

Hermann Weyl's Later Philosophical Views: His Divergence from Husserl

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In what seems to have been his last paper, *Insight and Reflection* (1954), Hermann Weyl provides an illuminating sketch of his intellectual development, and describes the principal influences—scientific and philosophical—exerted on him in the course of his career as a mathematician. Of the latter the most important in the earlier stages was Husserl's phenomenology. In Weyl's work of 1918-22 we find much evidence of the great influence Husserl's ideas had on Weyl's philosophical outlook—one need merely glance through the pages of *Space-Time-Matter* or *The Continuum* to see it. Witness, for example, the following passages from the former:

Expressed as a general principle, this means that the real world, and every one of its constituents, are, and can only be, given as intentional objects of acts of consciousness. The immediate data which I receive are the experiences of consciousness in just the form in which I receive them ... we may say that in a sensation an object, for example, is actually physically present for me—to whom that sensation relates—in a manner known to everyone, yet, since it is characteristic, it cannot be described more fully. (Weyl, Space-Time-Matter, 4)

...the datum of consciousness is the starting point at which we must place ourselves if we are to understand the absolute meaning of, as well as the right to, the supposition of reality ... "Pure consciousness" is the seat of what is philosophically a priori. (ibid., 5)

But a reading of *Insight and Reflection* shows Weyl to have moved away from the phenomenology which, as he remarks, "led me out of positivism once more to a freer outlook on the world." This divergence can in fact already be detected in Weyl's *The Open World* of 1932, in which, while granting that

The beginning of all philosophical thought is the realization that the perceptual world is but an image, a vision, a phenomenon of our consciousness; our consciousness does not directly grasp a transcendental real world which is as it appears...The postulation of the real ego, of the thou and of the world, is a metaphysical matter, not judgment, but an act of acknowledgment and belief,

he continues:

It was an error of idealism to assume that the phenomena of consciousness guarantee the reality of the ego in an essentially different and somehow more

certain manner than the reality of the external world; in the transition from consciousness to reality the ego, the thou and the world rise into existence indissolubly connected and, as it were, at one stroke. (Weyl, Open World, 26–27).

I think we may take it that Weyl's use of the term "idealism" here is intended to include Husserl's phenomenology, since in *Insight and Reflection* Weyl remarks, in connection with Fichte's philosophy, that "Metaphysical idealism, toward which Husserl's phenomenology was then shyly groping, here received its most candid and strongest expression."

In *Insight and Reflection* Weyl describes Husserl as "an adversary of the psychologism which prevailed at the turn of the century", who went on to develop

the method of phenomenology, whose goal it was to capture the phenomena in their essential being—purely as they yield themselves apart from all genetical and other theories in their encounter with our consciousness. This quintessential examination unfolded to him a far broader field of evidently a priori insights than the twelve principles which Kant had posited as the constituting foundation of the world of experience.

Weyl quotes a number of passages from Husserl's *Ideas*, which he calls his "great work of 1922." But certain of Weyl's comments on these passages have a somewhat critical tenor. For example, Weyl says

To point up the antithesis between an accidental, factual law of nature and a necessary law of being, Husserl cites the following two statements: "All bodies are heavy" and "All bodies have spatial extent." Perhaps he is right, but one senses even in this first example how uncertain generally stated epistemological distinctions become as soon as one descends from generality to specific concrete applications.

He gives his own view on this issue in the form of a quotation from his own *Space-Time-Matter*:

The investigations about space that have been conducted [here] seem to me a good example of the kind of the kind of analysis of the modes of existence which is the object of Husserl's phenomenological philosophy, an example that is typical of cases in which we are concerned with non-immanent modes. The historical development of the problem of space teaches how difficult it is for us human beings entangled in external reality to reach a definite conclusion. ... Certainly, once the true point of view has been adopted reason becomes flooded with light, and it recognizes and appreciates what is of itself intelligible to it,. Nevertheless, although reason was, so to speak, always conscious of this point of view in the whole development of the problem, it had not the power to penetrate it in one flash. This reproach must be directed at the impatience of those philosophers who believe that, on the basis of a single act of exemplary concentration, they are able to give an adequate description of being. In principle they are right, yet from the point of view of human nature, how utterly they are wrong! The example of space is at the

same time most instructive with regard to the particular question of phenomenology that appears to me the decisive one: To what extent does the limitation of those aspects of being which are finally revealed to consciousness express an innate structure of what is given, and to what extent is this a mere matter of convention?

He goes on to say:

Einstein's development of the general theory of relativity, and of the law of gravity which holds in the theory's framework, is a most striking confirmation of this method which combines experience based on experiments, philosophical analysis of existence, and mathematical construction. Reflection on the meaning of the concept of motion was important for Einstein, but only in such a combination did it prove fruitful.

From this passage I think it may be inferred that Weyl had come to hold the view that the ultimate secrets of Being cannot be arrived at by philosophical reflection alone.

Weyl next turns to what he identifies as the central theme in Husserl's work, namely,

the relationship between the immanent consciousness, the pure ego from which all actions emanate, and the real psychophysical world, upon whose objects these acts are intentionally directed.

Weyl characterizes Husserl's view of space as an object for the ego as follows:

Concerning space as an object, Husserl says that, with all its transcendence, it is something that is perceived and given in material irrefutability to our senses. Sensory data, "shaded off" in various ways within the concrete unity of this perception and enlivened by comprehension, fulfill in this manner their representative "function"; in other words, they constitute in unison with this quickened comprehension what we recognize as "appearances of" color, form, etc.

However, Weyl quickly questions this account of the matter:

I do not find it easy to agree with this. At any rate, one cannot disavow that the particular manner in which, through this function of inspiration, an identifiable object is placed before me, is guided by a great number of earlier experiences... The theoretical-symbolic construction, through which physics attempts to comprehend the transcendental content behind the observations, is far from inclined to stop with this corporeally manifested identity. I should, therefore, say that Husserl describes but one of the levels which has to be passed in the endeavor through which the external world is constituted.

Later Weyl appears to be somewhat uncomfortable with Husserl's epistemological idealism:

Concerning the antithesis of experience and object, Husserl claims no more than merely phenomenal existence for the transcendental as it is given in its various

shadings, in opposition to the absolute existence of the immanent; i.e., the certitude of the immanent in contrast to the uncertainty of the transcendental perception. The thesis of the world in its accidental arbitrariness thus stands face to face with the thesis of the pure I and the I-life which is indispensable and, for better or worse, unquestionable. "Between awareness and reality there yawns a veritable chasm of meaning," he says, "Immanent existence has the meaning of absolute being which 'nulla re indiget ad existendum'; on the other hand the world of the transcendental 'res' is completely dependent on awareness,—dependent, moreover, not just on being logically thinkable but on actual awareness."

This brings Weyl to the enigma of personal identity, a problem to which he ascribes paramount importance:

Here finally arises in its full seriousness the metaphysical question concerning the relation between the one pure I of immanent consciousness and the particular lost human being which I find myself to be in a world full of people like me (for example, during the afternoon rush hour on Fifth Avenue in New York). Husserl does not say much more about it than that "only through experience of the relationship to the body does awareness take on psychological reality in man or animal."

In this connection it is worth quoting what Weyl had to say concerning this issue in his *Address on the Unity of Knowledge*, delivered not long before.

...it is time now to point out the limits of science. The riddle posed by the double nature of the ego certainly lies beyond those limits. On the one hand, I am a real individual man...carrying out real and physical and psychical acts, one among many. On the other hand, I am "vision" open to reason, a self-penetrating light, immanent sense-giving consciousness, or however you may call it, and as such unique. Therefore I can say to myself both: "I think, I am real and conditioned" as well as "I think, and in my thinking I am free." More clearly than in the acts of volition the decisive point in the problem of freedom comes out, as Descartes remarked, in the theoretical acts. Take for instance the statement $2 + 2 = 4$; not by blind natural causality, but because I see that $2 + 2 = 4$ does this judgment as a real psychic act form itself in me, and do my lips form these words; two and two make four. Reality or the realm of Being is not closed, but open toward Meaning in the ego, where Meaning and Being are merged in indissoluble union—though science will never tell us how. We do not see through the real origin of freedom.

And yet, nothing is more familiar and disclosed to me than this mysterious "marriage of life and darkness", of self-transparent consciousness and real being that I am myself. The access is my knowledge of myself from within, by which I am aware of my own acts of perception, thought, volition, feeling and doing, in a manner entirely different from the theoretical knowledge that represents the "parallel" cerebral process in symbols. The inner awareness of myself is the basis for the more or less intimate understanding of my fellow-men, whom I acknowledge as beings of my own kind. Granted that I do not know of their consciousness in the same manner as my own, nevertheless my "interpretative" understanding of it is apprehension of indisputable accuracy. As hermeneutic interpretation it is as characteristic for the historical, as symbolic construction is for the natural, sciences. Its illumining light not only falls on my fellow-men; it also reaches, though with ever-increasing dimness and incertitude,

deep into the animal kingdom. Kant's narrow opinion that we can feel compassion, but cannot share joy, with other living creatures, is justly ridiculed by Albert Schweitzer who asks: "Did he ever see a thirsty ox coming home from the fields drink?" It is idle to disparage this hold on nature "from within: as anthropomorphic and elevate the objectivity of theoretical construction, though one must admit that understanding, for the very reason that it is concrete and full, lacks the freedom of the "hollow symbol". Both roads run, as it were, in opposite directions: what is darkest for theory, man, is the most luminous for the understanding from within; and to the elementary inorganic processes, that are most easily approachable by theory, interpretation finds no access whatsoever.

Returning to *Insight and Reflection*, Weyl goes on to compare Husserl's position with that of Fichte, a philosopher whose views Weyl says also had a pronounced influence on him. Although Weyl claims to find "preposterous" the actual details of what he calls Fichte's "constructivism", according to which the world is a necessary construction of the ego, nevertheless we find him asserting that

in the antithesis of constructivism and phenomenology, my sympathies lie entirely on [Fichte's] side.

But he quickly adds:

yet how a constructive procedure which finally leads to the symbolic representation of the world, not a priori, but rather with continual reference to experience, can really be carried out, is best shown by physics—above all in its two most advanced stages: the theory of relativity and quantum mechanics.

Soon afterwards Weyl introduces a geometric analogy which, he believes,

will be helpful in clarifying the problem with which Fichte and Husserl are struggling, namely, to bridge the gap between immanent consciousness which, according to Heidegger's terminology, is ever-mine, and the concrete man that I am, who was born of a mother and who will die.

In this analogy objects, subjects, and the appearance of an object to a subject are correlated respectively with *points on a plane, (barycentric) coordinate systems in the plane, and coordinates of a point with respect to a such a coordinate system.*

In Weyl's analogy, a coordinate system S consists of the vertices of a fixed nondegenerate triangle T ; each point p in the plane determined by T is assigned a triple of numbers summing to 1—its *barycentric coordinates* relative to S —representing the magnitudes of masses of total weight 1 which, placed at the vertices of T , have centre of gravity at p . Thus objects, i.e. points, and subjects i.e., coordinate systems or triples of points belong to the same "sphere of reality." On the other hand, the *appearances* of an object to a subject, i.e., triples of numbers, lie, Weyl

asserts, in a different sphere, that of *numbers*. These *number-appearances*, as Weyl calls them, correspond to the experiences of a subject, or of pure consciousness.

From the standpoint of naïve realism the points (objects) simply exist as such, but Weyl indicates the possibility of constructing geometry (which under the analogy corresponds to external reality) solely in terms of number-appearances, so representing the world in terms of the experiences of pure consciousness, that is, from the standpoint of idealism. Thus suppose that we are given a coordinate system S . Regarded as a subject or “consciousness”, from its perspective a point or object now corresponds to what was originally an appearance of an object, that is, a triple of numbers summing to 1; and, analogously, any coordinate system S' (that is, another subject or “consciousness”) corresponds to three such triples determined by the vertices of a nondegenerate triangle. Each point or object p may now be *identified* with its coordinates relative to S . The coordinates of p relative to any other coordinate system S' can be determined by a straightforward algebraic transformation: these coordinates represent the *appearance* of the object corresponding to p to the subject represented by S' . Now these coordinates will, in general, *differ* from those assigned to p by our given coordinate system S , and will in fact coincide for all p if and only if S' is what is termed by Weyl the *absolute* coordinate system consisting of the three triples $(1,0,0)$, $(0,1,0)$, $(0,0,1)$, that is, the coordinate system which corresponds to S itself. Thus, for this coordinate system, “object” and “appearance” coincide, which leads Weyl to term it the *Absolute I*.¹

Weyl points out that this argument takes place entirely within the realm of numbers, that is, for the purposes of the analogy, the *immanent consciousness*. In order to do justice to the claim of objectivity that all “I”s are equivalent, he suggests that only such numerical relations are to be declared of interest as remain unchanged under passage from an “absolute” to an arbitrary coordinate system, that is, those which are invariant under arbitrary linear coordinate transformations. According to Weyl,

this analogy makes it understandable why the unique sense-giving I, when viewed objectively, i.e., from the standpoint of invariance, can appear as just one subject among many of its kind.

Then Weyl adds an intriguing parenthetical observation:

¹ This phrase Weyl derives from Fichte, whom he quotes as follows:

The I demands that it comprise all reality and fill up infinity. This demand is based, as a matter of necessity, on the idea of the infinite I; this is the absolute I (which is not the I given in real awareness.

Incidentally, a number of Husserl's theses become demonstrably false when translated into the context of the analogy—something which, it appears to me, gives serious cause for suspecting them.

Unfortunately, we are not told precisely which of Husserl's theses are the "suspect" ones.

Weyl goes on to emphasize:

Beyond this, it is expected of me that I recognize the other I—the you—not only by observing in my thought the abstract norm of invariance or objectivity, but absolutely: you are for you, once again, what I am for myself: not just an existing but a conscious carrier of the world of appearances.

This recognition of the *Thou*, according to Weyl, can be presented within his geometric analogy only if it is furnished with a purely *axiomatic* formulation. In taking this step Weyl sees a third viewpoint emerging in addition to that of realism and idealism, namely, a *transcendentalism* which "postulates a transcendental reality but is satisfied with modelling it in symbols."

But Weyl, ever-sensitive to the claims of subjectivity, hastens to point out that this scheme by no means resolves the enigma of selfhood. In this connection he refers to Leibniz's attempt to resolve the conflict between human freedom and divine predestination by having God select for existence, on the grounds of sufficient reason, certain beings, such as Judas and St. Peter, whose nature thereafter determines their entire history. Concerning this solution Weyl remarks

[it] may be objectively adequate, but it is shattered by the desperate cry of Judas: Why did I have to be Judas! The impossibility of an objective formulation to this question strikes home, and no answer in the form of an objective insight can be given. Knowledge cannot bring the light that is I into coincidence with the murky, erring human being that is cast out into an individual fate.

Weyl's divergence from pure phenomenology is made evident by the passage immediately following, which shows him to have come to embrace a kind of theological existentialism:

At this point, perhaps, it becomes plain that the entire problem has been formulated up to now, and especially by Husserl, in a theoretically too one-sided fashion. In order to discover itself as intelligence, the I must pass, according to Descartes, through radical doubt, and, according to Kierkegaard, through radical despair in order to discover itself as existence. Passing through doubt, we push through to knowledge about the real world, transcendently given to immanent consciousness. In the opposite direction, however—not in that of the created works but rather in that of the origin—lies the transcendence of God, flowing from whence the light of consciousness—its very origin a mystery to itself—comprehends itself

in self-illumination, split and spanned between subject and object, between meaning and being.

Weyl says that from the late works of Fichte he moved to the teachings of Meister Eckhart, whom Weyl calls the “deepest of the Occidental mystics”, the originality of whose basic religious experience cannot be doubted:

It is the inflow of divinity into the roots of the soul which he describes with the image of the birth of the “Son” or of the “Word” through God the Father. In turning its back on the manifold of existence, the soul must not only find its way back to this arch-image, but must break through it to the godhead that lives in impenetrable silence.

It was through the reading of Eckhart that Weyl “finally found for himself the entrance to the religious world.” But he admits that his metaphysical-religious speculations never achieved full clarity, adding that “this may perhaps also be due to the nature of the matter.”

In his later years, Weyl says,

I did not remain unaffected either by the great revolution which quantum physics brought about in natural sciences, or by existentialist philosophy, which grew up in the horrible disintegration of our era. The first of these cast a new light on the relation of the perceiving subject to the object; at the center of the latter, we find neither a pure I nor God, but man in his historical existence, committing himself in terms of his existence.

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During his long philosophical voyage Weyl stopped at several ports of call: in his youth, Kantianism and positivism; then phenomenological idealism; and finally a kind of theological existentialism. But apart from his brief flirtation with positivism (itself, as he says, the result of a disenchantment with Kant’s “bondage to Euclidean geometry”) Weyl’s philosophical orientation was in its essence idealistic: he cleaved always to the primacy of intuition that he had first learned from Kant, and to the centrality of the individual consciousness that he first absorbed from Fichte and Husserl. But while he continued to admire Husserl’s philosophy, I infer from his remarks in *Insight and Reflection* that he came to regard it as lacking in two essential respects: first, it failed to give due recognition to the transcendental external world, with which Weyl, in his capacity as a natural scientist, was concerned; and secondly, and perhaps in Weyl’s view even more seriously, that it failed to deal adequately with the enigma of selfhood: the fact that I am the person I am. Grappling with the first problem led Weyl to emphasize the essential importance of symbolic construction in grasping transcendental external

reality, a position which brought him close to Cassirer in certain respects; while the second seems to have led him to existentialism and even to religious mysticism.

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