

# ARE THERE ANY LIMITS TO COGNITION?

## Study Topics principles of cognition

### **7.0 Cognitive Unity**

It is due, as we have seen, to our organization that the full, complete reality, including our own selves as subjects, appears at first as a duality. Cognition overcomes this duality by fusing the two elements of reality, the percept and the concept gained by thinking, into the complete thing.

### **7.1 Hypothetical World Principle and Experience**

It is quite natural that a dualistic thinker should be unable to find the connection between the world principle which he hypothetically assumes and the things given in experience.

### **7.2 Ego-hood's Questions and Answers**

It is not the world which sets us the questions, but we ourselves. Only when the Ego-hood has taken the two elements of reality which are indivisibly united in the world and has combined them also for itself, is cognitive satisfaction attained.

### **7.3 Reconcile Familiar Percepts and Concepts**

Our cognition is concerned with questions which arise for us through the fact that a sphere of percepts, conditioned by place, time, and our subjective organization, is confronted by a sphere of concepts pointing to the totality of the universe. My task consists in reconciling these two spheres, with both of which I am well acquainted.

### **7.4 Conceptual Representation Of Objective Reality**

We can obtain only conceptual representatives of the objectively real.

### **7.5 Real Principles in addition to Ideal Principles**

The ideal principles which thinking discovers seem too airy for the dualist, and he seeks, in addition, real principles with which to support them.

### **7.6 Real Evidence of Senses in addition to Ideal Evidence**

The naïve person demands the real evidence of his senses in addition to the ideal evidence of his thinking.

### **7.7 Vanishing Perceptions and Ideal Entities**

Its realities arise and perish, while what it regards as unreal, in contrast with the real, persists. Hence naïve realism is compelled to acknowledge, in addition to percepts, the existence of something ideal. It must admit entities which cannot be perceived by the senses.

### **7.8 Perceptible Reality and Imperceptible Reality**

Metaphysical realism constructs, in addition to the perceptible reality, an imperceptible reality which it conceives on the analogy of the perceptible one.

### **7.9 Sum of Perceptions and Laws of Nature**

If we reject the untenable part of metaphysical realism, the world presents itself to us as the sum of percepts and their conceptual (ideal) relationships. Monism combines one-sided realism with idealism into a higher unity.

### **7.10 Separation and then Reunion of "I" into World Continuity**

Bridging over the antithesis can take place only in the quite specific way that is characteristic of the particular human subject. As soon as the I, which is separated from the world in the act of perceiving, fits itself back into the world continuum through thoughtful contemplation, all further questioning ceases, having been but a consequence of the separation.

### **7.11 Sum of Effects and Underlying Causes**

This is an inference from a sum of effects to the character of the underlying causes. We believe that we can understand the situation well enough from a sufficiently large number of instances to know how the inferred causes will behave in other instances. Such an inference is called an inductive inference.

### 7.12 Subjective and Objective World Continuity

Through considerations of the process of cognition he is convinced of the existence of an objectively real world continuum, over and above the "subjective" world continuum which is cognizable through percepts and concepts. The nature of this reality he thinks he can determine by inductive inferences from his percepts.

[top](#)

### 7.0 Cognitive Unity

[1] WE have established that the elements for the explanation of reality are to be taken from the two spheres of perception and thought. It is due, as we have seen, to our organization that the full totality of reality, including our own selves as subjects, appears at first as a duality. Cognition transcends this duality by fusing the two elements of reality, the percept and the concept, into the complete thing. Let us call the manner in which the world presents itself to us, before by means of cognition it has taken on its true nature, "the world of appearance," in distinction from the unified whole composed of percept and concept. We can then say, the world is given to us as a duality (Dualism), and cognition transforms it into a unity (Monism). A philosophy which starts from this basal principle may be called a Monistic philosophy, or Monism.

*cognition overcomes duality by fusing the perception and the concept into the complete thing*

Opposed to this is the theory of two worlds, or Dualism. The latter does not, by any means, assume merely that there are two sides of a single reality, which are kept apart by our organization, but that there are two worlds totally distinct from one another. It then tries to find in one of these two worlds the principle of explanation for the other.

[2] Dualism rests on a false conception of what we call cognition. It divides the whole of reality into two spheres, each of which has its own laws, and it leaves these two worlds standing outside one another.

[3] It is from a Dualism such as this that there arises the distinction between the object of perception and the thing-in-itself, which Kant introduced into philosophy, and which, to the present day, we have not succeeded in expelling. According to our interpretation, it is due to the nature of our organization that a particular object can be given to us only as a percept. Thought transcends this particularity by assigning to each percept its proper place in the world as a whole.



As long as we determine the separate parts of the cosmos as percepts, we are simply following, in this sorting out, a law of our subjective constitution. If, however, we regard all percepts, taken together, merely as one part, and contrast with this a second part, viz., the things-in-themselves, then our philosophy is building castles-in-the-air. We are then engaged in mere playing with concepts. We construct an artificial opposition, but we can find no content for the second of these opposites, seeing that no content for a particular thing can be found except in perception.

[top](#)

### 7.1 Hypothetical World Principle and Experience

[4] Every kind of reality which is assumed to exist outside the sphere of perception and conception must be relegated to the limbo of unverified hypotheses. To this category belongs the "thing-in-itself."

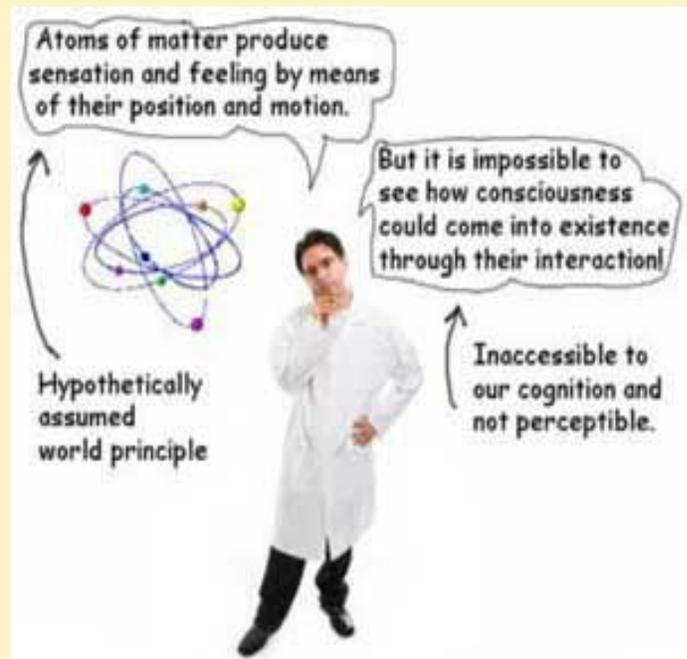
It is, of course, quite natural that a Dualistic thinker should be unable to find the connection between the world-principle which he hypothetically assumes and the facts that are given in experience. For the hypothetical world-principle itself a content can be found only by borrowing it from experience and shutting one's eyes to the fact of the borrowing. Otherwise it remains an empty and meaningless concept, a mere form without content. In this case the Dualistic thinker generally asserts that the content of this concept is inaccessible to our cognition. We can know only that such a content exists, but not what it is.

In either case it is impossible to transcend Dualism. Even though one were to import a few abstract elements from the world of experience into the content of the thing-in-itself, it would still remain

impossible to reduce the rich concrete life of experience to these few elements, which are, after all, themselves taken from experience.

Du Bois-Reymond lays it down that the imperceptible atoms of matter produce sensation and feeling by means of their position and motion, and then infers from this premise that we can never find a satisfactory explanation of how matter and motion produce sensation and feeling, for "it is absolutely and for ever unintelligible that it should be other than indifferent to a number of atoms of carbon, hydrogen, and nitrogen, etc., how they lie and move, how they lay or moved, or how they will lie and will move. It is in no way intelligible how consciousness might come into existence through their interaction."

This conclusion is characteristic of the whole tendency of this school of thought. Position and motion are abstracted from the rich world of percepts. They are then transferred to the fictitious world of atoms. And then we are astonished that we fail to evolve concrete life out of this principle of our own making, which we have borrowed from the world of percepts.



[5] That the Dualist, working as he does with a completely empty concept of the thing-in-itself, can reach no explanation of the world, follows even from the definition of his principle which has been given above.

[6] In any case, the Dualist finds it necessary to set impassable barriers to our faculty of cognition. A follower of the Monistic theory of the world knows that all he needs to explain any given phenomenon in the world is to be found within this world itself. What prevents him from finding it can be only chance limitations in space and time, or defects of his organization, i.e., not of human organization in general, but only of his own.

[top](#)

## 7.2 Ego-hood's Questions and Answers

[7] It follows from the concept of cognition, as defined by us, that there can be no talk of any limits of cognition. Cognizing is not a concern of the universe in general, but one which men must settle for themselves. External things demand no explanation. They exist and act on one another according to laws which thought can discover. They exist in indivisible unity with these laws. But we, in our self-hood, confront them, grasping at first only what we have called percepts. However, within ourselves we find the power to discover also the other part of reality. Only when the Self has combined for itself the two elements of reality which are indivisibly bound up with one another in the world, is our thirst for knowledge stilled. The Self is then again in contact with reality.

[8] The presuppositions for the development of cognition thus exist through and for the Self. It is the Self which sets itself the questions of cognition. It takes them from thought, an element which in itself is absolutely clear and transparent. If we set ourselves questions which we cannot answer, it must be because the content of the questions is not in all respects clear and distinct. It is not the world which sets questions to us, but we who set them to ourselves.

[9] I can imagine that it would be quite impossible for me to answer a question which I happened to find written down somewhere, without knowing the universe of discourse from which the content of the question is taken.

[top](#)

### 7.3 Reconcile Familiar Perceptions and Concepts

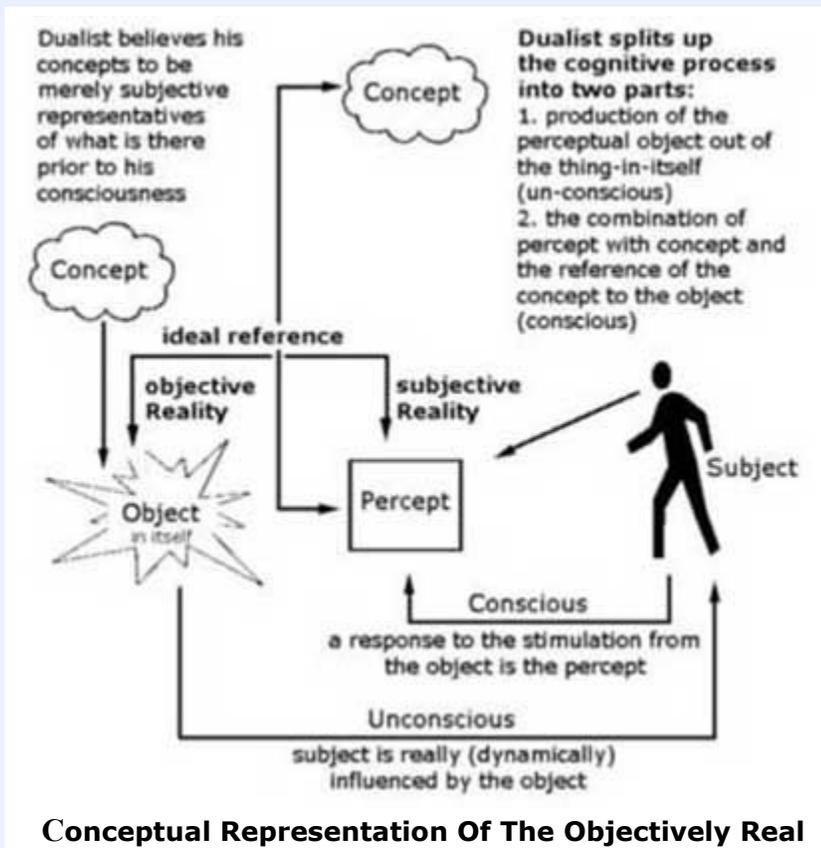
[10] Our cognition involves questions which arise for us through the fact that a world of percepts, conditioned by time, space, and our subjective organization, stands over against a world of concepts expressing the totality of the universe. Our task consists in the assimilation to one another of these two spheres, with both of which we are familiar. There is no room here for talking about limits to cognition. It may be that, at a particular moment, this or that remains unexplained because, through chance obstacles, we are prevented from perceiving the things involved. What is not found today, however, may easily be found tomorrow. The limits due to these causes are only contingent, and must be overcome by the progress of perception and thought.

[top](#)

### 7.4 Conceptual Representation Of Objective Reality

[11] Dualism makes the mistake of transferring the opposition of subject and object, which has meaning only within the perceptual world, to pure conceptual entities outside this world. Now the distinct and separate things in the perceptual world remain separated only so long as the perceiver refrains from thinking. For thought cancels all separation and reveals it as due to purely subjective conditions. The Dualist, therefore, transfers to entities transcending the perceptual world abstract determinations which, even in the perceptual world, have no absolute, but only relative, validity. He thus divides the two factors concerned in the process of cognition, viz., percept and concept, into four:

- (1) the object in itself;
- (2) the percept which the subject has of the object;
- (3) the subject;
- (4) the concept which relates the percept to the object in itself.



The relation between subject and object is "real"; the subject is really (dynamically) influenced by the object. This real process does not appear in consciousness. But it evokes in the subject a response to the stimulation from the object. The result of this response is the percept. This, at length, appears in consciousness. The object has an objective (independent of the subject) reality, the percept a subjective reality. This subjective reality is referred by the subject to the object. This reference is an ideal one. Dualism thus divides the process of cognition into two parts. The one part, viz., the production of the perceptual object by the thing-in-itself, he conceives of as taking place outside consciousness, whereas the other, the combination of percept with concept and the latter's reference to the thing-in-itself, takes place, according to him, in consciousness.

With such presuppositions, it is clear why the Dualist regards his concepts merely as subjective representations of what is really external to his consciousness. The objectively real process in the subject by means of which the percept is produced, and still more the objective relations between things-in-themselves, remain for the Dualist inaccessible to direct knowledge. According to him, man can get only

conceptual representations of the objectively real. The bond of unity which connects things-in-themselves with one another, and also objectively with the individual minds (as things-in-themselves) of each of us, exists beyond our consciousness in a Divine Being of whom, once more, we have merely a conceptual representation.

[top](#)

### 7.5 Real Principles in addition to Ideal Principles

[12] The Dualist believes that the whole world would be dissolved into a mere abstract scheme of concepts, did he not posit the existence of real connections beside the conceptual ones. In other words, the ideal principles which thinking discovers are too airy for the Dualist, and he seeks, in addition, real principles with which to support them.

[13] Let us examine these real principles a little more closely. The naive man (Naive Realist) regards the objects of sense-experience as realities. The fact that his hands can grasp, and his eyes see, these objects is for him sufficient guarantee of their reality. "Nothing exists that cannot be perceived" is, in fact, the first axiom of the naive man; and it is held to be equally valid in its converse: "Everything which is perceived exists." The best proof for this assertion is the naive man's belief in immortality and in ghosts. He thinks of the soul as a fine kind of matter perceptible by the senses which, in special circumstances, may actually become visible to the ordinary man (belief in ghosts).



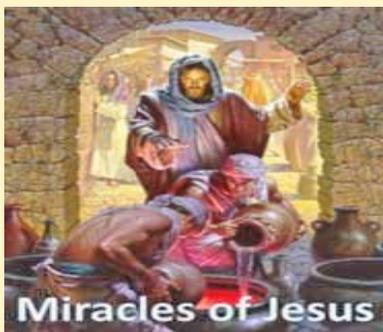
Photograph of Ghost?

[14] In contrast with this, his real, world, the Naive Realist regards everything else, especially the world of ideas, as unreal, or "merely ideal." What we add to objects by thinking is merely thoughts about the objects. Thought adds nothing real to the percept.

[15] But it is not only with reference to the existence of things that the naive man regards perception as the sole guarantee of reality, but also with reference to the existence of processes. A thing, according to him, can act on another only when a force actually present to perception issues from the one and acts upon the other. The ancient Greek philosophers, who were Naive Realists in the best sense of the word, held a theory of vision according to which the eye sends out feelers which touch the objects. The older physicists thought that very fine kinds of substances emanate from the objects and penetrate through the sense-organs into the soul. The actual perception of these substances is impossible only because of the coarseness of our sense-organs relatively to the fineness of these substances. In principle the reason for attributing reality to these substances was the same as that for attributing it to the objects of the sensible world, viz., their kind of existence, which was conceived to be analogous to that of perceptual reality.

[top](#)

### 7.6 Real Evidence of Senses in addition to Ideal Evidence



The naive man demands the real evidence of his senses.

[16] The self-contained being of ideas is not thought of by the naive mind as real in the same sense. An object conceived "merely in idea" is regarded as a chimera until sense-perception can furnish proof of its reality. In short, the naive man demands, in addition to the ideal evidence of his thinking, the real evidence of his senses.

In this need of the naive man lies the ground for the origin of the belief in revelation. The God whom we apprehend by thought remains always merely our idea of God. The naive consciousness demands that God should manifest Himself in ways accessible to the senses. God must appear in the flesh, and must attest his Godhead to our senses by the changing of water into wine.

[17] Even cognition itself is conceived by the naive mind as a process analogous to sense-perception. Things, it is thought, make an impression on the mind, or send out copies of themselves which enter through our senses, etc.

[18] What the naive man can perceive with his senses he regards as real, and what he cannot perceive (God, soul, cognition, etc.) he regards as analogous to what he can perceive.

[19] On the basis of Naive Realism, science can consist only in an exact description of the content of perception. Concepts are only means to this end. They exist to provide ideal counterparts of percepts. With the things themselves they have nothing to do. For the Naive Realist only the individual tulips, which we can see, are real. The universal idea of tulip is to him an abstraction, the unreal thought-picture which the mind constructs for itself out of the characteristics common to all tulips.

top

### 7.7 Vanishing Perceptions and Ideal Entities

[20] Naive Realism, with its fundamental principle of the reality of all percepts, contradicts experience, which teaches us that the content of percepts is of a transitory nature. The tulip I see is real today; in a year it will have vanished into nothingness. What persists is the species "tulip." This species is, however, for the Naive Realist merely an idea, not a reality. Thus this theory of the world finds itself in the paradoxical position of seeing its realities arise and perish, while that which, by contrast with its realities, it regards as unreal endures. Hence Naive Realism is compelled to acknowledge the existence of something ideal by the side of percepts. It must include



Flowers arise and perish, what persists is the flower species (an ideal entity).



Anthropomorphic God

within itself entities which cannot be perceived by the senses. In admitting them it escapes contradicting itself by conceiving their existence as analogous to that of objects of sense. Such hypothetical realities are the invisible forces by means of which the objects of sense-perception act on one another. Another such reality is heredity, the effects of which survive the individual, and which is the reason why from the individual a new being develops which is similar to it, and by means of which the species is maintained. The soul, the life-principle permeating the organic body, is another such reality which the naive mind is always found conceiving in analogy to realities of sense-perception. And, lastly, the Divine Being, as conceived by the naive mind, is such a hypothetical entity. The Deity is thought of as acting in a manner exactly corresponding to that which we can perceive in man himself, i.e., the Deity is conceived anthropomorphically.

[21] Modern Physics traces sensations back to the movements of the smallest particles of bodies and of an infinitely fine substance called ether. What we experience, e.g., as warmth is a movement of the parts of a body which causes the warmth in the space occupied by that body. Here again something imperceptible is conceived on the analogy of what is perceptible. Thus, in terms of perception, the analogon to the concept "body " is, say, the interior of a room, shut in on all sides, in which elastic balls are moving in all directions, impinging one on another, bouncing on and off the walls, etc.

top

### 7.8 Perceptible Reality and Imperceptible Reality

[22] Without such assumptions the world of the Naive Realist would collapse into a disconnected chaos of percepts, without mutual relations, and having no unity within itself. It is clear, however, that Naive Realism can make these assumptions only by contradicting itself. If it would remain true to its fundamental principle, that only what is perceived is real, then it ought not to assume a reality where it perceives nothing. The imperceptible forces of which perceptible things are the bearers are, in fact, illegitimate hypotheses from the standpoint of Naive Realism. But because Naive Realism knows no other realities, it invests its hypothetical forces with perceptual content. It thus transfers a form of existence (the existence of percepts) to a sphere where the only means of making any assertion concerning such existence, viz., sense-perception, is lacking.



Metaphysical Realism is Dualistic, constructing an imperceptible reality next to the perceptible reality.

[23] This self-contradictory theory leads to Metaphysical Realism. The latter constructs, beside the perceptible reality, an imperceptible one which it conceives on the analogy of the former. Metaphysical Realism is, therefore, of necessity Dualistic.

[24] Wherever the Metaphysical Realist observes a relation between perceptible things (mutual approach through movement, the entrance of an object into consciousness, etc.), there he posits a reality. However, the relation of which he becomes aware cannot be perceived but only expressed by means of thought. The ideal relation is thereupon arbitrarily assimilated to something perceptible. Thus, according to this theory the world is composed of the objects of perception which are in ceaseless flux, arising and disappearing, and of imperceptible forces by which the perceptible objects are produced, and which are permanent.

top

### 7.9 Sum of Perceptions and Laws of Nature

[25] Metaphysical Realism is a self-contradictory mixture of Naive Realism and Idealism. Its forces are imperceptible entities endowed with the qualities proper to percepts. The Metaphysical Realist has made up his mind to acknowledge, in addition to the sphere for the existence of which he has an instrument of cognition in sense-perception, the existence of another sphere for which this instrument fails, and which can be known only by means of thought. But he cannot make up his mind at the same time to acknowledge that the mode of existence which thought reveals, viz., the concept (or idea), has equal rights with percepts. If we are to avoid the contradiction of imperceptible percepts, we must admit that, for us, the relations which thought traces between percepts can have no other mode of existence than that of concepts. If one rejects the untenable part of Metaphysical Realism, there remains the concept of the world as the aggregate of percepts and their conceptual (ideal) relations. Metaphysical Realism, then, merges itself in a view of the world according to which the principle of perceptibility holds for percepts, and that of conceivability for the relations between the percepts. This view of the world has no room, in addition to the perceptual and conceptual worlds, for a third sphere in which both principles, the so-called "real" principle and the "ideal" principle, are simultaneously valid.

*Metaphysical Realism cannot acknowledge that what thought reveals, viz., the concept (or idea), is just as important as what is perceived*

[26] When the Metaphysical Realist asserts that, besides the ideal relation between the perceived object and the perceiving subject, there must be a real relation between the percept as "thing-in-itself" and the subject as "thing-in-itself" (the so-called individual mind), he is basing his assertion on the false assumption of a real process, imperceptible but analogous to processes in the world of percepts. Further, when the Metaphysical Realist asserts that we stand in a conscious ideal relation to our world of percepts, but that to the real world we can have only a dynamic (force) relation, he repeats the mistake we have already criticized. We can talk of a dynamic relation only within the world of percepts (in the sphere of the sense of touch), but not outside that world.



Monism

[27] Let us call the view which we have just characterized, and into which Metaphysical Realism merges when it discards its contradictory elements, Monism, because it combines one-sided Realism and Idealism into a higher unity.

**Naive Realism:** the real world is an aggregate of percepts.

**Metaphysical Realism:** reality belongs not only to percepts but also to imperceptible forces.

**Monism:** replaces forces by ideal relations (laws of nature) which are supplied by thought.

[28] For Naive Realism the real world is an aggregate of percepts; for Metaphysical Realism, reality belongs not only to percepts but also to imperceptible forces; Monism replaces forces by ideal relations which are supplied by thought. These relations are the laws of nature. A law of nature is nothing but the conceptual expression for the connection of certain percepts.

top

### 7.10 Separation and then Reunion of "I" into World Continuity

[29] Monism is never called upon to ask whether there are any principles of explanation for reality other than percepts and concepts. The Monist knows that in the whole realm of the real there is no occasion for this question. In the perceptual world, as immediately apprehended, he sees one-half of reality; in the union of this world with the world of concepts he finds full reality. The Metaphysical Realist might object that, relatively to our organization, our cognition may be complete in itself, that no part may be lacking, but that we do not know how the world appears to a mind organized differently from our own.



To this the Monist will reply: Maybe there are intelligences other than human; and maybe also that their percepts are different from ours, if they have perception at all. But this is irrelevant to me for the following reasons. Through my perceptions, i.e., through this specifically human mode of perception, I, as subject, am confronted with the object. The nexus of things is thereby broken. The subject reconstructs the nexus by means of thought. In doing so it re-inserts itself into the context of the world as a whole. As it is only through the Self, as subject, that the whole appears rent in two between percept and concept, the reunion of those two

factors will give us complete cognition. For beings with a different perceptual world (e.g., if they had twice our number of sense-organs) the nexus would appear broken in another place, and the reconstruction would accordingly have to take a form specifically adapted to such beings.

The question concerning the limits of cognition troubles only Naive and Metaphysical Realism, both of which see in the contents of mind only ideal representations of the real world. For to these theories whatever falls outside the subject is something absolute, a self-contained whole, and the subject's mental content is a copy which is wholly external to this absolute. The completeness of knowledge depends on the greater or lesser degree of resemblance between the representation and the absolute object. A being with fewer senses than man will perceive less of the world, one with more senses will perceive more. The former's knowledge will, therefore, be less complete than the latter's.

*The question concerning the limits of cognition troubles only Naive and Metaphysical Realism*

[30] For Monism the matter is different. The point where the unity of the world appears to be rent asunder into subject and object depends on the organization of the percipient. The object is not absolute but merely relative to the nature of the subject. The bridging of the gap, therefore, can take place only in the quite specific way which is characteristic of the human subject. As soon as the Self, which in perception is set over against the world, is again re-inserted into the world-nexus by constructive thought all further questioning ceases, having been but a result of the separation.

[31] A differently constituted being would have a differently constituted cognition. Our own cognition suffices to answer the questions which result from our own mental constitution.

*Our own cognition is sufficient to answer the questions which result from our own mental constitution*

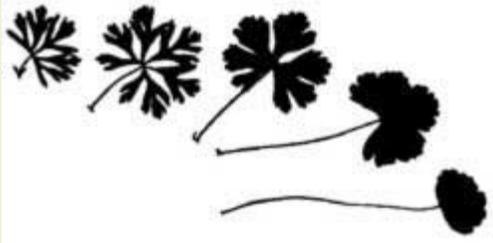
[32] Metaphysical Realism must ask, What is it that gives us our percepts? What is it that stimulates the subject?

[33] Monism holds that percepts are determined by the subject. But in thought the subject has, at the same time, the instrument for transcending this determination of which it is itself the author.

[top](#)

### 7.11 Sum of Effects and Underlying Causes

[34] The Metaphysical Realist is faced by a further difficulty when he seeks to explain the similarity of the world-views of different human individuals. He has to ask himself, How is it that my theory of the world, built up out of subjectively determined percepts and out of concepts, turns out to be the same as that which another individual is also building up out of these same two subjective factors? How, in any case, is it possible for me to argue from my own subjective view of the world to that of another human being? The Metaphysical Realist thinks he can infer the similarity of the subjective world-views of different human beings from their ability to get on with one another in practical life. From this similarity of world-views he infers further the likeness to one another of individual minds, meaning by "individual mind" the "I-in-itself" underlying each subject.



[35] We have here an inference from a number of effects to the character of the underlying causes. We believe that after we have observed a sufficiently large number of instances, we know the connection sufficiently to know how the inferred causes will act in other instances. Such an inference is called an inductive inference. We shall be obliged to modify its results, if further observation yields some unexpected fact, because the character of our conclusion is, after all, determined only by the particular

details of our actual observations. The Metaphysical Realist asserts that this knowledge of causes, though restricted by these conditions, is quite sufficient for practical life.

[36] Inductive inference is the fundamental method of modern Metaphysical Realism. At one time it was thought that out of concepts we could evolve something that would no longer be a concept. It was thought that the metaphysical reals, which Metaphysical Realism after all requires, could be known by means of concepts. This method of philosophizing is now out of date. Instead it is thought that from a sufficiently large number of perceptual facts we can infer the character of the thing-in-itself which lies behind these facts. Formerly it was from concepts, now it is from percepts that the Realist seeks to evolve the metaphysically real. Because concepts are before the mind in transparent clearness, it was thought that we might deduce from them the metaphysically real with absolute certainty. Percepts are not given with the same transparent clearness. Each fresh one is a little different from others of the same kind which preceded it. In principle, therefore, anything inferred from past experience is somewhat modified by each subsequent experience. The character of the metaphysically real thus obtained can therefore be only relatively true, for it is open to correction by further instances. The character of Von Hartmann's Metaphysics depends on this methodological principle. The motto on the title-page of his first important book is, "Speculative results gained by the inductive method of Science."

**Inductive Inference:** with a large number of perceptual facts we can infer the character of the thing-in-itself which lies behind these facts (but results gained are only relatively true).

[top](#)

### 7.12 Subjective and Objective World Continuity

[37] The form which the Metaphysical Realist at the present day gives to his things-in-themselves is obtained by inductive inferences. Consideration of the process of cognition has convinced him of the existence of an objectively-real world-nexus, over and above the subjective world which we cognize by means of percepts and concepts. The nature of this reality he thinks he can determine by inductive inferences from his percepts.