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Husserl's Reductions and the Role They Play in His Phenomenology

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The reductions were introduced by Husserl as part of his transcendental turn, which took place around 1905. He had used the word "reduction" before, in 1891, at the very end of his first work, *Philosophy of Arithmetic* (Husserl 1970b: 261ff.). However, the term is there used in the sense of reducing one kind of mathematical representation to some standard systematical form. For example, if we ask: "Which is greater, $18 + 49$ or 7×9 ?" we can answer this by "reducing" " $18 + 49$ " to the standard form "67," and " 7×9 " to "63" and we then have an immediate answer to our question.

In his next major work, *Logical Investigations*, from 1900/1 (Husserl 1975, 1984), there is no talk of reductions. Then in the *Ideas* (1913; cited as Husserl 1950), *First Philosophy* (lectures delivered 1923/4; cited as Husserl 1956, 1959), *Cartesian Meditations* (lectures delivered 1929; cited as Husserl 1988a, 1988b), and his last work, the *Crisis* (1954; cited as Husserl 1970a), reduction, in a quite new sense, becomes a central topic. Husserl discusses several kinds of reduction, the main ones being the eidetic, the transcendental, and the phenomenological reduction. Husserl interpreters disagree on what the reductions are and how they relate to one another. Some scholars find them so enigmatic that they write them off, together with all the rest of Husserl's transcendental philosophy. This reaction testifies to the central role the reductions play in Husserl's later philosophy: the reductions are the basic methodological tools of his transcendental philosophy; the reductions and Husserl's transcendental philosophy require one another in order to make sense.

In this chapter we will give an interpretation of the reductions that fits in well with Husserl's texts and, I hope, makes sense.

Some Basic Ideas of Husserl's Phenomenology

In order to understand the reductions and the role they play, we must first know the basic structure of Husserl's phenomenology, and in particular notions and distinctions that he introduced in connection with his transcendental turn. A basic idea from the beginning of phenomenology, in the *Logical Investigations* and hence before the transcendental turn, is *intentionality*, the directedness of consciousness. Let us explain it

with the help of one of Husserl's favorite examples, the seeing of a dice. When we see a dice, we see an object which has six sides, some of which can be seen from where we are, others can be seen if we twist it or move around it. The sides are square, but they appear as four-sided polygons unless we look at them from directly above. We have grown so accustomed to all of this we that we do not notice our complicated set of anticipations. Only when something goes wrong do we become aware that something disturbs. For example, if we move around and find no rear side, we may start reflecting and may discover that a lot of anticipatory structuring has been going on unnoticed. However, once we find a way of restructuring our experience, for example, by taking what we have in front of us as three square pieces put together to form a corner, which from some perspectives looks like a dice, we have an explanation of what happened and we can go on with our activities as before – until some other breakdown happens; according to Husserl there is no stage in perception where our anticipations are guaranteed to be successful.

The reflective attitude that we for a moment fell into when we tried to find out what disturbed, is a simple example of the *transcendental* reduction. We are reflecting on the structuring activity of our consciousness and the corresponding structure we expected to find in the experienced world. This reduction is not as mysterious as it might sound, and in a moment we shall expound and discuss it more systematically. Before we turn to this, however, let us notice that our dice example also may serve to illustrate the other main reduction in Husserl: the eidetic reduction. Let us now see how this happens. Looking at the dice, I may focus on this material object, which weighs approximately one-eighth of an ounce, which I inherited from my grandfather and which I would therefore not exchange with any other dice. I am seeing this particular physical object. When in this way I perceive a physical object, I am, Husserl says, in the natural attitude. However, looking at the dice I may also focus on its shape, I may disregard all the individual oddities of my dice and concentrate on the cubic form which is exhibited by my dice and also by many other objects. Further, my dice is not only a cube; it also exemplifies many other geometrical shapes, some of them more general, such as a polyhedron or a parallelepiped, or regularity, convexity, and so on. Each of these shapes can be the object I am focusing on when my eyes are directed toward the dice. What reaches my eyes may all the time be the same, but the object I am studying need not be this particular physical object, but may be any of the many features that are instantiated by it. The features need not be geometrical, they may be arithmetical, such as the five dots on the side turned toward me, or topological. They need not be mathematical at all; they can also be the color of the dice, its weight, etc. There is no limit to the number of features that a thing can instantiate.

All these features Husserl calls *eidōs* (plural: *eidē*), or *essences*. When Husserl writes about essences, he is hence not using the word as a label for something that is unique for each object, what is sometimes called individual essence. On the contrary, an essence is for him something that can be shared by many objects.

When we turn from observing a concrete physical object to studying one of these general features, we perform what he called the *eidetic* reduction. Again, this does not seem mysterious or difficult. It is something we do every day. Mathematicians do it more often than others, but we all do it, when we are turning from the concrete individuals to general features of the objects around us.

There remains the phenomenological reduction. But as we shall see, once we have the other two reductions, we also have the phenomenological one. Let us now, however, go through all of this somewhat more systematically.

Intentionality. Noema, Noesis, Hyle

First, intentionality: Husserl's teacher Brentano, from whom Husserl learned about intentionality, in two oft-quoted paragraphs defines intentionality as the *directedness* of our consciousness upon an object:

Every mental phenomenon is characterized by what the Scholastics of the Middle Ages called the intentional (or mental) inexistence of an object, and what we might call, though not wholly unambiguously, reference to a content, direction toward an object (which is not to be understood here as meaning a thing), or immanent objectivity. Every mental phenomenon includes something as object within itself, although they do not do so in the same way. In presentation, something is presented, in judgment something is affirmed or denied, in love loved, in hate hated, in desire desired and so on.

This intentional inexistence is characteristic exclusively of mental phenomena. No physical phenomenon exhibits anything like it. We can, therefore, define mental phenomena by saying that they are those phenomena which contain an object intentionally within themselves.¹

Husserl was very much in sympathy with Brentano's idea, but he saw two problems: First, some acts have no object. For example, when we hallucinate or when we think about the largest prime number or Pegasus, there is no object, although we might think so. What then about the act's directedness? Second, even when the act has an object, how does the act come to relate to it? Brentano gives no account of how this happens, he just states that the act is directed toward an object. Husserl endeavors to overcome both of these problems by introducing the notion of a meaning associated with the act. This gets its fully developed form in the *Ideas*, where he develops a theory of a *noema*.

The noema is a structure that is associated with each act, corresponding to all the "anticipations" we have about the acts' object. I put the word "anticipations" in quotation marks, because normally an anticipation is something we are aware of, but for Husserl, the noema has constituents that we are not aware of, "anticipations" that we have tacitly taken over from our culture and never thought about, even bodily settings, which we would have great difficulty describing in words even if we should be made aware of them.² Also, among our "anticipations" when we perceive an object is the anticipation that the object has features that go far beyond what we anticipate, features that we have never thought about and that are not even tacitly anticipated, features that have nothing corresponding to them in the noema, except our recognition that the object goes far beyond our anticipations. It is *transcendent*, Husserl said; it is not exhausted by our anticipations, and it never will be. As we go on examining the object, walk around it, turn it around, explore it with our various senses or with scientific instruments, our anticipations always go beyond what "meets the eye" or our other senses. The object, in turn, goes beyond anything that we ever anticipate.

Husserl conceives of the noema as an answer to the second question above: How does the act relate to its object? It also provides an answer to the first question: Acts may have this kind of directedness without their having any object. We often have anticipations that fail to be fulfilled. Husserl's way of dealing with acts without objects is strikingly parallel to Frege's way of dealing with expressions without a reference: the expression may have a meaning, a *Sinn*, without there being an object that matches this meaning. Husserl himself points to this parallel between noema and linguistic meaning in several places. In the third volume of the *Ideas*, which he never completed, he writes: "the noema is nothing but a generalization of the notion of meaning (*Bedeutung*) to the field of all acts."³ However, while Frege was rather taciturn concerning the notion of meaning and struggled with it mostly in his unpublished manuscripts, Husserl discusses the noema extensively. We need not go into his theory of the noema here. We shall however, take note of another, correlative notion, which is pertinent to our understanding the reductions: the *noesis*. Each act has a noesis, which is the experiential counterpart to the noema. The noeses are the structuring experiences, those that give structure, or meaning, to the act. While the noema is the meaning *given* in an act, the noesis is the meaning-*giving* element in the act.

The noeses are experiences, unlike the noemata, which are timeless structures. There is also a second kind of experience in our acts, that Husserl calls the *hyle* (using the Greek word for matter). The hyle are experiences we typically have when our senses are affected, but also can have when we have fever or are affected by drugs and the like. The hyle and the noesis have to fit in with one another; the hyle should be *filling* components of the noesis and correspondingly of the noema. This is what we meant by the metaphor "meet the eye" above: when we perceive, some of the "anticipations" in our noema are filled by hyle, others are not; they just point to further features of the object and may become filled when we go on exploring the object. These unfilled anticipations may conflict with the hyletic experiences we get when we explore the object, in that case, an "explosion" of the noema takes place, we have to revise our conception of what we perceive, we have to come up with another noema that fits in with our hyletic experiences. The hyle therefore *constrain* the noesis we can have in a given situation and thereby what noema we can have.

However, the hyle do not constrain us down to uniqueness; whatever hyle we have, there are always many different noeses that are compatible with them, noeses that differ in the anticipations that go beyond those that are presently filled. The object of an act, even an act of perception, is not uniquely fixed by the sensory experiences we have; there is always some slack, although we normally are not aware of this, except in special situations of the kind that Gestalt psychologists discussed under the heading "ambiguous" pictures. The hyle's constraining effect is crucial to bringing about our notion of *reality* and thereby the distinction between reality and fantasy. In fantasy there are no constraints, and as a consequence of this, fantasy lacks the reality character characteristic of perception. The reality character of the object is also reflected in the noema and noesis, in their so-called *thetic* component. This and the other components of the noema and noesis are, however, not needed in order to understand Husserl's reductions, and we shall therefore not discuss them here.⁴

As noted, in the natural attitude and also in the eidetic attitude we are not aware of these three elements of our acts, the noema, the noesis, and the hyle. They only

come to our awareness when we reflect on our acts and their structure. These three elements, noema, noesis, and hyle, remain hidden, although they are crucial to the way we experience the world. Husserl called them *transcendental*. This should not be confused with transcendent, which was mentioned earlier. “Transcendent” means “inexhaustible,” while “transcendental” means hidden, but crucial for our experience. It is this latter notion that is important in connection with the reductions.

Eidos. The Eidetic Reduction

We are now ready to go into the first of Husserl’s three reductions, the *eidetic reduction*. This is so called because it brings us to the eidos, or essences, of things. We touched briefly on the eidos in our discussion of the dice. Let us now consider it more closely. When I am facing the dice, my consciousness can be directed toward a number of different objects: toward a dice or some other object that looks like a dice from where I am, for example, as we noted, three square pieces put together to form a corner, or any number of other physical objects, the only requirement being that the noema of the act directed toward that object be compatible with the hyletic experiences I have. However, as we noted when we discussed the dice, my consciousness can also be directed toward one of the features of the dice, for example, its cubic form. In that case, I have anticipations of what kind of experiences I will get when the circumstances change or I perform certain actions. For example, I expect that if I count the corners I will get eight, and if I count the edges, I will get twelve. Some of these anticipations are similar to those I have when the object of my act is this concrete particular dice. However, I have no anticipations concerning this particular dice. I may take it away and replace it with another dice, and none of my anticipations will be violated. My anticipations when the object of my act is the cubic form include therefore only a subset of the anticipations I have when the object of my act is the concrete particular dice. Hence the label “reduction” for the passage from the experience of a particular concrete object to the experience of an eidos.

The object of my act in a given situation need therefore not be a concrete physical object, it can be an eidos. Given an act and the constraints imposed upon us by the hyle, the object of the act can in fact be any one of a large number of different physical objects, and it can also be any one of a number of general features, or eide. What object I experience, is underdetermined by the hyle. Husserl calls any act that is constrained in this way an *intuition*. These acts make reality claims; their noema has athetic component that corresponds to our regarding the object of the act as real. According to Husserl, intuitions and no other acts yield evidence for what the world is like. The three notions intuition, constraint, and reality are in this way intimately connected with one another.

Intuition that is directed toward physical objects Husserl calls perception. Intuition directed toward eidos or essences he calls eidetic intuition or essential insight (*Wesensschau*). Husserl regards himself an empiricist: all evidence reaches us through our senses. However, he argues that philosophers have jumped too quickly from empiricism to physicalism, the view that the only objects there are physical objects. Many of our acts are directed toward essences. And to the extent that they are constrained

in the way we have described, they give us evidence concerning essences and their various properties.

The examples of essences that we have given so far have been cubes and other geometrical forms and the number of dots on the side of a dice. These all belong to mathematics. However, as noted earlier, Husserl conceived of the study of many other kinds of essences; any kind of similarity between objects points to an essence, for example, colors, and also “humanity,” the feature all humans have in common. He conceived of a variety of eidetic disciplines in addition to geometry, arithmetic, and other mathematical disciplines. Each of them would study an essence or an inter-related group of essences. One of the methods they would use would be *eidetic variation*: one will focus on an essence and go through a number of examples that instantiate this essence. The examples need not be physical objects, it is easier and quicker to *imagine* new cases and variations and thereby explore what features this essence has and how it relates to other essences. Since we focus on essences when we study eidōs, and not on the objects that exemplify these essences, it does not matter for us whether these objects exist or not. By varying the examples of objects that instantiate the essence, we may prove existence results: we may find an instance that instantiates a particular combination of features. However, negative results, that there is no object satisfying a certain combination of features, require other types of considerations.

Husserl knew the method of variation from the philosopher/mathematician Bernard Bolzano (1781–1848) who developed this method in his *Theory of Science*.⁵ Husserl could also point to his mathematics teacher Karl Weierstrass, who used the method to discover a number of results in the foundations of mathematics, among them that there are continuous functions that are nowhere differentiable. (This result was proved 30 years earlier by Bolzano, but it was unknown to Weierstrass and Husserl, since Bolzano was not permitted to publish his results.)

The *eidetic reduction* is the transition from the *natural* attitude, where we are directed toward particular material objects, to the *eidetic* attitude, where we are directed toward essences (see Figure 8.1).

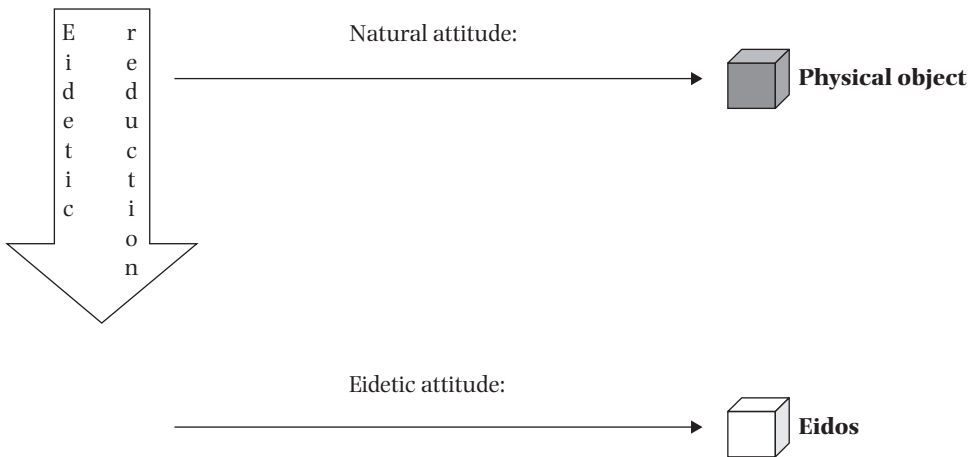


Figure 8.1

The Transcendental Reduction

Now on to the transcendental reduction. As already hinted at in our discussion of the dice in the beginning of the chapter, the transcendental reduction consists in our reflecting on the act itself rather than on its object. We then discover that our being directed upon the object consists of a complicated interplay of three elements: the structuring experiences in the act, *noeses*, the correlated structure given in the act, the *noema*, and the filling and constraining experiences, *hyle*.

Husserl argues that with some training one may be able to systematically study these three elements. One will then disregard the normal object of the act. One will not doubt that it is there, or wonder whether it is there, or check out one's anticipations by exploring the object further. Husserl calls this change of attitude an *epoché*, using the old Greek word for abstaining from judgment. He also calls this a *bracketing* of the object. One will simply not be concerned with the object, but solely with the structure of the act in which we experience the object. We will study the act's noesis, noema, and hyle. The *transcendental reduction* is this change of focus, from our object-directed attitude to an act-directed attitude. It leads us from the objects that we are concerned with in the natural or in the eidetic attitude to the transcendental objects, noema, noesis, and hyle, and also to the *transcendental ego*, the aspect of our ego that we are not aware of when we are considering ourselves as physical things in the material world, but that we become aware of when we discover the structuring activity of our own consciousness.

This reflective turn is called a reduction because it leaves out something that we were concerned with before the reduction started; the objects in the world and the *eide*. They are "bracketed", Husserl says (see Figure 8.2).

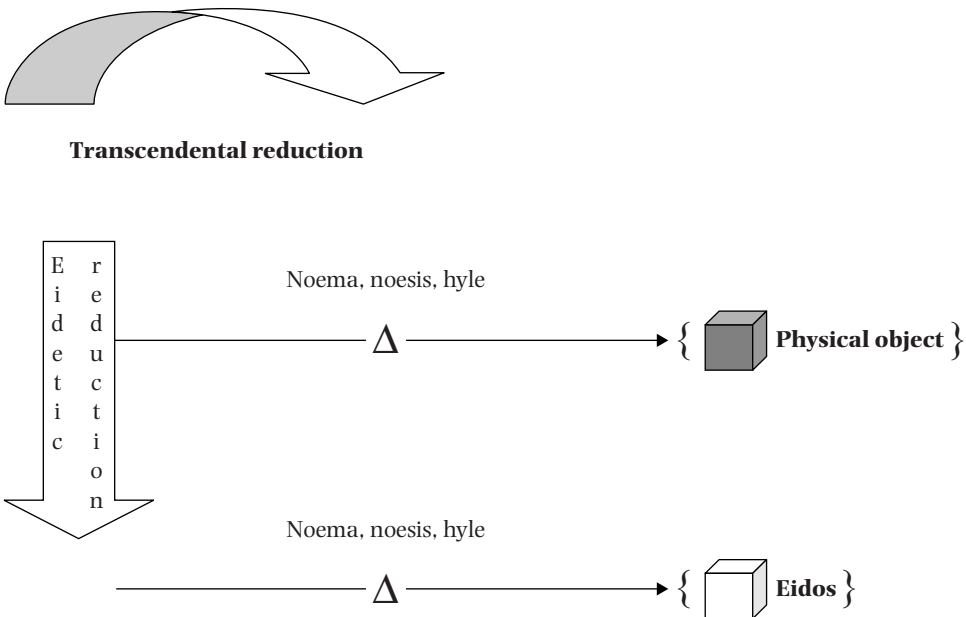


Figure 8.2

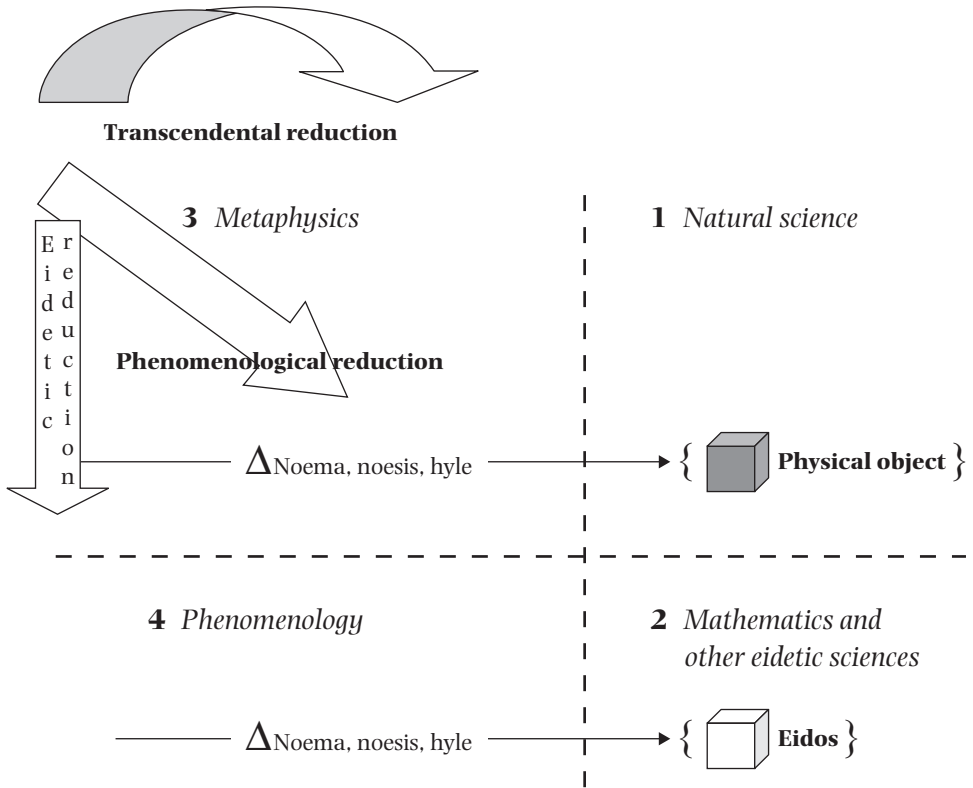


Figure 8.3

The *phenomenological reduction*, finally, is a combination of the eidetic and the transcendental reduction. It leads us from the natural attitude, where we are directed toward individual, physical objects, to an eidetic transcendental attitude, where we are studying the noemata, noeses, and hyle of acts directed toward essences. Using a diagram with four quadrants we can illustrate the phenomenological reduction (see Figure 8.3).

The reductions separate the objects of acts into four realms, indicated as four quadrants in Figure 8.3, and four main disciplines. In quadrant 1 we have the concrete physical objects that we are studying in the natural sciences. The eidetic reduction leads us to the eidos, the general features of objects, which are studied in mathematics and other eidetic sciences. If we perform the transcendental reduction on acts directed toward physical objects, we study the noemata, noeses, and hyle of such acts (quadrant 3). Husserl does not say much about this realm, but he proposes to call it metaphysics, and he indicates that it includes the study of the transcendental structuring of what is typically individual, such as death in its uniqueness for an individual, as distinguished from death as a general feature of people and animals. Quadrant 4, finally, contains the noemata, noeses, and hyle of acts directed toward essences. The study of these entities is what Husserl calls phenomenology. Hence the name of the reduction

that leads us from the natural attitude to the objects studied in phenomenology: the *phenomenological* reduction.

One final note concerning the reductions. In this presentation of Husserl's thought I have treated the phenomenological reduction as composed of the eidetic reduction followed by the transcendental reduction, in that order. It is clear that the order matters: if we were to start out with the transcendental reduction and then afterwards perform the eidetic reduction, we would arrive at the essential features of noemata, noeses, and hyle of acts directed toward individual concrete objects. This is not the same as the noemata, noeses, and hyle of acts directed toward essences. Husserl normally starts, as we have done, with the eidetic reduction and then follows it by a transcendental reduction. However, there are some few texts where he seems to permit the reductions to come in either order. In that case, phenomenology would presumably comprise the study of both realms.

Notes

- 1 Brentano 1924 (and later editions, pp. 124–5), vol. 1, book 2, ch. 1. Here quoted from D. B. Terrell's English translation of this chapter in Chisholm 1960: 50.
- 2 More on this in Føllesdal 1990. For more on the noema, see Føllesdal 1969.
- 3 Husserl 1950.
- 4 For more on this, see Føllesdal 2003.
- 5 Bolzano 1914–31.

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