

Coming Down from the Trees: Metaphysics and the History of Classification

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What is the philosopher supposed to do for the empirical researcher? To what extent can very general ontological considerations guide the construction of empirical concepts? This essay traces the relation of three kinds of concepts: transcendental, empirical, and what I call "meanings of being." I begin by showing the three kinds of concepts operating in Plato, and then study their relation in Kant and Hegel, who introduce significant changes that suggest one meaning for the notion of an "end of metaphysics." There are many meanings of "metaphysics" and many "ends," but the one I trace is pervasive, and still active. I conclude by showing how these issues remain divisive in current philosophical trends.

Plato and Aristotle

We can start with the trajectory that Plato describes in the *Republic*. Plato tells us that the master of dialectic has to travel the way up that arrives at the unhypothetical beginning, and then the way down to completion, descending with no reliance on sensible perception, traveling through forms to forms, and ending with forms. At ¹the end of the path the philosopher will possess a set of necessary and normative characterizations of what is being studied: the circle, the city, the virtue of justice, the kinds of pleasures, the statesman. The result would resemble what would later be called an a priori philosophical science. It would establish the "right" normative classification of beings.

Plato's dialectical way down is usually interpreted as a progression from the more general forms to the more specific through his process of collection

¹ "Thus [the process of dialectic] comes to its goal, not making any use at all of sensible things, but moving in forms through forms to forms, and ending with forms." (Republic 511c) References to Plato are given by Stephanus numbers, to Aristotle by Becker numbers (using the Ross translations), to Kant's *Metaphysical Foundations of Natural Science* (*Metaphysische Anfangsgrunde der Naturwissenschaft*) by pages in the Akademie edition and pages in the English translation by James Ellington (Indianapolis: Hackett, 1985), to the first Critique by A/B pages (using the Kemp Smith translation), to the *Opus Postumum* by pages in the Akademie edition, to Hegel's *Encyclopedia* by section number (E nn; using a mixture of translations by Miller and Petry), to the *Science of Logic* by volume and page numbers in the *Gesammelte Werke* and pages in the Miller translation. I have occasionally modified the translations.

and division. The Porphyrian tree of concepts of decreasing generality, for instance living being on top, animal in the middle, cows further down, illustrates this descent through genera to ever more particularized species. Plato would have us "cut reality at its joints" and find the ontologically necessary tree of genera and species.

Plato illustrates this method when he defines the sophist and the statesman. In building several definitional trees Plato discusses the method of dialectic and its ontological presupposition that the forms participate in one another. Dialectic traces the necessary connections of inclusion and exclusion inherent in each form.

However, there is a second kind of "concept" involved in Plato's enterprise. In the *Sophist* Plato discusses an unusual feature of some very general forms (being, sameness, and otherness).² These forms look as if they should be at the top of any tree of forms, but they do not really sit comfortably at any one location on the tree. They relate *directly* to every single form, which they "pervade and connect" and so make possible the forms' mutual participation and division. Plato says that one task of dialectic is to point out which kinds are consonant, and which are incompatible with one another--also, whether they are certain kinds that pervade them all and connect them so that they can blend, and again, where there are separations, whether there are certain others that traverse the whole and are responsible for the divisions. (Sophist 253bc; "responsible for" translates the word *aitia*.)

Although Plato does not make the point explicitly, Aristotle argues that being and unity do not relate to other concepts as genera to species; being is not a genus.

But it is not possible that either unity or being should be a single genus of things; for . . . it is not possible for the genus . . . to be predicated of its proper differentiae; so that if unity or being is a genus, no differentia will either have being or be one. (Metaphysics III.3, 998b21-28)

Being and unity do not appear on Aristotle's list of the categories that gives the highest genera of beings. They, and Plato's highest kinds, are not located at the top of the tree; they are the space within which the tree is articulated; they touch each item on the tree directly.

² These "greatest kinds" are often said to include five forms: being, sameness, otherness, motion, and rest. Of these only the first two have parallels to the medieval transcendentals. In his own way Hegel includes the other three.

These pervasive forms are the ancestors of the medieval transcendental concepts (*ens, unum, verum, bonum, res*) and I will use that name for them. They were called transcendental because they transcended any genus; they were not located on any branch in a tree of genus and species.

Although neither Plato nor Aristotle make too much of it, there is a problem about getting from the open space of the transcendentals to the articulated tree of genera and species.³ How do we find the joints and branchings, the proper differences that articulate the realm of being? This problem is less difficult for Aristotle, who uses a combination of argument and empirical observation to arrive at his tree of genera and species. The problem is acute for Plato, who restricts dialectic to the realm of necessary relations and demands that philosophical science "not make any use at all of sensible things, but move in forms through forms to forms, and ending with forms." (Republic 511c)

Implicit in this problem is a third kind of "concept". The examples of collection and division that Plato offers in the *Sophist* and the *Statesman* show him using a third kind of "concept" alongside the transcendentals and the tree of genera and species. The third kind of concept offers guidance for making divisions, and so helps establish genera and species. It regulates the branchings in the tree.

In the various examples Plato constructs, certain principles of binary division appear again and again. They create ontological divisions and levels that can be used to analyze phenomena and set up the tree of concepts. The most important is that which cuts between entities that possess in themselves a source of motion (or action or self-determination) and entities that receive motion (or action or determination) from another and then pass it on. This is the ontological principle behind the mind/body division and the division between the realm of the forms and our world, but it inspires other divisions as well, for example: divine/human production, freemen/slaves, *logon/alogon*, voluntary/involuntary, wild/tame animals, as well as many other distinctions Plato draws

³ There is a problem about the multiplicity of transcendentals. There are very few transcendental concepts on the medieval lists, but always more than one. How are they differentiated from one another, since they have the same extension? One medieval answer is that they are all the same concept, namely being, conceived as standing in different relations (to the intellect, to the will, etc.) We can also ask: could there be rival sets of transcendental concepts? I argue below that we should distinguish the transcendentals narrowly defined (roughly the medieval *ens* and *unum*) from the meanings of being. But this division, which is Aristotelian in spirit, overlooks the awkward inclusion of otherness in Plato's list, which foreshadows a more radical Hegelian treatment of that division.

between kinds of production and preservation, and kinds of arts, such as producer/retailer, productive/acquisitive arts, and others. A closely related distinction cuts between that being whose activity stays in itself and that whose activity affects others. This leads to more divisions of art and knowledge. These are not the only general polarities Plato uses to guide his construction of genus-species trees, but these recur constantly, and many other important polarities (such as reality/appearance or inside/outside or measure/measureless) can be related to them.

Aristotle is deeply influenced by these Platonic ontological polarities. Similar divisions show up in his discussions of actuality and potentiality, especially when he distinguishes the two kinds of actuality, those that do or do not have a product outside themselves. This metaphysical machinery gives him a set of divisions that can guide his empirical study and help him construct the genus-species trees. Like Plato he divides human skills in accord with these polarities, and types of knowledge and types of motion, but also grades of animality, the heavenly bodies, and so on.

In both thinkers these ontological polarities approach the genus-species trees from the side, as it were, to help in their construction. They advise where the branches should divide. The relation of these polarities to the transcendental concepts is not clear. These polarities are not themselves genera or species, for they are used repeatedly at many places in the tree, to construct the divisions among many different genera or species. Neither are they quite repetitions of the transcendental concepts such as being and unity, for they contain polarities.

In a way these principles give "content" to the transcendentals, which otherwise remain quite formal. Plato asks in the *Sophist* how true being can be distinguished, and he suggests that the mark of "being" would be the "power" to affect or be affected (247e).⁴ Becoming a principle of binary division, this distinguishes more and less powerful, that is, more and less self-sufficient, kinds of being. This brings the meaning of being as power to bear on divisions in the tree. We might say that being as power, with its built-in polarity, gives an absolute direction to the space opened by the more empty transcendental concept of being. Similarly, the Aristotelian notion of the kinds of actuality and

⁴ Plato says that *dynamis* would be the *horon* (in some texts *horon* is read as *horizein*) or mark for distinguishing real beings, a way of answering the question *toiond' einei to on*, what sort of a thing is being.

potentiality gives "content" to the notion of being, and provides guidance for the construction of conceptual trees.

The Heideggerian phrase "meaning of being" seems appropriate here, though I don't mean to imply the whole Heideggerian story of his "history of being." Still, it does seem possible that such a metaphysical meaning of being might change while the more formal function of the transcendentals continued. What would make a meaning of being "metaphysical," in some of the current meanings of that term, would be the polarity and directionality involved.

If the transcendentals offer an open logical space for the conceptual trees, the meaning of being gives that space definite dimensions and a metric and orientation, just as Aristotle's physical space has a built-in directionality and orientation. Not all directions in logical space are equal. Indeed, that there are directions at all in logical space is due to such binary principles of division.

These pervasive influences on the articulation of genus-species trees within the field of the transcendentals can define one meaning of "metaphysics." It would follow that one version of the so-called "end of metaphysics" would involve doing away with such built-in directionality in the opening of logical space. In the remainder of this essay I will show how that revolution happens in Kant and how it is partly followed up and partly retracted in Hegel.

Kant

The jump from Aristotle to Kant is long, but as philosophy went on, and especially after the revolutions and disputes wrought by the rationalists, Newton, and Hume, some justification for ontological classifications of reality became urgent, to answer the skeptics, to show that metaphysics was more than physical science, and to counter the proliferation of philosophical systems.

Kant agrees with Hume that there is no metaphysical necessity to be had by climbing up a tree of abstraction from experience. Nor can necessity be found by descending a tree of analyzed Leibnizian concepts. But Kant works from a new source for ontological categories. In the previous tradition, categories were derived from the basic features of entities. In Kant ontological discourse is to be structured by the architectonic and the table of the categories, but these categories themselves are not derived from an analysis of the features of beings. Kant derives them from the conditions for the possibility of determinate thought and the subject-object relation. Furthermore, in Kant ontological classifications no longer produce much in the way of divisions into

genera and species. Also, in Kant the first and the third kinds of concepts (the transcendentals and the metaphysical meaning of being) become fused in a new way.

In the first *Critique* Kant criticizes the idea that the ontologically basic concepts are simply the most general items on the tree of genus and species. Among empirical principles we can distinguish some that are more general, and so higher in rank than others; but where . . . are we to draw the line? . . . I ask: Does the concept of the extended belong to metaphysics? You answer, yes. Then, that of body too? Yes. And that of fluid body? You now become perplexed; for at this rate everything will belong to metaphysics. It is evident, therefore, that the mere degree of subordination (of the particular under the general) cannot determine the limits of a science; in the case under consideration, only complete difference of kind and of origin will suffice. (A843f/B872f)

For Kant the prime ontological categories are not highest genera to be divided into species. The categories he discovers through his transcendental analysis have quite another origin and quite another structure.

In Plato and Aristotle, the overall tone is one of discovery by investigating the nature of things. In Kant the discovery turns inward. The categories emerge from studying the conditions that make possible assembling the unity of experience and self across time. In that action, forms are applied, but those forms are neither empirical nor rationalist nor freely created. The action of synthesis is unification and presentation; Kant's categories are to give the dimensions of any possible unification and presentation.

The categories have complex relations among themselves but are not arranged in a tree structure. Instead the categories are found in four architectonic groups (quantity, quality, relation, modality), within each of which the first two categories connect to form the third.

Besides the twelve main transcendental categories, Kant affirms that there are other ontological concepts that are developed from the main categories. However, they are not generated by division. Kant says that "The categories, when combined with the modes of pure sensibility, or with one another, yield a large number of derivative a priori concepts." (A82/B108) His emphasis on combination shows that Kant does not think that the relation among the ontological categories is one of progressive differentiation.⁵

⁵ This issue is more complex than I have stated in the text. The passage from Kant continues: "The categories, as the true primary concepts of the pure understanding, have also their pure derivative

The Kantian categories open a space for possible objects of knowledge. They apply directly to all objects of thought. In this way they are like the medieval transcendental concepts. But they have more ontological punch. Kant's categories are not merely a list of concepts, as in the Medieval lists of the transcendentals, nor does Kant offer a set of highest genera, as in Aristotle's list of his categories. Kant's categories structure the possibility of thought and judgment through a four part structure (the four kinds of categories) and a subordinate three part structure (the relations within each of the four kinds), followed by various combining structures. As conditions of possibility Kant's categories give rise to synthetic a priori principles (about causality, substance, etc.) that go far beyond the kind of general statements derived from the medieval transcendentals.

Can we then conclude that the transcendentals of medieval times grow up to become the Kantian categories? Yes and no. Kant has this to say about the old transcendentals ("one, true, good"):

These supposedly transcendental predicates of things are, in fact, nothing but logical requirements and criteria of all knowledge of things in general, and prescribe for such knowledge the categories of quantity, namely, unity, plurality, and totality. But these categories . . . have . . . been used only in their formal meaning, as being of the nature of logical requisites of all knowledge, and yet at the same time have been incautiously converted from being criteria of thought to be properties of things in themselves. . . . We have not, therefore, in the concepts of unity, truth, and perfection, made any addition to the transcendental table of the categories, as if it were in any respect imperfect. (KRV B113-116)

For Kant the medieval transcendentals can, in one sense, all be gathered under the categories of quantity (unity, plurality, totality). His own categories go beyond them in detail and generative power. In another sense, Kant says that the medieval transcendentals express the "general logical rules, for the agreement of knowledge with itself," but in so doing they do not apply as ontological characteristics of objects.

concepts. . . . [this expansion of the categories] can easily be carried out, with the aid of the ontological manuals--for instance, by placing under the category of causality the predicables of force, action, passion; under the category of community the predicables of presence, resistance; under the predicaments of modality the predicables of coming to be, ceasing to be, change, etc. The categories, when combined with the modes of pure sensibility, or with one another, yield a large number of derivative a priori concepts." (A82/B108) So Kant does think of the other ontological concepts as being "under" the categories, but an examination of his examples shows that they are not dividing up an extension. Force, action, and passion, for instance, all apply to the same acts and events. Their being "under" causality does determine it, but not as if it were a genus being divided into mutually exclusive species.

So what becomes of the trichotomy I discerned in Plato and Aristotle? Earlier I have suggested a threefold division among transcendental concepts that open a space for other concepts, trees of genera and species, and meanings of being that guide the articulation of the trees. In Plato these roles are played by the highest kinds discussed in the *Sophist*, the forms for genera and species, and being as power. In Aristotle the roles are played by the notions of being and unity, the ten categories plus empirical genera and species, and being as kinds of actuality and potentiality. The medieval transcendentals play no important role in Kant, and his table of categories is not, like Aristotle's, a list of highest genera, and he offers no polarized meaning of being like Plato's. What we find instead is that (a) the table of the categories as a whole takes over the space-opening role of the medieval transcendental concepts, (b) the tree of genera and species includes some foundational concepts of the sciences plus empirical genera and species, and (c) what guides the branchings on the tree is the table of categories.

Notice that Kant's categories appear in the third place as well as in the first. We have seen that they fill and expand the role of the old transcendentals: every being that appears must fall directly under the categories; the categories are "transcendental" in the old sense as well as in Kant's new sense. They open the conceptual space for appearance. Now I want to show that they also fill the role of the old metaphysical meanings of being, because the structure of the table of categories offers some directions about how to approach the analysis of any realm of being and how to construct a tree of genera and species.

As an example I will turn briefly to Kant's treatment of the notion of matter.

Kant is not building trees. Because Kant structures his system overall according to the division of form and content, and what is a priori affects only the form of experience, you might think that there would be no problem in the relation of the categories to any tree of species and genera. We would let empirical observation fill in the genera while remaining within the formal limits demanded by the table of categories and the overall architectonic. Why have any a priori at all guide to tree construction?

But Kant wants to do special metaphysics as well as general ontology. He wants to "construct the concept" that specifies necessary properties and some laws for at least two kinds of being: matter and thinking substance, which are the objects of outer and inner sense. We can see this in operation at the

beginning of his discussion of matter, which is the kind of being that is formally required by our mode of outer intuition.⁶

Kant discusses matter in his *Metaphysical Foundations of Natural Science*, which was written after the *Prolegomena* but before the B edition of the *Critique*. There, and also in the notes gathered as his *Opus Postumum*, Kant tries to find a priori necessity for at least some wide genera of material beings and forces. In these arguments, the categories play a role quite similar to the role played by Plato's conception of being as power, guiding the divisions.

Kant insists that the four divisions of the table of the categories are the key to developing any system of ideas that will be relevant to science:

The schema for the completeness of a metaphysical system, whether of nature in general or of corporeal nature in particular, is the table of the categories. For there are no more pure concepts of the understanding, which can concern the nature of things. Under the four classes of quantity, quality, relation, and finally modality, all determinations of the universal concept of matter in general, and therefore, everything that can be thought a priori respecting it, that can be presented in mathematical construction, or that can be given in experience as a determinate object of experience, must be capable of being brought. (*Metaphysical Foundations* 473-477/11-16)

The first chapter of the *Metaphysical Foundations* presents basic concepts of matter considered as pure quantity, the second presents concepts of matter considered under its quality (as moving force), the third and fourth present concepts concerning matter in relation and with reference to its modality of appearance. The result is not a set of genera and species, but it is a list of what Kant considers the necessary basic categories for this kind of object.

This program in the *Metaphysical Foundations* was not Kant's last word on the subject. In the notes that make up his *Opus Postumum*, Kant

⁶ For Kant, constructing the a priori concept of matter does have an empirical presupposition, since it is a contingent fact that we have the modes of intuition that we do. We could have had non-spatio-temporal modes of intuition in which "matter" might not have been involved. But given that we do intuit under the forms of space and time, Kant thinks that there are necessities to be studied that tie the formal structures discussed in the first *Critique* to natural science. Kant says that "besides this empirical concept no other empirical principle is needed for cognizing the things" relevant to the foundations of science. (*Metaphysical Foundations* 470/7) "Natural science must derive the legitimacy of its designation only from a pure part of natural science, namely, from that part which contains the a priori principles of all remaining natural explications." (*Metaphysical Foundations* 468/4) We must work at "expounding this pure part as far as possible in its completeness, in order that one may be able to determine exactly what reason can accomplish of itself and where its capacity begins to require the assistance of principles of experience." (*Metaphysical Foundations* 469/5)

worked and reworked a proposed "Transition from the Metaphysical Foundations of Natural Science to Physics." There was need for a further bridge discipline that would connect the *Metaphysical Foundations* with empirical physics. He sought to bring the empirical manifold of physical moving forces into contact with an a priori order, without producing either a new empirical science or an extension of the table of categories. In this work too he claimed that "the moving forces of matter will be best divided according to the order of the categories, in terms of their quantity, quality, relation, and modality."⁷ (OP 21.291)

In both the *Metaphysical Foundations* and the *Opus Postumum* the table of the categories tells us not only the general requirements of thought but also suggests how to analyze and group physical moving forces. The table fills both the role of the old transcendentals (opening the space for classification) and the role of the meaning of being (guiding the construction of classifications).

What is important for our purposes is that the meaning of being role played by the table of categories is flat and formal. That is, although the table provides a conceptual order for the species of force where some divisions come before others, it does *not* establish an ontological hierarchy in the classic manner. Plato's meaning of being as power supplied a repeatable principle of binary division that inherently privileged one side of the divisions. This is not the case with Kant's categories as guides for classification. Some forces may be logically or categorically prior to others, but this does not mean that they are more "being" than the others, in the way that for Plato or Aristotle a full actuality is a more perfect example of being than a dependent actuality.

In the *Metaphysical Foundations* the definitions of matter and the various propositions about matter and force that are proved in each chapter build on the previous chapters, without supplanting one another or being absorbed into one final definition. They are not related as genus to species. The propositions proved in the different chapters all describe the same phenomena. The various forces have their concepts are constructed in a certain order, but they are ontologically all on the same level.

Although Kant emphasizes the overriding division of the a priori versus

⁷ The *Opus Postumum* continues to make use of the table of the categories as an ordering principle for studying the moving forces, but puts the categories in the context of the overall principle of purposive judgment and the need for a self-positing of the unified "I". (For a thorough discussion, see Eckart Förster, *Kant's Final Synthesis*, Cambridge: Harvard University Press, 2000.)

the empirical, the division of a priori and empirical is not a duality that guides the construction of genus and species trees. Nor does the table of categories provide highest genera to be divided into species. They are more like the old transcendentals, and yet they also give guidance in the construction of classifications: the two functions which were separated in the Greeks are fused in Kant.

In that fusion, to return to my spatial metaphor, the table of the categories sets the dimensionality of logical space, but eliminates its built-in orientation or directionality. We have moved from Aristotelian to Newtonian logical space. In such a space the construction of trees of genera and species becomes more empirical, and correspondingly of less interest to the philosopher.

Hegel

Though his work in progress was never completed, Kant was trying to make transcendental philosophy into what he said it should be, an architectonic and encyclopedic formal a priori science.⁸ With this goal we have moved some distance towards Hegel, or perhaps the distance was not so great all along.

Kant's deduction of the categories was considered incomplete by his successors. They objected to the "clue" he had found in the Aristotelian table of judgments, which seemed too empirical. There were also all the dualities that Kant seemed to presuppose, subject/object, in/out, appearance/reality, which had not received a proper transcendental deduction.

Hegel sought new ways to "deduce" categories. He kept Kant's basic strategy of deriving categories from the conditions for determinate thought, but added the claim that the self-investigation of pure thought thinking itself overarches any duality that might be used to "locate" its results as "only subjective" or only concerned with "appearances." For Hegel the basic ontological categories arise from pure thought thinking itself, thinking its own motions as its own content, seeking the conditions of possibility of ontological definiteness, togetherness, and self-coincidence, of which self-consciousness is a mode.⁹

⁸ Philosophy can become "eine Architectonische Encyclopädie welcher a priori ihr Formale zum Grunde liegt." (OP 21.109)

⁹ Something like Kant's "clue" reappears in the third part of the logic when Hegel tries to show how the process of pure thought gives rise to, justifies, and gives ontological weight to the basic moves of grammar and argumentation, but this is still generated by the attempt to think the conditions for determinate thought. Marxists move back toward a pre-Kantian position when they treat the dialectic as a

Hegel, like Kant, insists that ordinary empirical concepts do not turn into ontological categories by getting more and more universal.

This [empirical] universal is itself already determinate and consequently only a member of a division. Hence there is for it a higher universal, and for this again a higher, and so on . . . to infinity. For the cognition here considered there is no immanent limit. (WL 12.217/803)

Full-blooded ontological categories are to be generated in another way than by abstraction from given empirical data. Hegel's *Phenomenology of Spirit* could be seen as a version of the Platonic way up to the unhypothetical beginning, which for Hegel is the activity of pure thought. The *Science of Logic* articulates that beginning. The rest of the system gives a version of the Platonic way down to the concrete, as the logical categories are further determined to yield derivative concepts and to help organize genera and species.

Hegel is responding not just to Kant but to Reinhold's demand for greater systematicity than Kant had provided. Though he uses Kant's clues from the triplex structure of the category sets, and Kant's idea that the categories can be combined with one another, Hegel gets much more ontological detail than Kant. But in the *Logic* Kant's direction of progression is reversed: the dialectical combination of categories with one another yields fuller and richer concepts rather than derivative and lower ones.

In Hegel my three kinds of concepts look like this: (1) in the role of the transcendental concepts he has the Absolute Idea, the final category of the *Logic*, (2) for the tree of genera and species he has his philosophical treatment of various areas such as nature and history, (3) as a "meaning of being" that guides the constructions of more detailed concepts he has once again the Absolute Idea. As in Kant, the same item occurs in slots one and three. The action and content that open the space for empirical concepts also provides guidance for their construction.

The Absolute Idea with its internal movements fills the role of the old transcendentals by providing the space within which empirical concepts can be constructed. And it also fills the role of the old metaphysical meaning of being that guides the construction of subsidiary categories. It does both these roles, however, in a new way.

The old transcendentals that grew into Kant's table of the categories have now in Hegel become the entire *Logic*. The *Logic* moves through a sequence of kernels for ontologies that were in earlier ages developed into guides for classification and for constructing genus and species trees.¹⁰ The pattern of the motion of that sequence is self-described at the end of the *Logic*. The last items in the process both enact and describe the movement of the process. The makes space for determinations of thought, but not for a single concept or a static set.

For Kant the medieval transcendentals could be gathered under the categories of quantity. In Hegel the medieval transcendentals show up within the logical sequence, but are refracted into multiple categories on different levels. He has no single location for a single concept of unity or reality, and the absolute idea is neither a static tree nor a blank formal space.

The absolute idea might at first look like a super-category providing an ultimate metaphysical meaning of being. The Idea is unique in its union of form and content, but that content is just the preceding logical sequence taken as a motion with its own pattern. If there is a final meaning of being, it is this movement that poses itself from immediacy to determinateness and then takes that back into full self-possession.¹¹ Its content is the previous sequence now seen in terms of the method of its progress. The absolute idea gathers within, not over, the logical sequence, and it describes a set of transitions that are at once methodological form and ontological content. Its content is a description of its form, which is the process of the generation of its content through the sequence of the other categories.

As in Kant, what takes the place of the medieval transcendentals offers more content and structure than the old concepts could do. But Hegel's logic is also the self-referential movement of transition among various metaphysical meanings of being that offer temporary dimensioning to the space of being. These are gathered within a motion that could be considered a single formal meaning of being, except that the detailing of that form refuses to stand aloof

¹⁰ The categories of essence, since they come in pairs, work best in this regard, but the large divisions of the logic of being can be mobilized for this purpose, as can the threefold divisions in the logic of the concept. While the *Logic* courses through these ontological polarities and principles, neither in whole nor part is it organized as a tree of genera and species.

¹¹ "Being, which to the beginning as such seems an abstract affirmation, is thus much more negation, posited-being, mediated being, and pre-positing being." (E 238) The Absolute Idea is the concept of being fully developed, and Hegel says that the Idea returns into that concept at the end of the *Logic*.

and complete in itself, but throws us back into the varied transitions and contents.

While Kant opens a formal space in which the categories apply equally to all objects, Hegel produces a system of categories that apply in different ways to different spheres and instances, yet they are not empirical concepts and are not related in genus-species trees. So the first and third roles can no longer be separated even to the extent that was possible with Kant.

We can ask Hegel: do all beings we can think about exemplify at least *some* of the categories of the Logic? Yes. We can also ask: do all beings exemplify the *full* overall motion of the Logic? Here the answer is more complex than it would be for Kant. For Kant the table of categories is like the Aristotelian scheme of actuality and potentiality; it can be applied in any area of being. For Hegel the logical categories and movements do apply to everything, but not everything can contain the full movement.¹² All the stages of the *Logic* apply to all real beings. But in Platonic fashion Hegel allows that there can be beings that are not fully real. That is, there can be things (in nature or in social relationships and institutions) that remain abstract, in Hegel's sense of the word. They cannot in their structure manifest the full movement of the logical Idea. This means that they are not in his sense fully concrete, self-appropriating being, so that they cannot and do not exist on their own but only as moments within a richer totality. The study of just which totalities will contain just which moments is Hegel's equivalent of the old project of constructing classifications based on a tree of genera and species. It moves him some distance back from Kant's formal meaning of being toward the normative ontological judgments of Plato and Aristotle, though not in terms of genus-species divisions. This moves Hegel back towards Plato and "metaphysics" in the sense I have used, without returning to "metaphysics" as a study of beings independent of Kantian critical considerations.

The way Hegel uses logical categories to make ontological judgments is most clear in the *Philosophy of Right*, but I will parallel my earlier discussion of Kant on matter by a quick look at the early sections of Hegel's *Philosophy of Nature*, which treats of matter and force.

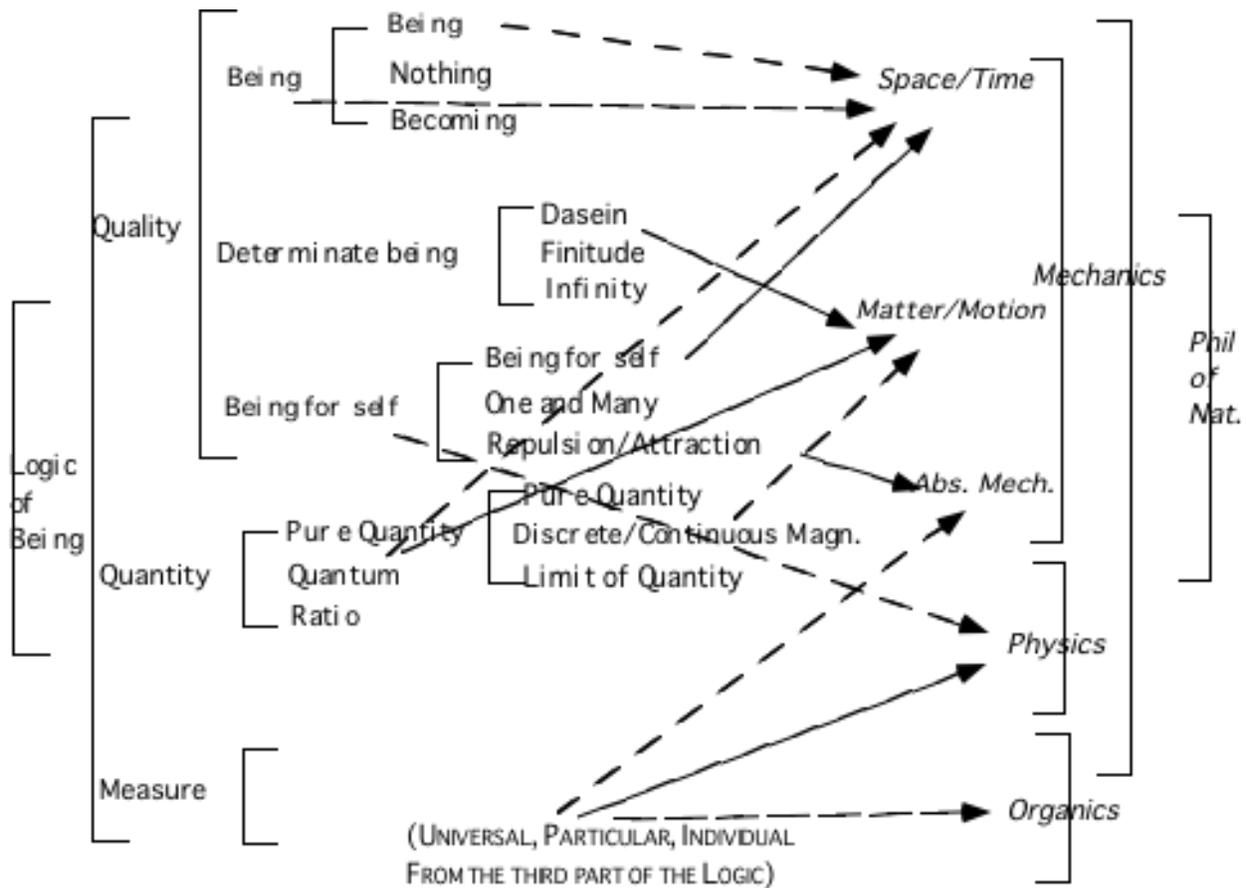
¹² "In point of form the logic has three sides: (a) the abstract side, or that of understanding, (b) the dialectical or negatively rational, (c) the speculative, or positively rational. These three sides do not make three parts of logic, but are moments of every logical-real, that is, of every concept, or every true thing whatever." (E 79)

At the end of the Introduction to the philosophy of nature Hegel uses his logical patterns to structure the divisions of his treatment:

The Idea as Nature is (I) in the determination of asunderness or mutual outsideness, of infinite separatedness, the unity of form being outside it . . . Mechanics; (II) in the determination of particularity, so that reality is posited with an immanent determinateness of form and with an existent difference in it. . . . Physics; (III) in the determination of subjectivity, in which the real differences of form are also brought back to the ideal unity which has found itself and is for itself--Organics. The division is made from the standpoint of the concept grasped in its totality." (E 252)

Kant used the structure of the table of categories to divide his treatment of matter and force, assigning different forces to different points in the structure. Hegel uses the dialectical patterns found in the *Logic* to structure his own treatment of matter and force. Hegel's logical structures are more elaborated than Kant's, and the application to Nature more complexly layered. There is no point for point transference from the logical progression to the philosophy of nature; multiple logical patterns are used at the same time, and not always in the order in which those patterns appear in the *Logic*.

The diagram below lines up the earliest sections of Hegel's *Science of Logic* against the early sections of his *Philosophy of Nature*. The arrows indicate the application of logical patterns in the discussion of nature. What is significant is how the arrows do not lie parallel but cross and recross as Hegel applies the dialectical patterns as needed.



Hegel and Kant

Hegel knew Kant's *Metaphysical Foundations*, and although Hegel's *Philosophy of Nature* contains no lengthy discussion of Kant's views, the order of treatment of the early topics is fairly similar. Hegel mentions Kant four times in the early parts of the philosophy of nature, but none of these mentions deal with the details of Kant's *Metaphysical Foundations*.¹³ Hegel does discuss Kant's doctrine of matter at some length in the larger *Logic*. There he censures Kant for treating the basic forces of matter (attraction, repulsion, and their species) as if they were externally related properties that just happen to show up in the same substance. (We might read some of Kant's efforts in his *Opus Postumum* as stemming from a similar worry about his earlier work.) What Hegel says

¹³ At E 254z Hegel discusses the first Critique's doctrine of space and time; 256z criticizes Kant's claim that the definition of a straight line is synthetic; 262z contains the only mention of Kant's *Metaphysical Foundations*, and refers to Hegel's fuller discussion of the forces of attraction and repulsion in the larger *Logic*; 268z discusses Kant's early writing on the shape of the Milky Way. In the last part of the *Philosophy of Nature*, which deals with organisms as purposeful totalities, there are two references to Kant's doctrines in the third Critique. In the *Logic*, the discussion of Kant on force and matter occurs where Hegel discusses the notion of a self-contained unit and the logical necessity of multiple such units, which leads to pre-concepts of attraction and repulsion that are not the physical concepts but provide the logical structure needed for thinking the physical phenomena. The treatment has some parallels to what Kant attempts in the *Opus Postumum*, but methods and goals differ.

about Kant's treatment of forces indicates the degree to which Hegel refuses to take the act of division and classification as final, and replaces it with movements within a totality.¹⁴

Their respective discussion of physical forces also shows us something important about the way Kant and Hegel alter the ancient search for normative classification. Neither of the Germans seeks to construct Plato's necessary tree of genera and species. But neither would be satisfied with a philosophy that just stated a few formal necessities and left to empirical observation the task of drawing up classifications of whatever entities and trees of genera and species just happened to exist--though this picture of philosophy has become common enough nowadays. While both Germans concede that at some level we do eventually just assemble lists and group empirical causes, both think that a good deal of necessary structure is needed to enable that activity.

So Kant and Hegel do not offer a philosophical science that produces an overall tree of genera and species classifications, but neither do they end up with a list of externally related entities, properties, and groups. When they get down to the business of dividing genera into species (and this is late in the game for both of them) they look for more than mere subordination and adjacency. In his treatment of matter and force, Kant organizes the species of force according to the table of the categories, and so into something akin to an order of prior and posterior. Hegel tries to find through the differentiated species of force a movement of self-division and self-affirmation. His dialectical patterns are to show how the division into species is necessary to the self-affirmation of the genus, and how the species have some echo of this and other dialectical patterns in their particularities.

For both Kant and Hegel the applications of their ontological schemes are

¹⁴ "Conceived as forces [attraction and repulsion] are regarded as self-subsistent and therefore as not connected with each other through their own nature; that is, they are considered not as moments, each of which is supposed to pass into the other, but rather as fixed in their opposition to each other. Further, they are imagined as meeting in a third, in matter, but not in such a manner that this unification is counted as their truth; on the contrary, each is regarded as a first, as being in and for itself, and matter, or its determinations, are supposed to be realized and produced by them. When it is said that matter has the forces within itself, they are understood to be so conjoined in this unity that they are at the same time presupposed as intrinsically free and independent of each other. . . . This standpoint has before it only ordinary mechanics, not immanent and free motion. . . . The fixed difference of these two forces attributed to them from that external standpoint is no less null than any other distinction must show itself to be which, in respect of its specific content, is made into something that is supposed to be firm (*Festseinsollendes*); because these forces are only moments which pass over into each other, as we saw above when they were considered in their truth." (WL 21.166-171/178-184) In this section of the *Logic* Hegel conducts a fairly detailed examination of a number of Kant's arguments and distinctions, but he seems to misunderstand Kant on a number of key points.

not simple transfers from one field to another; both thinkers are supple and ingenious in what more empirical concepts they choose to link to their ontological machinery. But that very suppleness should increase our worry that in both cases, but especially in Hegel, they are working with a repertory of structures from which they choose to draw this or that pattern. That choice seems more flexible and more empirical than their methodological pronouncements allow, and more under the influence of historical factors that are not supposed to be operative at that level of necessary knowledge.

Both Kant and Hegel are influenced by current science and its disputes (dynamism over mechanism, the nature of chemical compounds, Goethe's theory of colors, puzzles about the ether, and so on). Both share a special antagonism to the mechanical picture of nature as made up of externally related self-complete atoms--Kant and especially Hegel are deeply anti-atomist in their physics, in their ontology, and in their theories of meaning.

Hegel says explicitly that it is the business of philosophy to take up current science and to find the necessity behind the categories and laws that science has developed (E 9). Kant does not put the point that way, but he is willing to have his a priori science take sides, as in the dispute between mechanism and dynamism. Both thinkers, however, view their comments on current scientific disputes not as the validation of one of a pair of equally plausible hypotheses but as showing that one side of the dispute is badly conceived or ultimately un-thinkable.

Although both thinkers want philosophy to keep an eye on current science, they differ concerning the stance of the philosopher. Hegel does not, like Kant, approach the science of his time seeking to draw lines between a priori laws and empirical statements. Rather he seeks to find in current science the traces of the concept and notion that he knows from the logic must already be there. The Kantian philosopher stands firmly on the established ground of the a priori. The Hegelian philosopher moves in the circle of the self-differentiation of the Idea, which encompasses both the pure thought of the categories and the self-particularizations that are found in the otherness of nature. Those particularizations are examined in the confidence that they already embody the categorial structures of the Idea. "Believe in reason, no matter how contingent things seem to be--that the world moves according to

reason."¹⁵

There are many more comparisons that could be drawn between their treatments. For instance, we could talk about the way Kant's entire analysis works within an overarching subject-object relation that Hegel does without.¹⁶ Here I want to follow out another comparison that concerns my theme.

Consider what we get from the two thinkers. Kant is out to set up certain distinctions and orders of priority, and so is Hegel. Both thinkers deal in authoritative classifications. But Kant seeks synthetic a priori statements. Each of Kant's chapters in his treatment of matter tries to prove some necessary propositions and dismiss other alternative propositions. You can sum up Kant's results in a series of statements that look like a prelude to or a part of Newtonian physics. Classifications occur through and within those statements.

On the other hand, looking for a set of statements that sums up Hegel's philosophy of nature would be a frustrating task. There are no conclusions that you can walk away with. Hegel is qualifying various ranges of predicates and discourses. Insofar as there are results they have to do with judgments about the order of dependence and the adequacy of different kinds of discourse. For example, Hegel tries to show that Kepler's discourse about motion is superior in certain ways to Newton's. He does not deny Newton's, but he refuses to take it as the first or last word. But then Kepler does not have the last word either. There are no final propositions and what there are of final classifications occur within a motion that is not that of classifying.

¹⁵ "Glaube an die Vernunft, so zufällig es aussieht.--Dass es vernunftig in der Welt zugegangen." This is from a note in Hegel's hand, reproduced in the Hoffmeister edition of Hegel's Introduction to the History of Philosophy (Hamburg: Meiner, 1940), 265)

¹⁶ Kant's treatment begins with Phoronomy and ends with Phenomenology, both of which are stated in terms of matter and the subject/object relation. His treatment is visual throughout. There is no real parallel in Hegel to the first and last chapters of the *Metaphysical Foundations* (nor to the Transcendental Aesthetic that they presuppose). On the other hand there is no parallel in the Kantian text for Hegel's early sections on primitive concepts of space and time that are "pre-experiential." Hegel is not visual at all; his treatment of matter refers not to experience but to the logical structure of relations and differentiations needed to think the scientific concepts he is moving towards. There is no logical presupposition of an overarching subject-object relation. That relation, and the role it plays in Kant, has been put aside through the work of the *Phenomenology of Spirit*; it will not enter the system until the philosophy of spirit. This allows Hegel to make what would seem to Kant very odd statements, as where Hegel points out how this or that concept or movement involves a meaning or way of being that will be fully developed later on. For instance: "Time is the same principle as the I=I of pure self-consciousness, but this principle, or the simple Notion, still in its uttermost externality and abstraction--as intuited mere becoming, pure being-within-self as coming-out-of-self." (E 258z) "Motion is, in fact, the self, the subject as subject, the abiding of vanishing." (E 261z) Such things can be said precisely because at this stage the subject as such is not involved in some constitutive relation.

Implied here is an important difference in what takes the place of the old transcendental concepts. For Kant the conditions for language and experience can be isolated and reported in a series of straightforward formal principles. These principles level the ontological playing field. In the space opened by the categories, there is one non-polarized meaning of being for the phenomenal world. The transcendental categories are articulated not in a tree of genera and species, but in a series of synthetic a priori statements that apply to all entities. Philosophy then examines the warrants for claims within the space set up by those formal conditions. A large part, but not all, of current analytic philosophy espouses a modified version of this program.

Hegel's logic offers a fusion of the transcendentals with a variety of metaphysical meanings of being, each given its place in an overall motion. That motion with its self-description in the Absolute Idea is not a set of propositions on some meta-level. There is no static higher level; there is no independent platform from which it can all be reported. We have to be consciously within the motion. Its "summary" is its own self-description, but that description is not a report on a static form, but a re-enactment of the motion of thought, describing itself by doing itself. The Hegelian movement occurs as a series of purported wholes and their self-articulations. These are neither trees of genera and species nor sets of necessary propositions, but they do provide classifications. Any formal conditions are caught up within the movement, which is not describable in a purely formal way.¹⁷ A large part, but not all, of current Continental philosophy espouses a modified version of this program.

This End of Metaphysics Today

In classical and medieval philosophy there was much earnest construction of large genus-species trees that were supposed to cut reality at its necessary empirical joints. Kant stopped that kind of metaphysical adventure. If we take this "end of metaphysics" as the loss of a single meaning of being that provides an absolute orientation or built-in polarity for logical space, then almost all contemporary philosophy has embraced that end. Genus-species trees are no longer of deep philosophical significance. When they are fought over philosophically, it is usually not the details of one tree versus another, but the

¹⁷ When Hegel praises Kant's idea of the synthetic a priori statement, he gives it a Hegelian twist: "Kant's notion of synthetic a priori judgments--the notion of something differentiated which equally is inseparable, of an identity which is in its own self an inseparable difference, belongs to what is great and imperishable in his philosophy." (WL 21.200/209)

overall status of such classifications, as in realist-conventionalist disputes.

While there is some plausibility to the general characterization at the end of the previous section, describing analytic philosophy as Kantian and continental philosophy as Hegelian, closer examination suggests that on both sides of that divide we can find both Kantian and Hegelian ways of dealing with the end of ontological or transcendental guidance.

The focal issue is the possibility of a single meaning of being. The Kantian style of thought fuses the transcendentals into a structure of presuppositions that can be thought of as providing a formal meaning of being, without the polarities and primacies in most of the traditional meanings of being. This approach tends towards reportorial and argumentative prose.

The Hegelian style disperses the transcendentals into a movement that we are constituted within. This can be described as one oddly broken meaning of being or as a movement out of which many such meanings emerge. This style can tend more towards performative than reportorial textual gestures.

In those species of analytic philosophy that aim for the primacy of logical analysis and avoid a fully naturalized epistemology, but also in many versions of Continental critical theory, we find something Kantian stripped of Kant's detailed table of the categories and his architectonic of the sciences. The categories have become slimmer formal conditions for discourse, and there is nothing like Kant's attempt to extend necessity into the foundations of physical science. The formal conditions open a level field on which one builds such empirical concepts as one can. All genus-species trees have become empirical. Such a formal analysis of conditions of possibility is often supplemented by a general pragmatism, which could be seen as a mutated version of Kant's overarching subject-object relation and his distinction between the realm of appearance and things in themselves. There are no polarized metaphysical meanings of being to guide the construction of empirical concepts -- this is the "end of metaphysics" described above -- but there is one non-polarized "factual" meaning of being as presence that is enforced for all entities -- this is a continuation of "metaphysics" in another sense of the term. The status of formal analysis itself is not taken as problematic. Formal analysis is securely located within unchallenged dualities such as form/content, epistemological/ontological, and logical/psychological.

In more Wittgensteinian and Rortian-pragmatic species of analytic philosophy, and in phenomenological and hermeneutic species of Continental

philosophy, we find something Hegelian, where the transcendentals remain fused with a motion within which forms or structures come to be. This resembles Hegel's process, but his circle is broken. Pure thought is compromised and its motions spill over in all directions--Plato's form of otherness returns with a vengeance. So we get deconstructive and hermeneutic and other attempts to find movements and differences within the most fixed systems and polarities. The motion of being is neither Platonic harmony and differentiation nor Hegelian self-division and re-appropriation. What goes around doesn't come all the way around. The motion is incomplete and broken and self-transgressive. In this case the status of formal analysis is very problematic indeed, since something like the older Hegelian strictures against purely formal unities still apply, and, as in Hegel, they apply to themselves as well. Standard dualities are challenged, without locating them within larger fixed conceptual structures. As in Hegel, this leads not to nihilistic paralysis but into a self-reflexive motion of thought or interpretation.

Each style tries to recreate the other in its own image. The modern Kantian tries to force the modern Hegelian to admit a meta-level, a formal description of the motion; the Hegelian tries to force the Kantian to see that such descriptions are within a motion that they do not capture. The modern Kantian has rejected some of Kant's basic dichotomies, and the modern Hegelian has denied the purity of the logical categories, so we are really dealing with new species here.¹⁸

These Kantian and Hegelian trends do not exhaust contemporary options. In keeping with our beginning with Greek philosophy, we could describe another main trend as atomist and Epicurean. The opening of space for concepts is seen as arising from the combinatory play of multiple forces or elements, rather than as any kind of unified or unifying action of subjectivity or thought.¹⁹ This trend embraces thinkers on both sides of the analytic-continental divide, from

¹⁸ The situation is still more complex because both the Kantians and the Hegelians are naive about issues the other has seen better. For instance, insofar as it belongs to the Hegelian wing, deconstruction fails to see the strength of John Searle's argument about presupposing pure divisions, and insofar as they are in the Kantian wing, Quinean pragmatists take the identity of formal systems too simply. In the end, the Kantian style seems to me too caught up in form/content and subject/object polarities. Better an interrupted circle than a hierarchy of meta-discourses or a static formalism.

¹⁹ It is somewhat unfair to describe the European representatives of this broad trend as atomist, even though Deleuze cites the Epicurean swerve as an inspiration. There is a sense in which many of them share with the German Idealists the notion of a self-determination that is not the discovery of a form that was statically there all along nor the imposition of a form by or on a formless motion.

Nietzsche and Deleuze to the evolutionary and naturalized epistemologists. For them, the field where conceptual trees can be planted is a product of multiple local forces and non-intentional operations. There is no unified space of meaning, no overall action of unity or self-presentation or self-return. These thinkers offer only formal and pragmatic constraints on empirical concept creation, without desiring any more than evolutionary accounts of the origin or legitimacy of these constraints. Because of its anti-transcendentalism this trend can be seen as an even more final end of metaphysics²⁰, but in many cases it reintroduces a polarized meaning of being as power, and uses that meaning to guide classifications and evaluations in ways reminiscent of Plato's meaning of being.²¹

²⁰ Conventionalist or voluntarist versions of these theories may not adequately account for the possibility of the unity of the convening or willing individual or community across time. To disunify completely the space of appearance and thought leaves us unable to account for our own activities, and for the possibility and the togetherness of the pluralism we encounter. It is not enough to say that there must be some unity, but that the mode is left up to empirical considerations; what would 'unity' mean then, and how would we know when we found it?

²¹ Deleuze, and Foucauldian readings of Nietzsche are more "Platonic" in this sense than are their analytic counterparts.