy this deficiency of our calculus by introducing an index of correlation as third argument.

reminded in Section I, is of doubtful application if the space ω is a continuum, in particular for the phase space of a physical system. Aristotle in discussing Zeno's paradox remarks: "The movement does not move by counting. . . . By dividing the continuous line into two halves one takes the one point for two; one makes it both beginning and end. But if one divides in this manner, neither the line nor the motion are any longer continuous," and he concludes significantly: "In the continuous there is indeed an unlimited number of halves, but only potentially, not actually."

Nevertheless, set-theoretic topology has been able, by associating with each point its "neighborhoods," to deal in a crude manner with that structure of a continuum by which it defies isolation of an individual point. For instance, in the case of a plane, a neighborhood of the point x is any circle around the center x . Thus x is an *inner point* of a given set a if all points of a certain neighborhood of x belong to a ; x is a *limit point* of a if each neighborhood of x contains points of a . Following Aristotle's suggestion that for a point on the common boundary of a and its complement $\sim a$, uncertainty prevails as to whether it belongs to a or $\sim a$, we venture this terminology:¹⁰ A point x lies *certainly* in the set a , if x is an inner point of a , x lies *possibly* in a , if it is a limit point of a . We thus come to introduce two operators P and N for sets: Pa is the closure consisting of all limit points of a while Na is the core consisting of all inner points of a . We then have, as it should be [cf. (5), (6)]:

$$\begin{aligned} \sim Pa &= N \sim a, \\ a \subset Pa &\text{ and } Na \subset a. \end{aligned}$$

Axiom (8) in the form $PPa \subset Pa$ is true, and hence

$$PPa = Pa, \quad Na = NNa$$

(P and N are "idempotent" operators). But (9), which was correct in Section III, is now decidedly wrong.

¹⁰ See Tang Tsao-Chen, *Bulletin American Mathematical Society*, XLIV (1938), 737.

Here are some further facts concerning our “modal” operators P and N :

- i. If $\alpha \subset \beta$, then $P\alpha \subset P\beta$, $N\alpha \subset N\beta$.
- ii. $N(\alpha \cap \beta) = (N\alpha \cap N\beta)$. | $P(\alpha \cup \beta) = (P\alpha \cup P\beta)$.
- iii. $(N\alpha \cup N\beta) \subset N(\alpha \cup \beta)$. | $(P\alpha \cap P\beta) \subset P(\alpha \cap \beta)$.
- iv. $N(\alpha \cup \beta) \subset (P\alpha \cup N\beta)$.

A set α is said to be *open* or *closed* according to whether

$$\alpha = N\alpha \quad \text{or} \quad \alpha = P\alpha.$$

The sets $\alpha \cup \beta$, $\alpha \cap \beta$ are open or closed sets respectively if α and β are such.

If one designates the set $(\sim \alpha) \cup \beta$ by $\alpha \rightarrow \beta$ as in Section I, then fact iv above is equivalent to formula (7):

$$N(\alpha \rightarrow \beta) \subset (N\alpha \rightarrow N\beta).$$

All this looks promising enough. However, before it is too late I feel obliged to dampen our growing enthusiasm by three remarks: (1) P and N are here operators working on sets or predicates rather than on propositions. (2) They presume a *topological space*, and hence are of much more limited application than the general theory of sets. This tends to indicate that the idea of possibility is much more specific and deeper tinged by the material in which it works than the ideas *not*, *and*, *or*. The following considerations in Sections v and vi will go far in confirming such a conviction. (3) Our model lends no support to Lewis's theory of strict implication; for there is no difference between the two statements “ $\alpha \rightarrow \beta$ is the whole space,” “ $N(\alpha \rightarrow \beta)$ is the whole space”; they both state α to be part of β .

Various devices have been proposed to reform the set-theoretic analysis of the continuum, or, what is the same, the logic of classical physics, so as to avoid obviously meaningless questions as, for example, whether in a given case a measurable quantity with a continuous range has a rational or irrational value. One escape suggested by the requirements of statistical mechanics has been to identify sets which differ by a set of Lebesgue measure zero. Let me point out here another such

attempt that is more in line with Aristotle's thoughts. We admit only *open* sets a . But then the complement $\sim a$ is not open, and we therefore replace it by its open core $N\sim a$.¹¹ This has the embarrassing effect that the join of the two sets falls short of the whole space by their common boundary. This defect could be repaired by considering as the join of a and β the closure $P(a \cup \beta)$, or rather, since we want to have an open set again, $NP(a \cup \beta)$. Any open set a is part of $NP a$, the core of its closure. NP is an idempotent operator. We are thus led to admit only such sets, called $*$ sets, for which $NP a = a$, and to adopt the following modified definitions of *not*, *and*, or:

$$\underset{*}{\sim} a = N(\sim a), \quad a \underset{*}{\wedge} \beta = a \wedge \beta, \quad a \underset{*}{\vee} \beta = NP(a \cup \beta).$$

These operators $\underset{*}{\sim}$, $\underset{*}{\wedge}$, $\underset{*}{\vee}$ carry $*$ sets into $*$ sets, and in consequence of the facts about P and N enumerated before, all the axioms of Table CS are fulfilled by the modified operators. But all $*$ sets being open, the distinction between "it is so" and "it is necessarily so," namely, between a and Na , has disappeared.

Predicates or properties of a point in a continuum are often of the "*more or less*" type, so that the question is not whether an individual has this property or not, but *to what degree*. Assuming the degree to be measurable, the predicate is then described by a function $f(x)$ whose argument x varies over the points of the given space while the value f is a real number in the interval $0 \leq f \leq 1$. The predicates of the former type are those for which the function takes on no other values than 0 and 1 [characteristic function $(a; x)$ of a set a]. A natural way to take into account the nature of a continuum which defies "chopping off its parts from one another, as it were, with a hatchet" (Anaxagoras) would be by limiting oneself to continuous functions $f(x)$ throughout. We come here upon a functional calculus uniting the features of the calculus of

¹¹ So far in agreement with M. H. Stone, *Časopis pro pěst. mat. a fys.*, LXVII (1937-38), 1-25, and A. Tarski, *Fundamenta mathematicae*, XXXI (1938), 103-134. If one stops here, one obtains a calculus of open sets which coincides with Heyting's system of intuitionistic logic (cf. Section VII). But the simple remark that follows and restores the classical axioms CS casts a deep shadow on this interpretation of Heyting's system in terms of topology.

probability and of sets. The domain of continuous functions $f(x)$ is closed with respect to the fundamental operations

$$\begin{aligned}\sim f(x) &= 1 - f(x), & f(x) \wedge g(x) &= \min (f(x), g(x)), \\ f(x) \vee g(x) &= \max (f(x), g(x)).\end{aligned}$$

V. DIGGING DEEPER FOR THE MOLE: INTUITIONISM

We believe this to be a fair description of a continuum: (1) It is divisible into parts; (2) but the parts are not “chopped off from one another with a hatchet,” localization and boundaries are necessarily vague; (3) however, the mathematician, wishing to be prepared for any emergency, imagines that the fineness and accuracy of the partition can be driven beyond any degree already reached.

The combinatorial schemes of topology correspond to this conception of the continuum. The schemes as such contain nothing vague; the uncertainties come in when one applies the scheme to an actual continuum; in progressing to more and more refined divisions according to the scheme, the boundaries of the previous divisions have to be drawn with an ever sharper pencil.

Much more than classical mathematics is intuitional mathematics capable of accounting for this nature of the continuum. According to Brouwer the alternative α and $\sim \alpha$ of classical logic breaks down in mathematics as soon as one takes the first step beyond arithmetical statements concerning individual numbers, namely, as soon as the ideas “there is” and “any” creep in. Brouwer thus denies the table CT as a sound basis even for the propositions of mathematics. A question of the form “Is there an integer x of the well defined property \mathfrak{A} , or has any integer the property non- \mathfrak{A} ?” is not such as to be necessarily answerable by yes or no. Assertion of the existence statement requires *actual construction* of a concrete integer with the property \mathfrak{A} , while the meaning of the other alternative is a *hypothetical* proposition, saying something only in case that . . . : “In case you come across a certain number (whatever this number may be) you may be sure it has the property non- \mathfrak{A} .” If we search for sheer and honest truth in mathe-

matics, the intuitionistic thesis is irrefutable. However, if Brouwer in this sense challenges the principle of excluded middle, the defect can certainly not be repaired by the primitive expedient of inserting a "possible, perhaps" between the yes and no. The situation is one of essentially more delicate nature.

Hilbert made the heroic attempt to save classical mathematics from Brouwer's onslaught by a complete formalization of mathematics. The mathematical propositions are changed into formulas meaningless in themselves, and the way in which a mathematical proof consisting of such formulas proceeds is described without reference to their meaning. This puts Hilbert beyond the reach of the attack by Brouwer, who denied an intuitively verifiable meaning to most of the usual mathematical propositions: Hilbert relinquishes that pretension of meaning altogether, and what he tries to establish by intuitive reasoning is not the truth of the formulas, but the *consistency* of the whole system: the game when played according to the rules will never lead to the formula $\sim (0 = 0)$.

Hilbert's formulas¹² consist of four kinds of symbols: constants (like 0, 1), variables (x, y, \dots), operators (like the logical operators \sim, \cap, \cup or the arithmetical operators $+, \times$), quantifiers. The most important quantifiers are "any" (x) and "there is" ($\exists x$). The formulas $(x)\mathfrak{A}(x)$, $(\exists x)\mathfrak{A}(x)$ correspond to the propositions " $\mathfrak{A}(x)$ holds for all x ," and "There is an x for which $\mathfrak{A}(x)$ holds." The quantifiers bear a variable x as index, and "bind" that variable in the whole following formula $\mathfrak{A}(x)$. An exact description is given of the way in which the symbols combine to form formulas. A formula without free variables may be called a closed formula; in our mathematical game they correspond roughly to individuals or individual propositions. Let \mathfrak{b} be a closed formula and \mathfrak{A} a formula which contains only one free variable x . We denote by $\mathfrak{A}(\mathfrak{b})$ the closed formula arising from \mathfrak{A} if one replaces the variable x wherever it occurs *free*, by the whole expression \mathfrak{b} . Hilbert and von Neumann *maintain* the table CT in the sense

¹² My description is based on von Neumann's modified system, *loc. cit.* note 3. See now Hilbert-Bernays, *loc. cit.* note 4.

that its rules furnish axioms if one takes for a, b, c any closed formulas. About the quantifier (x) they first stipulate the rule

$$(12) \quad (x)\mathfrak{A} \rightarrow \mathfrak{A}(b)$$

with the notation just explained. In order to make possible conclusions resulting in a "general" statement $(x)\mathfrak{A}$, Hilbert is bold enough to combine the ideas of "any" and "there is" with Zermelo's axiom of choice by inventing a quantifier ρ_x , called representative. The idea is that a predicate \mathfrak{A} will hold for any individual x if it holds for the representative $\rho_x\mathfrak{A}$ of \mathfrak{A} . Or, translated into an axiomatic rule with the same notations as before:

$$(13) \quad \mathfrak{A}(\rho_x\mathfrak{A}) \rightarrow (x)\mathfrak{A}.$$

Similarly for existence. The syllogism (F) remains the only rule of inference.

We are now very far from claiming the rules in Table CT as universal truths which have a crystal-clear significance and are indubitably true irrespective of the propositions a, b, c and of the field of reality with which they deal. But we incorporate them, together with the "transcendental" logical axioms (12), (13), as an intrinsic part into the symbolic edifice of mathematics. As soon as we argue "metamathematically" about the consistency of the whole system, our reasoning is not governed by any axioms but by sheer evidence.

VI. LIGHTNING IN THE CLOUDS: QUANTUM LOGIC

A calculus of probability (sets) much less artificial and arbitrary than the one discussed in Section III is *quantum logic*, which has been devised to serve the ends of modern quantum physics.¹³ As we explain it here, it is the counterpart of "classical logic" with a phase space ω consisting of a *finite* number n of points only.¹⁴ Our space is now an n -dimensional *Euclidean vector space* V . By a set a we now mean any *linear sub-*

¹³ G. Birkhoff and J. von Neumann, *Annals of Mathematics*, xxxvii (1936), 823.

¹⁴ In truth, we should have substituted unitary geometry with complex coördinates for the ordinary orthogonal Euclidean geometry; but the simpler model is good enough for our purposes.

space of V ; in particular, o is the zero space made up by the vector o alone, and ω the full space V . $\sim a$ is defined as the subspace perpendicular to a , $a \cap \beta$ is the intersection of a and β , while $a \cup \beta$ denotes the smallest linear subspace containing both a and β , namely the subspace of all vectors of the form $x + y$ (x in a , y in β). Then all the axioms CS are satisfied with the exception of the last two, which are to be replaced by the self-dual Dedekind axiom:

$$\text{If } \beta \subset a, \text{ then } a \cap (\beta \cup \gamma) = \beta \cup (a \cap \gamma).$$

Let us investigate what the analogue of \rightarrow is in this quantum logic. Here too, $a \subset \beta$, a is contained in β , means the same as:

$$(a \cup \beta) = \beta \quad \text{or as} \quad (a \cap \beta) = a.$$

Adopting the first description we replace it by the equivalent

$$\sim (a \cup \beta) \cup \beta = \omega.$$

Hence if we introduce the abbreviation

$$a \uparrow \beta \quad \text{for} \quad (\sim a \cap \sim \beta) \cup \beta,$$

$a \subset \beta$ asserts $a \uparrow \beta$ to be the whole space. It is also true that a vector lying in a and in $a \uparrow \beta$ will lie in β . In both these respects, (\bar{F}) and (F) , the operator \uparrow in quantum logic behaves like \rightarrow in classical logic. However, with equal right we could have adopted the second description which leads us to introduce the abbreviation $a \downarrow \beta$ for $\sim a \cup (a \cap \beta)$; and in both respects, (\bar{F}) and (F) , \downarrow is as good as \uparrow . In the classical case the two operators \uparrow , \downarrow coincide with \rightarrow , but here they are essentially different. This splitting of \rightarrow into \uparrow and \downarrow in quantum logic throws some light on our previous analysis of implication.

We now come to the probability part of quantum logic. If x is a given vector $\neq o$ and ξ a given linear subspace, we project x perpendicularly upon ξ ; the quotient of the square of the length of the projection \bar{x} by the square of the length of x itself is called the "probability $(\xi; x)$ of x satisfying ξ ." (Since this value is the same for vectors differing by a numerical factor, it is reasonable to consider the *rays* rather than the

vectors as representing the possible states of the given physical system.) Pythagoras's theorem then turns into the axiom of negation:

$$(\sim a; p) = 1 - (a; p)$$

which shows that the value of $(\sim a; p)$ is uniquely determined by $(a; p)$, namely according to the rule set down in (10). However the values of $(a \cup \beta; p)$ and $(a \cap \beta; p)$ are in no way uniquely determined by the values of $(a; p)$ and $(\beta; p)$ — and we were well aware in Section III that by enforcing the arbitrary rules (10) we sold our birthright of reality for the pottage of a nice formal game.

There is a perfectly sound definition of the multiplication of vector spaces which in quantum logic allows passing from properties to *relations* between several states of the same or different physical systems. Nevertheless the classical logic of propositional functions with its *variables* x, y, \dots and its *quantifiers* $(x), (\exists x)$ has a much greater flexibility, due to the parallelism between the operators \sim, \cap, \cup for sets and for (truth or probability) values, a feature prevailing in classical logic which breaks down completely in quantum logic.

Again we encounter in the symbolic set-up of a discipline, here quantum physics, a certain part which may justly be said to be its *logic*.¹⁵ Each field of knowledge, when it crystallizes into a formal theory, seems to carry with it its intrinsic logic which is part of the formalized symbolic system, and this logic will, generally speaking, differ in different fields. However, when in a formalized mathematical proof we check that a formula $a \rightarrow b$ is this combination of two given formulas a and b (with the intention to draw from a and $a \rightarrow b$ the inference b) we depend on sheer *evidence*. We depend on experimental evidence in quantum physics when we ask whether a physical quantity under empirically given concrete conditions takes on a certain value with such and such probability. Our symbolic structure may consist of several layers; e.g., we may want to apply to quantum physics classical mathematics in its

¹⁵ In the present case some would prefer to call it quantum *geometry*; however, there is not much use in fighting over names.

formalized form with the attending existential logic rather than intuitionistic mathematics. But the topmost layer will always open up to the light of meaning, of simple and honest truth, as revealed by evidence and experience. Pure symbolism is never closed in itself; ultimately the mind's seeing eye must come in. We can teach a man, perhaps a dog, but not a stone.

VII. SNAPSHOTS IN TWILIGHT

Up to now we have been mostly concerned with the intrinsic logic of a system. However, in Section II we mentioned another interpretation of the "oblique modes": α being a formula within the system, the assertion $\vdash \alpha$ proclaiming the "certainty" or "necessity" of α is not a formula, but the statement that I have succeeded in deriving α as the end formula in a game played according to the axioms and the rule of inference. The situation is quite similar from the intuitionistic standpoint. Kolmogoroff¹⁶ proposed to interpret an existential proposition "There is a number x of such and such kind" as the mathematical *problem* α to *construct* such a number. With the timeless problem α we confront the announcement $\vdash \alpha$ of the historical fact that I have succeeded in carrying out the desired construction.

The fact is less subjective than it appears at first sight, since anyone else to whom the construction is communicated and who understands it may also pronounce: "(Owing to Mr. Weyl's communication) I know how to construct a number such that" Yet the statement would be deprived of its personal and historical character altogether only by appending the full construction, whereby it is changed into the proposition that the number thus and thus constructed satisfies the demands. We prefer the much shorter existential statement if, as often happens, the particular construction of the number is irrelevant and hence we may forget about it. Indeed, a mathematical proof after having established the existence of a number of the desired nature, is apt to go on like this: "Let therefore a be such a number," and then to lead to a conclusion not

¹⁶ *Mathematische Zeitschrift*, xxxv (1932), 58.

involving a at all. For such purposes one has invented the phrases "one can" or "it is possible to construct" instead of the personal one "I have succeeded in constructing." This characteristic usage of the word "possible" in mathematics should not pass without notice. [In Hilbert's system it is "objectivized" as the quantifier ($\exists x$).]

In Hilbert's system the gap between the (mathematical) formulas and the metamathematical assertions of deducibility for certain formulas is unbridgeable. It makes therefore no sense to iterate the assertion \vdash or to combine it with the symbols \sim , \cap , \cup occurring within the system. Brouwer displays a more conciliatory attitude.¹⁷ Let a be the statement that all numbers have the property non- \mathfrak{A} . By constructing a number of the property \mathfrak{A} one proves the impossibility, or as Brouwer says, the absurdity, of a which we indicate by the symbol $\neg a$. In this case it makes sense to speak of the absurdity of the absurdity of a : $\neg \neg a$, which would be established by showing that the hypothesis of a number a having the property \mathfrak{A} leads to a contradiction. It seems certain that $\neg \neg a$ implies a , but the converse remains doubtful. Prompted by such arguments, Heyting¹⁸ set up a formal system of intuitionistic logic of propositions to which I am ready to consent with two reservations: (1) what constitutes absurdity of a proposition a depends on the nature of a , and I do not see how one can be sure of the meaning of $\neg a$ for any meaningful proposition a ; (2) all evidence seems to discourage the hope that we shall ever be able completely to formalize the logic of intuitive reasoning; so I question whether, or in which limited sense, completeness may be claimed for Heyting's system.

Even so, to my mind his system \mathfrak{S} stands on a much firmer ground of evidence than Lewis's logic of strict implication. It is therefore of some interest to clarify their mutual formal relationship. Let us adopt for the operator \mathcal{N} the following axioms:

- 1) $\mathcal{N}a \rightarrow a$,
- 2) $\mathcal{N}a \rightarrow \mathcal{N}\mathcal{N}a$,
- 3) $\mathcal{N}(a \rightarrow b) \rightarrow (\mathcal{N}a \rightarrow \mathcal{N}b)$

¹⁷ Cf. Bernays-Hilbert, I, 43, about the "finitistic" and "intuitionistic" standpoints.

¹⁸ *Sitzungsber. Preuss. Ak. Wissensch.* (1930), p. 42.

and add them to the table CT. In addition to the syllogism we employ as a further rule of inference one admitting passage from an already proved formula a to $\mathcal{N}a$ as a proved formula (system \mathfrak{S}). Then, as Gödel has found, one can translate Heyting's basic concepts into this symbolism so that formulas valid in \mathfrak{S} are deducible in the system \mathfrak{L} . There are even several ways of translation by which to accomplish this. But the translation seems to work only one way: $\mathfrak{S} \rightarrow \mathfrak{L}$. Hence this support lent to Lewis by intuitionism is not very strong.¹⁹

As to the question raised at the end of Section II, the scores are now decidedly in favor of a negative answer. But if we have found in our considerations ample reason for casting doubt upon a universal logic of modality, we need not deny that the word "possible," though capable of different nuances, expresses a basic and irreducible idea. In concluding, I want to point out two of its most fundamental appearances.

As we mentioned above, Aristotle, and following him Leibniz, described the continuum as the medium of possible parts where the whole precedes the parts, while in an aggregate of actual parts the parts precede the whole. The continuum of space and time is the medium of possible localizations. I have often said, and repeat it here once more, that in using the continuum or the sequence of integers we project the actually given upon the background of the *a priori* possible, upon a field of possibilities constructed according to a definite procedure but open into infinity.²⁰ I still believe this "potentiality" to be a basic issue, yet it is a specific metaphysical rather than a universal logical conception. Such ideas underlie our theoretical constructions, and we have caught glimpses of the disguise in which the idea in question enters into our actual mathematical construction.

¹⁹ K. Gödel, *Ergebnisse eines mathematischen Kolloquiums* (Wien), IV (1933), 39.

²⁰ I was bold enough to add (1925): "Wir stehen mit ihr (der mathematischen Konstruktion) genau in jenem Schnittpunkt von Gebundenheit und Freiheit, welcher das Wesen des Menschen selbst ist." Heidegger says more emphatically (*Sein und Zeit*, vol. I, 1927, p. 143): "Die Möglichkeit als Existenzial ist die ursprünglichste und letzte positive ontologische Bestimmung des Daseins." About mathematics and temporality cf. O. Becker, *op. cit.* note 1, pp. 539-547.

Potentialities of another kind are those which bear on us as historical beings at every moment of our daily lives, the dreaded or hoped for eventualities that the future has in store for us. If history ever becomes ripe for the stage of theoretic symbolic construction, it would not be surprising if in symbolical form this possibility inherent in our very existence, on which I have dwelt before in Section II, and the depth of which resounded in the last quotation from Heidegger, would play a paramount part in an intrinsic "logic of history." But the example of quantum physics should warn us against any attempt to predict *a priori* what a symbolic logic of history will look like — if its time ever comes.

One may also expect the entire situation to change if one passes from a logic of propositions to a true logic of communications. The propositions either are impersonal or involve only an ego from which they irradiate; communications play between an existential I and thou. Promises, questions, commands, will have to be treated in such a logic.

Our aim was to display relevant material. To pass and execute final judgment requires a stouter heart than that of Hamlet or a mathematician.

GRUNDLEGENDE UNTERSUCHUNGEN ZUM PHÄNOMENOLOGISCHEN URSPRUNG DER RÄUMLICHKEIT DER NATUR ¹

Edmund Husserl

DIE NACHFOLGENDEN Blätter sind unerachtet der vielen Wiederholungen und Ueberholungen jedenfalls grundlegend für eine phänomenologische *Ursprungslehre von Räumlichkeit*, von *Körperlichkeit*, von *Natur im Sinne der Naturwissenschaft* und so für eine *transzendente Theorie der naturwissenschaftlichen Erkenntnis*. Allerdings bleibt offen, ob nicht noch Ergänzungen notwendig wären.

Unterschied: die Welt in der Offenheit der Umwelt — in der gedanklich gesetzten Unendlichkeit. Sinn dieser Unendlichkeit — “Welt in der Idealität der Unendlichkeit existierend.” Was ist der Sinn dieser Existenz, der seienden unendlichen Welt? Die Offenheit als nicht vollkommen ausgedachte, vorstellig gemachte, aber implizit schon geformte Horizonthaftigkeit. Offenheit der Landschaft — Wissen, dass ich schliesslich an Deutschlands Grenzen komme — dann kommt französische, dänische, etc. Landschaft. Ich habe, was im Horizont liegt, nicht abgeschritten und kennen gelernt, aber ich weiss, Andere haben ein Stück weiter kennen gelernt, dann wieder Andere noch ein Stück — Vorstellung einer Synthese der aktuellen Erfahrungsfelder, die mittelbar herstellbar die Vorstellung Deutschland, Deutschland im Rahmen von Europa und dieses selbst ergibt, usw. — schliesslich die

¹ This manuscript was written between May 7th and 9th, 1934. Its very informality and incompleteness give a vivid impression of Husserl at work. The following descriptive comment was written on the envelope: “*Umsturz der kopernikanischen Lehre* in der gewöhnlichen weltanschaulichen Interpretation. Die Ur-Arche Erde bewegt sich nicht. Grundlegende Untersuchungen zum phänomenologischen *Ursprung der Körperlichkeit der Räumlichkeit der Natur* im ersten naturwissenschaftlichen Sinne. Alles notwendige Anfangsuntersuchungen.” The publication of the manuscript has been duly authorized.

Erde. Vorstellung der Erde als synthetische Einheit zustandekommend, analog wie in fortgesetzter und verbundener Erfahrung die einzelmenschlichen Erfahrungsfelder zur Einheit eines Erfahrungsfeldes kommen. Nur dass ich Berichte der Anderen, ihre Beschreibungen und Feststellungen analogisierend mir zueigne und Universalvorstellungen bilde. Audsrücklich zu unterscheiden ist:

(1) das Anschaulichmachen der Horizonte der fertigen "Weltvorstellung," so wie sie in apperzeptiven Uebertragungen und gedanklichen Antizipationen, Entwürfen gebildet worden ist;

(2) der Weg der Fortkonstitution der Weltvorstellung von einer schon fertigen Weltvorstellung aus, z.B. Umwelt des Negers oder des Griechen gegenüber der kopernikanischen, naturwissenschaftlichen Welt der Neuzeit.

Wir Kopernikaner, wir Menschen der Neuzeit sagen:

Die Erde ist nicht die "ganze Natur," sie ist einer der Sterne im unendlichen Weltraum. Die Erde ist ein kugelförmiger Körper, freilich nicht auf einmal und von Einem wahrnehmbar in seiner Gänze, aber in einer primordialen Synthesis als Einheit aneinandergeknüpfter Einzelerfahrungen. Doch ein Körper! Obschon für uns der Erfahrungsboden für alle Körper in der Erfahrungsgenesis unserer Weltvorstellung. Dieser "Boden" wird zunächst nicht als Körper erfahren, in höherer Stufe der Konstitution der Welt aus Erfahrung wird er zum Boden-Körper, und das hebt seine ursprüngliche Boden-form auf. Er wird zum Totalkörper: zum Träger aller bisher voll (normal) allseitig empirisch zureichend erfahrbaren Körper, in der Weise, wie sie erfahren sind, solange die Sterne noch nicht als Körper mitrechnen. Nun aber ist die Erde der grosse Klotz, auf dem sie sind, und aus der durch Abstückung oder Abgliederung kleinere Körper für uns immer auch geworden sind und hätten werden können.

Ist die Erde als Körper zur konstitutiven Geltung gekommen — und andererseits die Sterne aufgefasst als in Fernerscheinungen erscheinende, nur nicht vollkommen zugängliche

Körper, so greift das die Vorstellungen von Ruhe und Bewegung an, die ihnen mit zukommen müssen. Auf der Erde, oder an der Erde, von ihr weg, auf sie hin findet Bewegung statt. Erde selbst in der ursprünglichen Vorstellungsgestalt bewegt sich nicht und ruht nicht, in bezug auf sie haben Ruhe und Bewegung erst Sinn. Nachher aber "bewegt" sich oder ruht Erde — und ganz ebenso die Gestirne, und die Erde als eines unter ihnen. Wie gewinnen in der erweiterten oder neugestalteten "Weltanschauung" Bewegung und Ruhe rechtmässigen Seinssinn — ihre erdenkliche bewährende Anschauung, Evidenz? Gewollte apperzeptive Uebertragung ist es nicht, aber wie immer, sie muss sich ausweisen können.

Ueberhaupt die Ausarbeitung der Weltanschauung, der Anschauung einzelner Körper, der Raumanschauung, der Zeitanschauung, der Anschauung der Naturkausalität — das alles geht miteinander Hand in Hand.

Das Sichbewegen von Körpern in der ursprünglich anschaulichen Funktion der Erde als "Boden," bzw. Körper in der Ursprünglichkeit verstanden, wirklich in möglicher Beweglichkeit und Veränderlichkeit. Emporgeworfenwerden, oder irgendwie, ich weiss nicht wohin, Sichbewegen — in bezug auf die Erde als Erdboden. Körper im Erdraum sind beweglich-haben einen Horizont möglicher Bewegung, und wenn Bewegung endet, so zeichnet doch Erfahrung Möglichkeit weiterer Bewegung vor, ev. in eins mit der Möglichkeit neuer Bewegungskausalität durch einen möglichen Stoss, usw. Körper sind wirklich in offenen Möglichkeiten, die sich in dem, was von ihnen wirklich wird, in ihrer Bewegung, Veränderung (Unveränderung als einzelne Möglichkeitsform von Veränderung) verwirklichen. Körper sind in wirklicher und möglicher Bewegung, und Möglichkeit immer offene Möglichkeit an Wirklichkeit, an Fortsetzung, an Richtungsveränderung, etc. Körper sind auch "unter" wirklichen und möglichen Körpern, und korrelativ Körper sind wirklich erfahren oder möglicherweise erfahren, in ihren wirklichen Bewegungen, Veränderungen, etc., in ihren wirklichen "Umständen." Möglichkeiten, die im voraus, *a priori* offen sind; und als das, als seiende Möglichkeiten haben sie anschauliche

Vorstellbarkeit, ihre anschauliche Ausweisung. Das haben sie als Modi, die zum Sein der Körper und der Körpermannigfaltigkeit gehören.

In aller Fortbildung der Weltapperzeption muss Einheit einer "Weltanschauung" die Weltmöglichkeit bewähren — als *die* Möglichkeit, und Universum der offenen Möglichkeiten, die einen Grundbestand der Wirklichkeit der Welt ausmacht. Der Kern der aktuellen Erfahrung (ontisch das was von der Welt in der und der Seite erfahren ist und ev. schon aus Erfahrungssynthese in Einstimmigkeit als bekannte Wirklichkeit gilt) wird als Erfahrungskern von der Welt, Kern von dem was durch ihn vorgezeichnet ist und vorgezeichnet ist als Spielraum von Möglichkeiten: und dies bedeutet einen Spielraum von iterativ fortzusetzenden einstimmigen Möglichkeiten. Welt konstituiert sich aufsteigend und ist schliesslich — hinsichtlich der Natur als ihrem abstrahierbaren Bestand — konstituiert in einer Horizonthaftigkeit, in welcher das Seiende als wirklich in allzeit vorgezeichneten Seinsmöglichkeiten konstituiert ist; vorgezeichnet ist die von der Ontologie nachher auf Begriffe und Urteile gebrachte, mit ihnen "bedachte" Weltform, und innerhalb derselben bewegt sich alle relativ bestimmte induktive Vorzeichnung, das jeweils bestimmt Erwartungsmässige und im Gang der wirklichen Erfahrung, der eigenen und kommunikativen, die als nun sich zeigende Wirklichkeit eintretende Bewährung oder Entwährung.

Wirkliche Erfahrung im Rahmen wirklicher sich induktiv vorzeichnender Möglichkeiten einstimmig synthetisch in den Horizont eindringend und ein Stück wirklich anschaulich und als bewährtes Sein sich bietendes Weltfeld erfassend — ergibt Körper in Ruhe oder Bewegung, in Unveränderung oder Veränderung mir und ev. uns in einer aktuellen Vergemeinschaftung. Aber was sich da ergibt, ist ein Aspekt, in dem noch nicht alles entschieden ist, was von den noch horizonthaften Möglichkeiten her sinnbestimmend ist für die vollkonstituierte Welt. Hier gilt: Ruhe gibt sich als ein Entschiedenes und Absolutes, und ebenso Bewegung: nämlich auf der an sich ersten Stufe der Konstitution der Erde als Boden.

Aber Ruhe und Bewegung verlieren, sowie Erde zum Welt-

körper geworden ist in der offenen Mannigfaltigkeit umgebender Körper ihre Absolutheit. Bewegung und Ruhe werden notwendig relativ. Und wenn darüber ein Streit sein könnte, so nur darum, weil die neuzeitliche Apperzeption der Welt als Welt der unendlichen kopernikanischen Horizonte nicht für uns aus wirklich durchgeführter Weltanschauung bewährte Weltapperzeption geworden ist. ("Apperzeption" der Welt, Apperzeption überhaupt, das ist das Geltungsbewusstsein, mit dem Seinsinn Welt mit all den Stufen der Konstitution.) Die apperzeptive Uebertragung hat in einer Weise stattgefunden, dass sie nur Anweisung für eine bewährende Anschauung geblieben ist statt wirklich zu Ende konstruiert als Ausweisung.

Wie ist eigentlich ein Körper, sein Ort, seine Zeitstelle, seine Dauer und Gestalt, als in ihr so qualifizierter identifizierbar, wiedererkennbar, an sich bestimmt und somit als bestimmbar zu denken? Alle Ausweisung, alle Bewährung der sich fortbildenden und fortgebildeten Weltapperzeptionen — als fortschreitender apperzeptiver Uebertragungen, in denen von schon konstituierter Objektivität und Welt aus "*die*" selbe Welt mit höherstufigem Sinn ausgestattet wird, bis zur letzt — und vollkonstituierten Welt in ihrem eigenen festen Stil sich fortkonstituierend — alle Ausweisung hat ihren subjektiven Ausgangspunkt und letzten Ankergrund im Ich, dem ausweisenden. Die Bewährung der neuen "Weltvorstellung," der des abgewandelten Sinnes, hat ihren ersten Anhalt und Kern an meinem Wahrnehmungsfeld und der orientierten Darstellung des Weltausschnittes, um meinen Leib als Zentralkörper unter den anderen, sie alle gegeben mit ihrem anschaulich eigenen Wesensgehalt in Ruhe oder Bewegung, in Veränderung und Unveränderung. Eine gewisse Relativität von Ruhe und Bewegung ist hier schon ausgebildet. Relativ ist eine Bewegung notwendig, die erfahren ist in bezug auf einen als ruhend erfahrenen "Bodenkörper," mit dem mein körperlicher Leib eins ist. Dieser selbst kann in Bewegung sein als sich bewegend, aber kann jederzeit dann sich zur Ruhe bringen und dann sich als ruhend erfahren. Der relative Bodenkörper ist aber natürlich relativ ruhend

und relativ bewegt in bezug auf den Erdboden, der nicht als Körper erfahren ist — wirklich ursprünglich erfahren. Relative "Bodenkörper": ich kann im fahrenden Wagen sein, der dann mein Bodenkörper ist, ich kann auch getragen werden in einem Eisenbahnwagen, dann ist mein Bodenkörper zunächst der Körper, der mich bewegt tragende ist, und für diesen wieder der Eisenbahnwagen, etc. Der Wagen ist als ruhend erfahren. Wenn ich aber hinaussehe, sage ich, dass er sich bewegt, obschon ich sehe, dass die Landschaft draussen in Bewegung ist. Ich weiss, dass ich auf den Wagen gestiegen bin, ich habe solche Wagen in Bewegung gesehen mit Leuten darin, weiss dass sie, wie ich, wenn ich darauf steige, die Umwelt in Bewegung sehen, etc. Ich kenne die Umkehrung der Erfahrungsweise Ruhe und Bewegung von dem fahrenden Spielwagen her, auf den ich so oft gesprungen bin und wieder abgesprungen. Aber es ist doch alles zunächst auf den Boden aller relativen Bodenkörper, auf den Erdboden bezogen: alle Mittelbarkeiten habe ich in der Apperzeption impliziert und kann bewährend auf sie in Einstimmigkeit rekurrieren.

Wenn ich nun die Erde als bewegten Körper "denke" — dann brauchte ich, um sie als das, ja überhaupt als einen Körper denken zu können, im ursprünglichsten Sinne, d.i. für sie eine mögliche Anschauung gewinnen zu können, in der ihre Möglichkeit des Seins als ein Körper direkt evident werden kann, einen Boden, auf den alle Körpererfahrung, und damit alle Erfahrung von verharrendem Sein in Ruhe und Bewegung bezogen ist. Hier ist zu betonen: ich kann auf meinem Erdboden immerfort weitergehen und sein "körperliches" Sein in gewisser Weise immer voller erfahren; er hat seinen Horizont darin, dass ich auf ihm eben gehen und gehend von ihm und allem, was darauf ist, immer mehr erfahren kann. Ebenso mit andern Menschen, die körperlich auf ihm gehen und ihn mit allem, was darauf und darüber ist, gemeinsam mit mir erfahren und zu Einstimmigkeit bringen können. Stückweise lerne ich Erde kennen und erfahre auch die Abstückbarkeit von Teilen, die richtige Körper sind, abgestückt ihr Sein haben in Ruhe und Bewegung — relativ zu dem nun wieder fungierenden ruhenden Erdboden. Ich sage

ev. die "ruhende Erde" — aber die "Erde" als der einheitliche Erdboden kann nicht in dem Sinne ruhend und somit nicht in dem Sinne als ein Körper erfahren werden wie eben "ein" Körper, der nicht nur seine Extension hat und seine Qualifizierung, sondern auch im Raume seinen "Ort," aber als seinen Ort möglicherweise wechselnd und ruhend oder bewegt. Solange ich keine Vorstellung habe von einem neuen Boden, als einem solchen, von wo aus die Erde im zusammenhängenden und in sich zurückführenden Gehen als ein geschlossener Körper in Bewegung und Ruhe Sinn haben kann, und solange ich keine Vorstellung gewinne von einem Austausch der Böden und einem dadurch zum Körper Werden beider Böden, solange ist eben die Erde selbst Boden, aber kein Körper. Die Erde bewegt sich nicht — ich sage vielleicht doch, sie ruht, das kann aber nur sagen, jedes Erdstück, das ich abstücke oder Andere abstücken, oder das sich von selbst abstückt, ruht oder bewegt sich, ist ein Körper. Die Erde ist ein Ganzes, dessen Teile — wenn sie für sich gedacht werden, wie sie es können als abgestückt, abstückbar, Körper sind, aber als "Ganzes" ist sie kein Körper. Hier ist ein aus körperlichen Teilen "bestehendes" Ganzes darum doch kein Körper.

Wie steht es nun mit der Möglichkeit von neuen Boden- "Körper" oder vielmehr mit neuen "Erden" als Beziehungsgrundlagen für Körpererfahrung und mit der erwarteten Möglichkeit, dass dadurch die Erde ebensogut wie der andere Bodenkörper zu normalen Körpern würden? Zunächst wäre zu sagen gewesen, dass es sinnlos ist, vorher von einem leeren Weltraum in dem Sinne zu sprechen, wie wir es in der schon unendlichen "astronomischen" Welt tun, als Raum, in dem die Erde ist, so wie Körper darin sind, und der die Erde umgibt. Einen umgebenden Raum haben wir als Ortssystem — d. i. als System möglicher Enden von Körperbewegungen. Aber darin haben wohl alle irdischen Körper, aber nicht die Erde selbst eine jeweilige "Stelle." Anders wird die Sache vielleicht, wenn eine "Denkmöglichkeit" gewonnen ist für den Wechsel der Böden.

Einwand: Ist nicht die Schwierigkeit der Konstitution der Erde als Körper arg übertrieben? Die Erde ist doch ein

Ganzes von impliziten Teilen, jeder in der Möglichkeit der reellen Abteilung und ein Körper, jeder hat seinen Ort — und so hat die Erde einen Innenraum als ein Ortssystem oder (wenn auch nicht mathematisch gedachtes) Ortskontinuum mit Rücksicht auf eine gesamte Teilbarkeit. Also aus demselben Grunde, warum jeder sonstige Körper, als teilbarer, hinsichtlich der Teile seinen Ort hat. Der Innenraum und der Aussenraum der Erde bilden aber einen einzigen Raum. Oder bleibt noch etwas übrig? Jeder Teil der Erde könnte sich bewegen. Die Erde hat Innenbewegungen. Ebenso: jeder gewöhnliche Körper ist nicht nur teilbar, sondern hat seine Deformationen und seine kontinuierlichen Innenbewegungen, während er als ganzer in seiner Weise die Stelle im Raum behalten oder ändern kann. So hat die Erde Deformation und kontinuierliche Innenbewegung, etc. Aber wie kann sie sich als “ganze” bewegen, wie ist das denkbar? Nicht als ob sie fest angeschmiedet wäre — dafür fehlte der “Boden.” Hat Bewegung, also Körperlichkeit für sie einen Sinn? Ist also ihr Ort im Allraum wirklich ein “Ort” für sie? Andererseits ist der Allraum eben nicht das Ortssystem aller Körper, die danach zerfallen in implizite Teile der Erde (als abgestückt und beweglich) und freie Aussenkörper? Was sind das für Kuriositäten der “Raumanschauung,” bzw. des Raumes dieser Stufe?

Aber nun haben wir uns noch die Aussenkörper — die freien Körper, die nicht implizite Erdestücke sind — zu überlegen und — die Leiber. “Mein Leib” und “andere Leiber.” Diese als Körper im Raum wahrgenommen, jeweils an ihrem Ort, und unwahrgenommen, doch wahrnehmbar (oder modifiziert erfahrbar) als das kontinuierlich Dauernde, in einer über diese Dauer gebreiteten Bewegung — Ruhe (auch innerer Bewegung und innerer Ruhe).

Mein Leib: in primordialer Erfahrung hat er keine Fortbewegung und keine Ruhe, nur Innenbewegung und Innenruhe, ungleich den Aussenkörpern. Im “ich gehe,” überhaupt “ich bewege mich” kinästhetisch — “bewegen sich” nicht alle Körper und bewegt sich nicht der ganze Erdboden unter mir. Denn zu einer körperlichen Ruhe gehört, dass die

Aspekte der Körper "beweglich" in mir kinästhetisch verlaufen oder nicht verlaufen, je nach meinem Stillhalten, etc. Ich habe keine Fortbewegung; stehe ich still oder gehe ich, so habe ich meinen Leib als Zentrum und ruhende Körper und bewegte um mich herum und Boden ohne Beweglichkeit. Mein Leib hat Extension, etc., aber keine Ortsveränderung und Unveränderung in dem Sinne, wie ein Aussenkörper sich als in Bewegung, sich entfernend oder nähernd, oder nicht in Bewegung, nah, fern, gibt. Aber auch der Boden, auf dem mein Leib geht oder nicht geht, ist nicht erfahren wie ein Körper, als *ganz* fortzubewegen oder nicht fortzubewegen. Anderer Leiber sind Körper in Ruhe und Bewegung (immer: Fort-Bewegung, im Sinne von sich mir nähern oder entfernen), aber es sind Leiber im "ich bewege," wobei das Ich "anderes Ich" ist, für welches mein Leib Körper ist und für welches alle Aussenkörper, die nicht Leiber für es sind, dieselben sind, die ich habe. Aber auch jeder Leib, der für mich fremder Leib ist, ist für alle anderen Ich mit Ausnahme ihres eigenen Leibes identisch derselbe Körper und derselbe Leib desselben Ich, und für jedes Ich ist mein Leib derselbe Körper und zugleich derselbe Leib für dasselbe für sie andere Ich, das ich selbst für mich bin.

Die Erde ist für alle dieselbe Erde, auf ihr, in ihr, über ihr dieselben Körper, auf ihr waltend — "auf ihr," etc., dieselben leiblichen Subjekte, Subjekte von Leibern, die für alle Körper sind in einem geänderten Sinne. Für uns alle ist aber die Erde Boden und nicht im vollen Sinne Körper. Nun sei angenommen, dass ich ein Vogel wäre und fliegen könnte — oder schon: ich blicke auf die Vögel hin, die zur Erde mit gehören. Sie verstehen ist sich in sie als fliegende hineinversetzen. Der Vogel ist auf dem Ast, oder sitzt auf dem Boden, springt herum und fliegt dann auf: er ist wie ich in seinem Erfahren und Tun, wenn er auf der Erde ist und erfährt Boden, erfährt verschiedene Körper, auch andere Vögel, anderer Leiber und Leibesich, etc. — sowie wie ich. Aber er fliegt auf — das ist wie Gehen unten eine Kinästhesie, durch die alle Erscheinungsverläufe, die sonst als Ruhe und Bewegung von Körpern wahrgenommen wären, sich abwandeln und ähnlich wie beim

Gehen. Nur insofern anders, als das Stillhalten und vom "Winde getragen sein" (was aber keine körperliche Auffassung zu bedeuten hat) eine Erfahrungskombination mit dem "ich bewege" ist und immer noch die "Scheinbewegung" ergibt, bei einer "Aenderung der Flügellage" und beim Stillhalten dabei abermals, aber in anderer Weise. Letztere endet als "Fallen," damit dass der Vogel nicht mehr fliegt, sondern auf dem Baum oder der Erde sitzt und dabei ev. springt, etc. Der Vogel geht von der Erde, auf der er nicht-fliegende Erfahrungen hat wie wir, aus, fliegt auf und kehrt wieder zurück: zurückgekehrt hat er wieder die Erscheinungsweisen der Ruhe und Bewegung wie ich Erdgebundener, fliegend und zurückkehrend hat er durch andere Kinästhesen (durch seine besonderen des Fliegens) motivierte Erscheinungsweisen, aber analogisch abgewandelte, die aber in der Abwandlung die Bedeutung von Ruhe und Bewegung haben, da die Flugkinästhesen und die Kinästhesen des Gehens ein einziges kinästhetisches System für den Vogel bilden; wir den Vogel Verstehende verstehen eben diese Erweiterung seiner Kinästhesen, etc. Was ruht, hat sein Erscheinungssystem, das immer wieder herzustellen ist als Nicht-gehen, Nicht-fliegen, etc.

Betrachten wir das Auf-und Abspringen von einem bewegten Körper, und die Umkehrung der Erscheinungsverläufe ergibt für mich nicht nur sondern für jedermann Ruhe und Bewegung in alter Weise — so verstehe ich notwendig jedermann. Ich verstehe ja sein Aufspringen als solches. In mein Gesichtsfeld eintretende Körper, eintretend z.B. "aus dem leeren Raum" als fallend, verstehe ich eben als solche. "Wie das? Auf der Erde sich bewegend sind sie es für mich dadurch, dass ich Kinästhesen abwandeln und ev. mitlaufen kann und dadurch die Erscheinungswandlung der Ruhe erhalten — derselben, die Ruhe für mich bedeutet, wenn ich kinästhetisch still wäre. Das kann ich bei Körpern, die sich im über-irdischen Raum bewegen nicht, ich könnte es, wenn ich flöge. Aber ich kann Steine emporwerfen und sie wieder herabkommen sehen als dieselben. Werfen kann mehr oder minder flaches Werfen, sein, offenbar sind die Erscheinungen dabei so analog den Bewegungen auf dem Boden der Erde, dass sie als Bewegungen

erfahren werden. So wie Körper als rollende Kugeln, etc., Stoss bewegt werden, so geworfen, etc. Zu erwähnen wäre auch die Erfahrung einer Fallbewegung, bei dem Falle von einem hohen irdischen Körper aus, von dem Hausdach, von einem Turm.

Bewegter Körper (Wegen), auf ihm mein Leib-Flugschiff. "Ich könnte so hoch fliegen, dass die Erde als Kugel erscheinen würde." Die Erde könnte auch so klein sein, dass ich sie allseitig durchwandern könnte und indirekt zur Kugelvorstellung käme. Ich entdecke also, dass sie ein grosser Kugelkörper ist. Aber das ist eben die Frage, ob und wie ich zur Körperlichkeit käme, in dem Sinne, dass die Erde "astronomisch" eben ein Körper unter den anderen, darunter den Himmelskörpern wäre. Ebenso wenig könnte man sagen, wie wenn ich mir den Vogel beliebig hoch imaginierte und nun meinte, er könnte die Erde als Körper wie einen anderen damit erfahren. Warum nicht? Der Vogel, das Flugzeug bewegt sich für uns Menschen auf der Erde und für den Vogel selbst und für den Menschen auf dem Flugzeug, sofern er die Erde als Stamm-"körper," Boden-"körper" in Erfahrung hat. Aber kann nicht das Flugzeug als "Boden" fungieren? Kann ich Boden und Körper gegenüber dem Boden bewegt und als Urstätte meiner Bewegungen vertauschen oder vertauscht denken? Was wäre das für eine Aenderung der Apperzeption und wie stände es mit ihrer Ausweisung? Müsste ich nicht all das auf das Flugzeug übertragen denken an konstitutiver Geltung (der Form nach), was der Erde als meinem Boden, als Boden meiner Leiblichkeit überhaupt Sinn gibt?

Ist das ähnlich der Art, wie ich einen fremden Leib verstehend doch meinen Primordialleib und alles was dazu gehört voraussetze? Aber hier habe ich notwendig Seinsgeltung des Anderen in verständlicher Weise. Die Schwierigkeit wiederholt sich bei den Sternen. Um sie als Körper "erfahren" indirekt auffassen zu können, muss ich schon Mensch auf der Erde als meinem Stammboden für mich sein. Vielleicht sagt man: die Schwierigkeit bestände nicht, wenn ich und wir fliegen könnten und als Bodenkörper zwei Erden hätten, von denen wir die je andere durch Flug erreichen könnten. Eben

dadurch würde der eine Körper für den anderen Boden. Aber was heisst zwei Erden? Zwei Stücke einer Erde mit einer Menschheit. Beide zusammen würden zu einem Boden und wären zugleich Körper jeder für den anderen. Sie hätten um sich den gemeinsamen Raum, in dem jeder als Körper ev. beweglichen Ort hätte, aber die Bewegung relativ immer auf den anderen Körper und irrelativ auf den synthetischen Boden ihres Zusammen. Die Orte aller Körper hätten diese Relativität, welche für Bewegung und Ruhe die Fraglichkeit ergeben würde: in bezug auf welchen der beiden Bodenkörper?

Ursprünglich konstituiert sein kann nur "der" Erdboden mit umgebendem Raum von Körpern, das setzt aber schon voraus, dass mein Leib konstituiert ist und bekannte Andere, und offene Horizonte von Anderen, verteilt im Raum-im Raum, der als offenes Nah-Fern-Feld von Körpern die Erde umgibt und den Körpern den Sinn von irdischen Körpern und dem Raum den von Erdraum gibt. Die Allheit des Wir, der Menschen, der "Animalien" ist in diesem Sinne irdisch — und hat zunächst keinen Gegensatz in nicht-irdisch. Dieser Sinn ist verwurzelt und hat sein Orientierungs-zentrum in mir und einem engeren Wir mit einander Lebender. Es ist aber auch möglich, dass der Erdboden sich erweitert, etwa in der Art, dass ich verstehen lerne, dass im Raum meines ersten Erdbodens grosse Luftschiffe sind, die in ihm längere Zeit fahren: auf einem bin ich geboren, lebt meine Familie, es war mein Seinsboden, bis ich lernte, dass wir nur Schiffer sind auf der grösseren Erde, etc. So kann eine Vielheit von Bodenstätten, Heimstätten zur Einheit einer Bodenstätte kommen. Aber darüber später notwendige Ergänzungen.

Zunächst: ist Erde mit Leiblichkeit und Körperlichkeit konstituiert, so ist auch "Himmel" notwendig als Feld des äusserst noch räumlich Erfahrbaren für mich und uns alle — vom Erdboden aus. Oder es ist konstituiert ein offener Horizont der erreichbaren Ferne; von jedem Raumpunkt aus, der für mich erreichbar ist, ein äusserster Horizont, Limes (Horizontkugel), worin das als Fernding noch Erfahrbare mit der Entfernung schliesslich verschwindet. Umgekehrt: ich kann mir natürlich vorstellen, dass sichtbar werdende "Punkte"

ferne Körper sind, die herangekommen sind und sich nun nähern können, bis sie den Erdboden erreichen, etc. Nun aber auch: ich kann mir vortellen, dass es Heimstätten sind.

Aber zu bedenken ist: jede hat ihre "Historizität" vom jeweiligen Ich aus, das in ihr beheimatet ist. Bin ich als Schifferkind geboren, so habe ich ein Stück Entwicklung auf dem Schiff, und das wäre aber nicht als Schiff für mich charakterisiert in bezug zur Erde — solange keine Einheit hergestellt worden ist — es wäre selbst meine "Erde," meine Urheimat. Aber meine Eltern sind dann nicht auf dem Schiff urbeheimatet, sie hatten noch ein altes Zuhause, eine andere Urheimat. Im Wechsel der Heimstätten verbleibt allgemein gesprochen dies (wenn Heimstätte den gewöhnlichen Sinn meines jeweiligen, einzelnen oder familienmässigen Territoriums hat), dass jedes Ich eine Urheimat hat — und diese gehört zu jedem Urvolk mit seinem Urterritorium. Aber jedes Volk und seine Historizität und jedes Uebervolk (Uebernation) ist selbst beheimatet letztlich natürlich auf der "Erde," und alle Entwicklungen, alle relativen Historien haben insofern eine einzige Urhistorie, deren Episoden sie sind. Freilich ist es dabei möglich, dass diese Urhistorie ein Zusammen völlig getrennt lebender und sich entwickelnder Völker wäre, nur dass sie alle füreinander im offen unbestimmten Erdraumhorizont liegen.

Nehmen wir nun Sterne, nachdem wir uns klargemacht haben die Möglichkeit von fliegenden Archen (das könnte auch ein Name sein für Urheimstätte), die sich herausstellen in der "Erfahrung" (das ist in der Historizität, in der sich die Welt und in ihr körperliche Natur, natürlicher Raum und Raumzeit, Menschheit und animalisches Universum konstituieren) als blosse "Luftschiffe," "Raumschiffe" der Erde, von ihr ausgegangen und wieder zurückkehrend, von Menschen bewohnt und geführt, die nach ihrem letztlichen generativen und für sie selbst historischen Ursprung auf dem Erdboden als ihrer Arche beheimatet sind. Dafür nehmen wir also jetzt "Sterne" — zunächst Lichtpunkte, Lichtflecke. Im Lauf der sich ausbildenden Erfahrung apperzipiert als Fernkörper, aber ohne die je eintretende Möglichkeit der normalen Erfahrungsbewährung, derjenigen im ersten Sinne,

im engeren einer direkten Ausweisbarkeit. "Himmelskörper": wir behandeln sie gleich den nur zufällig faktisch für uns (aber ev. für Andere) gegenwärtigen, zeitweilig unzugänglichen Körpern und machen in bezug auf sie Erfahrungsschlüsse, empirisch unsere Ortsbeobachtungen, Beobachtungen ihrer induzierten Bewegungen, etc., als ob sie Körper wie andere wären. Alles das ist auf die Arche Erdboden und "Erdkugel" relativ und auf uns, die irdischen Menschen, und die Objektivität ist auf die Allmenschheit bezogen. Wie die Arche Erde selbst? Sie ist nicht selbst schon Körper, nicht ein Stern unter Sternen. Erst wenn wir unsere Sterne als sekundäre Archen uns vorstellen mit ihren ev. Menschheiten, etc., uns fingieren als dorthin versetzt und unter diese Menschheiten, dorthin etwa fliegend, wird es anders. Dann ist es wie mit Kindern, auf den Schiffen geboren, doch etwas abgewandelt. Die Sterne sind ja hypothetische Körper in einem bestimmten Als-ob-Sinne, und so ist auch die Hypothese, dass sie Heimstätten im erreichbaren Sinne sind, von besonderer Art.

Die Homogenisierung der Himmelsferne sogar unter Iteration bringt ihre phänomenologischen Fragen mit sich. Was ist da Wesensmöglichkeit und mit der irdischen Welt vorgegebene Möglichkeit, als mitkonstituierend deren Sein, durch ihre wesensmässige Seinsart. Mit der hypothetischen Interpretation der sichtbaren Sterne als Fernkörper und durch die Wesensform des Limes der Fernerfahrbarkeit ist schon gegeben die offene Unendlichkeit der irdischen Welt als begabt mit einer Unendlichkeit möglicherweise seiender Fernkörper. Ohne weiteres wird die Homogenisierung von uns so verstanden, dass die Erde selbst ein Körper sei, auf dem wir zufällig herumkriechen; wir stehen mit den jetzt überlegten Problemen eigentlich in dem einen grossen Problem des rechtmässigen Sinnes einer universalen rein physischen "Natur"wissenschaft — einer astronomisch-physikalisch in der "astronomischen" Unendlichkeit sich haltenden Wissenschaft im Sinne unserer neuzeitlichen Physik (im weitesten Sinne Astrophysik), und einer inneren Unendlichkeit, der Unendlichkeit des Kontinuums und der Weise sich in offener Endlosigkeit oder Unendlichkeit zu atomisieren oder zu

quanteln — die Atomphysik. In diesen Unendlichkeitswissenschaften von der Allnatur ist die Betrachtungsweise gewöhnlich die, dass Leiber, nur zufällig besonderte Körper sind, die also denkbarerweise auch ganz wegfallen könnten, dass also eine Natur ohne Organismen, ohne Tiere und Menschen möglich ist. Es fehlt auch nicht viel, dass man meinte, und zeitweise meinte man so wohl auch reichlich: dass es eine bloße Faktizität sei, eine Tatsächlichkeit der in der Welt geltenden Naturgesetze, wenn mit gewissen Körpern oder Körpertypen der physikalischen Struktur animalischer Leib psychisches Leben (kausal) verbunden sei; danach wäre es denkbar, dass dieselben, dass eben so geartete Körper eben bloße Körper seien. Wie man auch nachweisen zu können glaubt hinsichtlich der Erde, war auf ihr einmal kein "Leben," es bedurfte langer Zeiträume, bis die hochkomplizierten organischen Substanzen zur Bildung kamen und damit animalisches Leben auf der Erde auftrat. Und auch das gilt für selbstverständlich, dass Erde nur einer der zufälligen Weltkörper ist, einer unter anderen, und fast wäre es lächerlich, nach Kopernikus meinen zu wollen, dass die Erde, "bloss weil wir zufällig auf ihr leben," Mittelpunkt der Welt sei, bevorzugt sogar durch ihre "Ruhe," in bezug auf welche alles Bewegte bewegt sei. Es scheint, dass wir in die naturwissenschaftliche Naivität (nicht sofern wie theoretisiert, sondern sofern sie in ihren Theorien absolute Weltwahrheit zu gewinnen glaubt, wenn auch in relativen Vollkommenheitsstufen) schon durch das Bisherige eine tüchtige Bresche geschossen haben. Vielleicht dass die Phänomenologie die kopernikanische Astrophysik gestützt hat — aber auch den Antikopernikanismus, wonach Gott die Erde an einer Stelle des Raumes festgemacht hätte. Vielleicht ist es auf dem Niveau der Phänomenologie so, dass gleichwohl die Rechnungen und mathematischen Theorien der Kopernikus nachfolgenden Astrophysik und so die gesamte Physik damit in ihren Grenzen ein Recht behalten — ein anderes ist schon die Frage, ob eine rein physische Biologie — die aber dabei Biologie sein soll — Sinn und Recht behalten kann.

Also überlegen wir. Wie sollen wir Recht gewinnen, die

Erde als einen Körper, als einen Stern unter Sternen gelten zu lassen? Zunächst auch nur als Möglichkeit. Fangen wir an mit einer anderen Möglichkeit. Der Naturforscher wird zugestehen, dass es ein blosses Faktum sei, dass wir überhaupt Sterne sehen. Er wird sagen: sehr wohl könnten sie so weit sein, dass sie für uns nicht da wären — auch die Sonne? Sie könnte ja durch eine Nebelschicht unsichtig sein. So wäre es also gewesen in allen historischen Zeiten — wir lebten also in einer generativen Historizität und hätten unsere irdische Welt, unsere Erde und Erdräume, darin fliegende und schwebende Körper, usw., alles wie bisher, nur ohne sichtbare, für uns erfahrbare Sterne. Vielleicht eine Atomphysik, Mikophysik hätten wir, aber keine Astrophysik, Makrophysik. Aber es wäre zu überlegen, wiefern erstere geändert wäre. Wir hätten unsere Fernrohre, unsere Mikroskope, unsere immer feineren Messinstrumente; wir hätten unseren Newton und das Gravitationsgesetz, wir hätten entdecken können, dass Körper aufeinander Gravitation üben, dass Körper dabei als teilbar zugleich angesehen werden können, als Ganze von Teilkörpern, die dabei wie selbständige Körper ihre Gravitation üben und nach mechanischen Gesetzen wirken, Resultanten ergeben, usw. Wir hätten entdeckt, dass die Erde eine "Kugel" ist und teilbar ist in Körper, dass sie als totale Einheit von körperlichen Teilen eine Gravitation als Totalität übt in bezug auf alle sich ablösenden Körper, die sichtbar und unsichtbar im Erdraum sind. Dass Körper darin sind, die wir erst durch Fernrohre und immer bessere Fernrohre als immer immer weiter über das für uns gewöhnlich Sichtbare hinausliegende wahrnehmen können, das alles wüssten wir. Wir werden uns dann sagen können; schliesslich könnten natürlich beliebig grosse Körper in den unseren Sinnen noch nicht und nie zugänglichen Fernen sein. Ohne sie zu sehen, direkt von ihnen Kunde zu haben, wenn auch als hypothetisch den gewöhnlichen Körpern gleichzustellenden Fernkörpern, könnten wir Induktionen machen und aus Gravitationswirkungen, etc., das Dasein solcher "Sterne" berechnen. Die Erde wäre in allem Physikalischen schliesslich ein Körper wie jeder andere und hätte eben auch Sterne um sich. Faktisch haben

wir schon in Sicht Sterne und finden sie wissenschaftlich als in berechenbaren physikalischen Beziehungen zur Erde und diese als physikalisch ihnen gleichstehend ein Körper unter Körpern. Also an der Physik rühren wir gar nicht.

Aber worauf alles ankommt ist: nicht die zum apodiktischen Ego, zu mir, zu uns gehörige Vorgegebenheit und Konstitution zu vergessen, als Quelle alles wirklichen und möglichen Seinssinnes, aller möglichen Erweiterungen, welche in der in Gang stehenden Historizität schon konstituierte Welt sich weiter ausbauen kann. Man darf nicht die Verkehrtheit, in der Tat Verkehrtheit, begehen, im voraus unbemerkt die naturalistische, die herrschende Weltauffassung voraussetzen und dann anthropologistisch und psychologistisch in der Menschengeschichte, die Speziesgeschichte, innerhalb der individuellen und Völkerentwicklung, die Ausbildung der Wissenschaft und der Weltinterpretation anzusehen als ein selbstverständlich zufälliges Geschehen auf der Erde, das ebensogut auf Venus oder Mars statthaben könnte. Auch die Erde und wir Menschen, ich mit meinem Leib und ich in meiner Generation, meinem Volk, usw. Also auch diese ganze Geschichtlichkeit, das gehört zum Ego unabtrennbar, und das ist prinzipiell nicht wiederholbar, sondern alles was ist, ist auf diese Historizität transzendentaler Konstitution als zuständigen Kern und sich erweiternden Kern zurückbezogen — oder alles neu als Weltmöglichkeit Entdeckte ist an den Seinssinn, der schon fertiger ist, gebunden. Man möchte danach denken, dass daraus folgendes zu entnehmen sei: die Erde kann ebensowenig ihren Sinn als "Urheimstätte," als Arche der Welt verlieren, als mein Leib seinen ganz einzigen Seinssinn verlieren kann als Urleib, von dem jeder Leib einen Teil seines Seinssinnes ableitet und als wir Menschen in unserem Seinssinn den Tieren vorangehen, usw. Daran aber, an dieser konstitutiven Dignität oder Wertordnung können alle sich notwendig mitkonstituierenden Gleichstellungen (Homogenisierungen) von Leib und Körper, oder körperlichem Leib als Körper gleich anderen, Menschheit als Tierspezies unter Tierspezies, und so schliesslich Erde als Weltkörper unter Weltkörpern nichts ändern. Ich kann mir sehr gut

denken, dass ich auf den Mondkörper versetzt würde. Warum soll ich mir nicht den Mond als so etwas wie eine Erde, als so etwas wie eine tierische Wohnstätte denken? Ja von der Erde aus kann ich mich sehr wohl als Vogel, der auf einen weiten Körper hinfliegt, denken oder als Pilot eines Flugzeuges auffahren und dort landen. Ja ich kann mir denken, dass dort schon Menschen und Tiere wären. Aber frage ich zufällig "wie sind sie da hinaufgekommen?" — so ähnlich wie ich bei einer neuen Insel, auf der ich Keilinschriften vorfinde, frage: wie sind die betreffenden Völker dahin gekommen? Alle Tiere, alle Lebewesen, alles Seiende überhaupt hat Seinssinn nur von meiner konstitutiven Genesis und diese "irdische" geht voran. Ja ein Bruchstück Erde (wie eine Eisscholle) kann sich vielleicht abgelöst haben, und das hat eine besondere Geschichtlichkeit ermöglicht. Aber nicht sagt das, dass ebensogut der Mond oder die Venus als Urstätten in Urtrennung denkbar wären und es nur ein Faktum sei, dass für mich und unsere irdische Menschheit eben die Erde ist. Es gibt nur eine Menschheit und eine Erde — ihr gehören alle Bruchstücke an, die sich ablösen oder je abgelöst haben. Aber wenn dem so ist, dürfen wir mit Galilei sagen, dass *par si muove*? Und nicht im Gegenteil, sie bewegt sich nicht? Freilich nicht so, dass sie im Raume ruht, obschon sie sich bewegen könnte, sondern wie wir es oben darzustellen versuchten: sie ist die Arche, die erst den Sinn aller Bewegung ermöglicht und aller Ruhe als Modus einer Bewegung. Ihr Ruhen aber ist kein Modus einer Bewegung.

Aber nun wird man das arg finden, geradezu toll aller naturwissenschaftlichen Erkenntnis der Wirklichkeit und realen Möglichkeit widersprechend. Da ist die Möglichkeit, dass einmal der Wärmetod allem Leben auf der Erde ein Ende macht, oder auf die Erde stürzende Himmelskörper, usw. Aber mag man in unseren Versuchen die unglaublichste philosophische Hybris finden — wir weichen in unserer Konsequenz der Aufklärung der Notwendigkeiten aller Sinngebung für Seiendes und für Welt nicht zurück. Auch nicht vor den Problemen des Todes, wie die Phänomenologie sie in ihrer neuen Weise fasst. Gegenwart, ich als Gegenwärtiges

bin in fortgehendem Sterben, die Anderen sterben für mich, wenn ich den gegenwärtigen Konnex mit ihnen nicht finde. Aber da geht durch mein Leben die Einheit durch Wiedererinnerung — ich lebe noch, obschon im Anderssein, und lebe fort das Leben, das hinter mir liegt, und dessen Sinn des Hinter-mir in der Wiederholung und Wiederholbarkeit liegt. So lebt das Wir in der Wiederholbarkeit und lebt selbst fort in Form der Wiederholbarkeit der Geschichte, während der Einzelne "stirbt," d.i. nicht mehr von den Anderen einführungsmässig "erinnert" werden kann, sondern nur in historischer Erinnerung, in der die Erinnerungssubjekte sich vertreten können.

Was zur Konstitution gehört, das ist und ist allein absolute und letzte Notwendigkeit, und erst von da aus sind alle Denkbarkheiten konstituierter Welt letztlich zu bestimmen. Welchen Sinn können die zusammenstürzenden Massen im Raum, in einem als absolut homogen und *a priori* vorangestellten Raum haben, wenn konstituierendes Leben weggestrichen wird? Ja hat selbst solches Wegstreichen nicht bloss Sinn, wenn überhaupt welchen, als Wegstreichen von und in konstituierender Subjektivität. Das Ego lebt und geht allem wirklich und möglich Seienden voran, und Seiendem jedes, ob realen oder irrealen Sinnes. Die konstituierte Weltzeit birgt zwar in sich psychologische Zeit und das Psychologische weist zurück auf Transzendentes — aber doch nicht so, dass man nun das objektiv Psychische einfach ins Transzendente umkehren und vor allem, dass man jede Weise wie man einstimmig unter irgendeinem abstrakten und relativ berechtigten Gesichtspunkt homogene Welt und näher Natur und darin psychophysisch gebundenes Psychisches voraussetzt und damit praktisch ganz gut operiert (für menschlich natürliche Praxis Wissenschaft ausbildend und verwertend), dass man das in Transzendentes umstülpt und nun die Paradoxien, die entspringen, gegen die Phänomenologie geltend macht.

INDEX

INDEX

I. References to Husserl's Writings

- Author's Preface to the Ideas, 60
- Die Frage nach dem Ursprung der Geometrie (Geometrie), 151ff., 165, 175
- Die Krisis der europäischen Wissenschaften und die transzendente Phänomenologie (Krisis), 151f., 156ff., 165, 174, 176
- Erfahrung und Urteil (Experience and Judgment), 53, 58, 63, 112, 138
- Formale und Transzendente Logik (Logik, Formal and Transcendental Logic), 73, 74, 76, 82, 83, 106, 107, 125, 135ff., 138, 139f., 145f., 147n., 148, 150f., 154, 165, 170, 175, 234, 236, 237, 239, 243, 244, 247, 248
- Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie (Ideen; Eng. trans.: Ideas), 13, 46, 54, 57f., 59, 65, 72n., 74ff., 82, 93ff., 106, 125, 135, 144n., 164, 191, 220n., 232, 236, 239, 242, 248
- Logische Untersuchungen (Log. Unt., Logical Investigations), 19, 20, 21, 23, 41, 42, 54ff., 61, 65, 72n., 74, 82, 125, 135, 138, 143, 146, 148n., 164, 231f., 236, 237
- Méditations Cartésiennes (Méd. Cart., Cartesian Meditations), 41f., 54, 74, 75, 82, 106, 165, 170, 171n., 173, 198, 255, 259
- Nachwort zu meinen "Ideen zu einer reinen Phänomenologie" (Postscript to the Ideas), 59f., 138f., 165, 168, 179
- Phenomenology, 60
- Philosophie als strenge Wissenschaft (Philosophy as a Rigorous Science), 19, 54, 56f., 143, 144, 146
- Philosophie der Arithmetik, 148, 231
- Vorlesungen zur Phänomenologie des inneren Zeitbewusstseins (Lectures on the Phenomenology of the Consciousness of Inner Time), 79ff., 113, 133f.

II. Phenomenological Terms

- Alter Ego, 140, 167, 170, 171f., 182
- Appresentation, 171
- Categorical intuition, 134
- Constitution, 58, 62, 94f., 110, 123, 139f., 145f., 172f., 180, 183, 192, 197ff., 202
- Ego-pole, 255
- Eidetic intuition, 14, 124, 125, 134, 212f., 214, 216, 217, 252, 258
- Epoché, 54, 63, 138, 169, 190
- Essence, 12f., 15, 57, 145, 178f., 194, 197, 208, 212, 215, 234, 251, 253
- Evidence, 98, 135ff., 154, 155f., 161, 175, 212
- Genetic method, 53, 54, 61
- Horizon, 106ff.
- Intentional genesis, 145, 150f.
- Intentional history, 147f., 150f., 154, 156, 157

- Intentional object, *qff.*, 150f.
 Intention and fulfillment, 189
 Intentio, 109f.
 Intentionality, 65ff., 82, 95, 136, 145f.,
 179, 188, 228, 232f.
 Life-world, 166f., 169, 173f., 177
 Logical absolutism, 61
 Meaning-essence, 231f.
 Naïve, naïveté, 13, 56, 166, 174, 180,
 182, 187, 244f.
 Natural attitude, 179
 Noesis and noema, 73ff., 109f., 114,
 115, 121
 Nucleus, 112, 115
 Observation of essences, *see* Eidetic
 intuition
 Problems of origin, 143f., 147
 Passive synthesis, 197
 Phenomenological attitude, 239, 241
 Phenomenological idealism, 93f., 123
 Phenomenological reduction, 54, 58,
 62, 92f., 94, 95, 96, 105, 147, 167,
 169ff., 191f., 194, 202, 226, 238,
 240f., 246
 Phenomenon, 86ff.
 Presuppositionlessness, 44ff.
 Psychologism, 19ff., 60, 73, 83, 143,
 146
 Radical radicalism, 45, 56f., 59, 138,
 168, 238
 Reactivation, 151, 156, 161, 163, 175,
 183
 Reflective perceiving, 8f.
 Sedimentation, 156, 157, 160ff., 169,
 175, 182
 Situation, 120f.
 Solipsism, 90, 94, 170, 248f., 254f.
 Straightforward perceiving, 8f., 12
 Transcendental consciousness, 16ff.,
 89, 198
 Transcendental ego, 41f., 123, 139,
 141, 238, 248
 Transcendental intersubjectivity, 172,
 198
 Transcendental subjectivity, 59, 145,
 166, 167, 168f., 172, 237, 249
 Wesensschau, *see* Eidetic intuition
 Wesensgesetzlich, 286
 World, 14f., 114, 121, 170f.

III. Proper Names (other than Husserl)

- Alexander, 31n., 190n.
 Allesch, 189n.
 Anatolius, 158
 Anaxagoras, 294
 Antiphon, 35
 Apollonius, 158, 160n.
 Archimedes, 158, 160
 Aristotle, 21, 33, 40n., 124, 292, 294,
 302
 Ayer, 38n., 141n.
 Barocius, 159
 Becker, 191n., 278, 289, 302n.
 Beckman, 161
 Bergson, 39, 73, 219, 228, 229
 Berkeley, 24, 39, 66, 73, 222, 223,
 246ff.
 Bernays, 279, 280n., 296n., 301n.
 Bernstein, 283n.
 Birkhoff, 297
 Bode, 181n.
 Brentano, 47, 65, 109, 232, 244
 Bröcker, 42n.
 Brouwer, 295f.
 Callicles, 37
 Carlyle, 252
 Carnap, 127, 128f., 137f., 140f., 206
 Cassirer, 135
 Celms, 94n.
 Cohen, 135
 Coke, 265
 Copernicus, 321
 Dante, 196
 Dedekind, 298

- Descartes, 24n., 39, 50, 96, 101f., 124,
 148, 157, 159ff., 204, 211, 223, 229,
 237, 238f., 245, 246, 254
 Dilthey, 104, 146
 Diophantus, 158, 160
 Duhem, 161n.
- Eddington, 111, 217
 Einstein, 126f., 208
 Euclid, 157, 158, 160
- Fermat, 160n.
 Fichte, 189n.
 Fink, 47n., 60n., 94n., 95n., 134n.,
 141n., 151n., 152n.
 Frege, 231, 278
- Galileo, 148, 151, 157, 160f.
 Geiger, 188n.
 Ghetaldi, 160
 Goethe, 196
 Gödel, 302
 Gorgias, 27
- Harriot, 160
 Hartmann, 100n.
 Hegel, 204, 206, 211, 214, 215f., 223,
 237
 Heidegger, 42n., 87, 226, 302n., 303
 Hermogenianus, 262
 Heyting, 294n., 301f.
 Hilbert, 127f., 208, 279, 280, 285,
 296f., 301
 Hippias, 35, 37n.
 Hodgson, 45
 Hume, 20, 24, 32, 38, 39, 40, 66ff.,
 96, 106, 118f., 124, 126, 149, 150,
 237, 246
 Huxley, 39n.
- Jaensch, 217
 James, 73, 77, 219, 228, 229
 Jeans, 259
- Kant, 49, 126, 134, 135, 188n., 200,
 207, 229, 237, 246, 247, 261, 286
 Kepler, 161
 Knight, 189n.
 Kolmogoroff, 300
- Landgrebe, 53n., 65n.
 Langford, 284n.
 Laporte, 69n.
 Lebesgue, 293
 Leibniz, 124, 148, 199, 225, 226, 229,
 302
 Lewis, 47n., 284ff., 293, 301f.
 Leyendecker, 101n.
 Leonardo, 196
 Lipps, 21
 Locke, 7f., 13, 39, 66, 73, 106, 124,
 149, 256
 Łukasiewicz, 128, 290
- MacColl, 284n.
 Maine de Biran, 104
 McTaggart, 39
 Mill, 21, 149, 150
 Misch, 146n.
 Moore, 252
 Moritz, 201n.
 Morgan, 201n.
 Morris, 129
- Newton, 319
- Oresmus, 161
 Oughtred, 160
- Parmenides, 27, 42
 Parsons, 185n.
 Perry, 44n., 248
 Peirce, 219, 226, 228, 229
 Pfaender, 96, 103, 104
 Plato, 19, 21, 24, 25ff., 30, 32, 37, 38,
 39, 41, 42, 124, 150n., 255, 256
 Proclus, 158, 159
 Protagoras, 21, 27, 34f., 42, 43
 Pythagoras, 299
- Rehmke, 50
 Reichenbach, 291n.
 Riegl, 189
 Rilke, 192, 198, 201n.
 Royce, 251, 260
 Russell, 278, 281, 284
- Santayana, 251, 257
 Scheler, 90n., 104, 245
 Schelling, 237

- Schlick, 206
 Schopenhauer, 135, 249, 260, 261
 Schuppe, 50
 Shakespeare, 189, 276
 Sheffer, 53
 Sigwart, 21
 Spencer, 150
 Spinoza, 200, 229, 261
 Spranger, 47n.
 Stevin, 148, 160
 Stone, 283n., 294n.
 Stonier, 181n.
 Strauss, 149n.

 Tang Tsao-Chen, 292n.
 Tarski, 128, 294n.
 Tennyson, 201n.
 Thrasymachus, 37

 Vico, 149
 Vieta, 148, 158ff., 162
 Volkelt, 48ff.
 Von Neumann, 280, 296f.
 Von Ranke, 178

 Wallis, 160
 Weber, 185
 Whewell, 150
 Whitehead, 219, 225, 228, 229, 251,
 278
 Windelband, 49
 Wittgenstein, 38n., 129

 Zeno, 292
 Zermelo, 297

