General Discourse on the Subject of My Philosophy

Part 2 of 12

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As a sort of interlude in this presentation, I should like to return to the subject of the early Greeks and to certain consequences of the Kantian contribution. The early Greeks, namely, those before Socrates, did unearth certain problems that are of perennial importance. These are the problems known as, first, the One and the Many, and the problem of the Permanent and the Impermanent, or that which is changing. These are problems of premiere importance not only in Western philosophy, but also they appear in the philosophies of the Orient as matters of first importance. Thus, it is the seeking of the unity in the midst of multiplicity and of the permanent in the impermanent that is very largely the objective in the practical applications of the philosophy of Shankara. Among the Greeks the emphasis of these two wings of these two contrasts is developed by different philosophers in a different way.

Thus, it was Heraclitus who was very strongly impressed with the ubiquity of change. Everything changes continuously; not for two moments is anything exactly the same as it was. This we know to be true of all of the phenomena of the world. It is very obvious in the manifestations of sub-atomic physics, but it is also known to be true of the seemingly permanent hills. The only difference is a difference in the time scale of the changing process. In fact, Heraclitus said you can never step twice into the same stream; and someone has added that you even cannot step once, for in the time elapsing during the stepping the stream has changed.

Contrasted to this was the philosophic position of Parmenides and his school of which the chief disciple was Zeno, who maintained the real is the changeless and that all change is merely an appearance, a something that is not real. And the paradoxes of Zeno were designed originally to prove the unreality of change.

There is also the relative emphasis of the one and the many. Oneness was generally regarded as the superior fact and manyness as occupying a subordinate position. Indeed, it was Plotinus who named the ultimate Realization as the "One."

But there is also another contribution from the pre-Socratic Greeks that is, I think, of perennial importance, and that is the contribution of Pythagoras. Pythagoras had an interest that transcended that of those who preceded him. In fact, he is said to have traveled abroad into India, had studied at the feet of Masters there, and later attained recognition among the Indian sages as the Foreign Master. His primary conception lay in connection with number. Whether he conceived number as itself the substance of that which is, or as simply the measure of that substance, may not be wholly clear, but number stood as a guiding modulus, certainly, in the determining of the processes of nature. Now, here is something that I think is of very great interest to us. There is, in fact,

a sense in which we may say that the modern scientist is a Pythagorean; for, indeed, observations in the subtler and more precise domains of our science is very largely a matter of reading numbers on a dial or on some other scale. Number determines fact for us. And in the case of the computer, which guides so much of our more modern highly technical industry, the process is a process of number—manipulation of number. And in fact, actually, our wealth is not measured in tangible dollars which we can hold as material objects in our hands as used to be the case, but actually is a number in certain records kept by the banks. Number, thus, is for us of supreme importance, perhaps fully as important as it was for Pythagoras, though for us, it is understood in a way different from that with which Pythagoras himself understood it.

Pythagoras is a very important figure not only in the field of philosophy, but even more so in the field of mathematics. He made to mathematics two of the most important contributions. First, he applied the principle that all mathematical theorems should be proven. Before him, mathematical conceptions were largely empiric determinations growing out of certain practical necessities, such as the possibility of re-determining specific land areas in the delta of the Nile after flooding, so that geometrical relationships were more akin to empiric determinations than of formal logical demonstration. Pythagoras insisted upon the importance of logical demonstration, something which we take so far for granted today that it is hard for us to conceive of a mathematic that was not a matter of logic.

In addition to his contribution of the theorem stated in the form that the squares of the legs of a right angle triangle summed equal the square on the hypotenuse, he made a determination out of this that is of supreme importance in the history of mathematics; although it came to the Greek mind as a shock and seems to have been the reason for a later persecution of the Pythagorean school. It is quite obvious that the diagonal of a square is the hypotenuse of a right angle triangle which has two legs of equal length which we may, therefore, regard as of unit length. The square of 1 is 1, so the sum of the squares on the two sides is 2; and according to the Pythagorean Theorem, this is the square on the side of the hypotenuse. So the length of that side is the square root of 2. But here is a new kind of number entirely foreign to Greek conceptuality. The Greeks conceived that all lengths were commensurable, that we could find a unit which could be divided into any length a rational number of times. This, however, is not true of the square root of 2 or any other irrational. There is no unit which is a common measure of a rational number and an irrational number. And this was shocking to the Greek because their concept of number had a religious value.

There is another sense in which many persons today are Pythagoreans, and that is in connection with onomanics; but I will reserve comment on this subject until after we have entered into some consideration of the contribution of Immanuel Kant, for it has, I think, a real pertinence here.[1]

[1] Thomas Taylor, *The Theoretic Arithmetic of the Pythagoreans* (York Beach, Me.: Samuel Weiser, 1983), vii-viii. The following is from the introduction by Manly P. Hall:

Now, in connection with the philosophical presentation of Immanuel Kant, this is the point to be borne in mind that represents his revolution in the approach to philosophy. You will remember that he maintained this position: that the cognizing subject carries with him certain forms which determine what his experience shall be. These forms are of two types: one known as the transcendental aesthetic, and the other, the categories of the understanding, corresponding to what I call perception and conceptual cognition—the two familiar forms of cognition that are the subject-matter of most philosophy and psychology. The transcendental aesthetic consists of two primary forms, namely, those of space and time. Ordinarily, in the naive view that had been the standpoint of nearly all philosophy up to the time of Immanuel Kant, and is the general view which, practically, we hold still today, is this: that space and time are external or objective existences. Newton even spoke of time as moving evenly through all whether there was a universe or not. In that sense, we may say that the common view of most human beings, and of the philosophers prior to Kant, was that these two elements were objective and given originally. Kant introduced the reversed position that the cognizing subject brought with him these forms as conditioning the structure of his perceptions. Thus, we could not affirm that the thing-in-itself, or the *ding an sich*, was experienced as it is in itself by the cognizing subject, but that the cognizing subject superimposed these forms upon our cognition. We experienced objects as existing in space and in time because that was the form by which we restricted, unknowingly, our experience.

In addition, there were the elaborate forms presented by the categories of the understanding which involved all of the processes of judgment and of reasoning. We brought logic with us; and our logic applied, therefore, to the world that we experienced because the experience was so conditioned by ourselves, though unknowingly so. The world that we experience fits the logical forms not because those forms are necessarily true of the thing-in-itself, but because they were true with respect to the structure of our possible experience. And this provides the answer to a question asked by Einstein which runs as follows, "How can it be that mathematics, being after all a product of human thought independent of experience, is so admirably adapted to the objects of reality?"[2] This, now, I think we can see, because the only experience that we can possibly have would be an experience which is conditioned by both the transcendental aesthetic elements and the categories of the understanding, which include logic. Logic, therefore, is implied in the possibility of experience.

The third book of the *Theoretic Arithmetic* is devoted to philosophizing on the virtues of numbers, and contains practically all of the fragments of genuine Pythagorean onomanics which have survived the ruin of time. From these fragments it will be evident that to the Samian Initiate numbers were the elements of a sublime theological symbolism. Through the study of mathematics Pythagoras invited all men to a communion with the gods.

Numerology as it is practiced today derives its premise from a short statement of Iamblichus to the effect that Pythagoras perfected a system of divination by numbers, based upon the secret traditions which descended from Orpheus.

[2] E. T. Bell, *Men of Mathematics* (New York: Simon & Schuster, 1937), xvii.

Now, the problem that presented itself to Einstein in this case is actually connected with a development in mathematics that had taken place some time previously, and this is a matter of particular interest. Most of us have had the background of what is known as Euclidian geometry. And the assumption underlying the Euclidian geometry is that there are certain self-evident truths, known as axioms, with which we start; and upon the basis of these axioms, we then proceed to reason and develop our proofs of various theorems. But one of these axioms, known as the twelfth axiom or parallel axiom, was so complex as stated by Euclid that it seemed to be a theorem. This led to an effort to derive this twelfth axiom as a consequence of the other axioms; but all effort in this direction failed. Then two approaches to the problem were made by Lobachevsky and Bolyai, on one side, and by Riemann, on the other.

Lobachevsky and Bolyai assumed that through a given point in a plane in which a given line lay that two parallel lines could be drawn, whereas, the twelfth axiom stated that only one such line could be drawn through such a given point. Then these men proceeded to develop a mathematical system on the basis of that assumption to see if it would run into any contradictions. If it ran into contradictions, that would support the Euclidian thesis as being true essentially. But the outcome was that a consistent system of mathematics could be developed upon the assumption that two lines could be drawn through such a point parallel to the given line.

There was another approach made by the mathematician known as Riemann to the effect that no line could be drawn through the given point which was parallel to the given line. This implied that any line whatsoever drawn through the given point, even though the sum of the interior angles on one side of a transversal cutting the given lines were equal to 180 degrees, then, even though that was so, the two lines would meet in a finite distance; whereas, in the Euclidian geometry, they meet only in an infinite distance. He built a geometry that was self-consistent, led to no contradictions, and, therefore, in the mathematical sense, exists.

Now, the interesting point was that this is a structure in pure mathematics not intended to have any applications whatsoever; it was a pure investigation. But when Einstein faced the problem of a general theory, known as the general theory of relativity, which would satisfy the observations of nature that had reached a degree of subtlety considerably greater than that which existed at the time of Sir Isaac Newton, this theory found that the geometry of Riemann met the requirements of the situation as the geometry of Euclid could not. It implies, among other things, a closed or finite space analogous to that of the space on the surface of a sphere; with this difference, that it implied that three-dimensional space had a character similar to that of the geometry of the surface of the sphere. The Riemannian conception fit this necessity. Now, the point was that Riemann was thinking in a pure sense, unrelated to any fact of experience, yet, in the end, his pure thought fit the facts as they were known at the time of Einstein in the field of physical and astronomic determination. How could this be, was the question that arose in Einstein's mind. But, I think we can see that if we carry with us psychical determinants, such as space and time, and the categories of the understanding, then experience must take the form that is valid for our pure thought. We cannot say that these forms are actually valid for the thing-in-itself or for reality as it is apart from our

cognition, if there is such a reality; but, of necessity, our pure thought must be valid for our experience simply because we carry those forms with us, though we are not conscious of this fact.

Now, there are two points to be distinguished: first, the general principle of Immanuel Kant to the effect that we carry the forms which determine our possible experience and thought; and, second, Kant's determination in detail of what those forms are. One might very well be convinced that the first point is preeminently and eternally valid, and yet, at the same time, be forced to disagreement with respect to the detailed delineation of what those forms are. A critique in the latter sense would not be a discounting of the first principle; the forms might be different from that which Kant conceived them to be, and yet the principle would remain valid. The question arises: are these forms universally valid for all men regardless of race and culture? Are they forms that are valid for the primitive? Are they forms that are valid for the advanced and very strange culture of the Chinese? Or are they forms that are valid for a given stage of culture, the one in which Kant stood? Or are they, in part, valid only for him as a given individual? These are questions of very considerable interest. I have not seen them discussed, but I have thought to offer in this domain.

I think it is very questionable to assert that the forms as delineated in detail by Immanuel Kant would be valid for primitive man as he is found in Africa, in Australia, in the South Sea Islands, and in the Americas; and I question whether they would be valid for the advanced and ancient culture of the Chinese; and, perhaps, not for the East Indian race and culture; but, in detail only valid for the modern mind as it had developed as a result of the culture of the classical period and the modern Western culture, to use the language of Spengler. And if this is so, then we would have to consider the possibility that there is something like an evolution or development in these predetermining forms that constitute the structural basis of different possibilities of cognition. Therefore, we may have here a new interpretation of the nature of evolution and of the nature of *maya* or the theory of universal illusionism.

First of all, let us consider a possible interpretation of illusionism from this perspective. In as much as it follows from Immanuel Kant that we are not, in our cognitions, dealing with the thing-in-itself as it is apart from cognition, but only as it appears through these forms of space, time, and the categories of the understanding, we are not, therefore, dealing with reality as it is in itself, but with a constructed world, even though we are unconscious of the fact that we ourselves are constructing it through these forms. To be sure, there are the unpredictable presentments in experience—unpredictable as to detail, but predictable as to form; note this distinction. We can not abstractly say that the content of possible awareness is necessarily conditioned by space and time and the categories of the understanding, but they may take other possible forms. We can only predict this, in this general way, that whatever man, as he is now, the product of Western culture, will see, or more generally, cognize the material of his experience under these forms. There would be implied an unpredictable element in their concrete immediacy, but a predictable element in the sense that they appear as existing in space and time and fit the categories of our understanding. Is it possible, then, that all human beings, and indeed all conscious creatures, carry with them, in general, a determining form, but that that

form itself grows or evolves or is manipulated by man either knowingly or unknowingly so that those forms become different in time with different peoples, with different creatures? Certainly it is true that Immanuel Kant's detailed determination fits the thinking of modern Western man, and perhaps very largely could fit the thinking of classical man, and, yet, fail to fit the cognitive functions of primitive man and of quite alien cultures.

Now, this has a certain bearing that determines the limitations into which we can apply our categories. Here, particularly, in connection with the onomanics of Pythagoras, might it be true that he had something that was valid within the cultural limitations of his time which no longer would be valid for man who is abreast of the present culture? No doubt the majority of human beings, as Spengler has pointed out, still think in terms of the mathematics of the classical culture, and only the relatively few, the more sophisticated, think abreast of what is now true of modern mathematics, of modern number. Might it be that the onomanics worked with those who lived in the day of Pythagoras, but would fail to work for one whose conception of number was abreast of that which exists in Western scientific culture? Perhaps it would work with those who are only abreast of the classical Greek conception of number living today, but not with those others whose consciousness has moved abreast of modern number thought, for number with us is a very different and a very much more complex conception than it was with the men of the day of Pythagoras. This is just a thought that I am throwing out, but my feeling is that applying the onomanics of Pythagoras in our day is a sort of regression to something which was, and that the important step to take is to come abreast of what number means for us and apply it in a way that is appropriate to its meaning.

You see that here we have a conception of evolution emerging that is different from that which is generally conceived to be valid. Generally, we conceive of evolution as something taking place objectively, that it is something that involving the thing-in-itself, as it were. But, if we can cognize only through these forms, we are not justified in predicating that the notion of evolution is valid for the thing-in-itself, but is valid only for experience as predetermined by our forms of cognition. Think of these forms, then, as subject to a principle of modification or change—evolutionary or otherwise. And as a result of this, the world of experience, not the world of the thing-in-itself, will be that which is evolving, but experience does not give the thing-in-itself as it is in itself. Evolution, then, is a superposition upon a reality of which we cannot predicate development or change, but of which we can, perhaps, say nothing except that somehow it is.

I would like to develop a conceptual image to suggest what this principle of the forms of perception and of the categories of the understanding as carried by the cognizing entity so that it predetermines the possible form his experience may take, I'd like to develop this conceptual image to render it somewhat more conceivable or imaginable. Let us assume that we have, to begin with, a cognizing entity. I'm not now concerned with a living animal, embodied entity, but only with a cognizing entity. I'm abstracting the cognizing entity from the concrete totality which is the actuality, to get this point put forward. Think of the cognizing entity of a center of awareness surrounded by, perhaps, a spherical shell, but it could be in any other shape; the important point is that it is a shell

or capsule by which this cognizing entity perceives his world about. Imagine, in that shell which encloses his consciousness, that there are certain windows which, however, are composed of a substance or a film so that he remains separated from the reality as it is in itself, which we will postulate as existing out beyond the shell. In this shell, there are windows cut in various shapes; they could be squares, circles, lunar structures, the forms of any sort.

Here, we are dealing with an image that is based purely upon the principle of vision, of sight, of the optical portion of our cognition—only that. The whole idea in its concrete totality would include the action of all of the sensuous side of man—the hearing, the smelling, the tasting, the tactile sense, the kinesthetic sense—but we are developing this image only in terms of the visual sense.

Imagine all sorts of forms and that beyond this shell, there is what we might call the Clear Light. And the Clear Light represents the thing-in-itself as it is in itself—the unmade reality, the uncreated reality, the unevolving reality, the unformed reality. And, then, this is experienced by the cognizing self through the windows under the form that those windows impose upon it—one window would be a tree, another a mountain, a third would be a star, and a fourth might be a galaxy, and so on through all the forms that we can imagine.

And also conceive of these windows as capable of development, of change, so that these forms are not fixed, but changing everlastingly; yet, the Clear Light beyond remains unchanging, unmodified. This, then, that which comes through these windows to the cognizing self, is the world of his experience—the only thing which he can contact so long as his cognition is restricted to sense perception and conceptual cognition; and that all that he knows, ordinarily, by these means in his ordinary consciousness is this field of forms, self-determined by the structure he carries with him, namely, the capsule shell; and which he himself is modifying by his relating of his consciousness to it; and, yet, the reality beyond is untouched, unmodified by those processes. Here is the domain of his evolution, of his endless change, while beyond lies the changeless, permanent Eternal.