Humanities 116: Philosophical Perspectives on the Humanities

1 From Porphyry's *Isagoge*, on the five predicables

Porphyry's *Isagoge*, as you can see from the first sentence, is meant as an introduction to the *Categories*. In it he discusses five important words that Aristotle uses constantly, but never defines in a clear and organized way. (The closest Aristotle comes is in *Topics* 1.4–5, which I used to assign for this course. But I find that it isn't very understandable.) The five words (traditionally called "the five predicable") are: "genus," "species," "differentia," "proprium," and "accident." They describe five ways in which, according to Aristotle, one predicate (property, characteristic) can apply to many things. Below are brief excerpts from Porphyry's already brief discussion. Most of what he says here is taken more or less directly from Aristotle, just reorganized. (Porphyry also had his own more original ideas; we'll see some of them next time.)

To put the whole thing even more briefly: you can define a species (for example, *human*) by giving its genus (*animal*, apparently, or maybe *mortal animal*) and its differentia (*rational*). (So the definition would be: "a human is a rational animal," or: "a human is a rational mortal animal."[1])

The differentia belongs to all the members of the species and only to them. (For example: all humans are rational, and, at least among mortal animals, only humans are rational.) But a differentia isn't just any characteristic like that. For example: among mortal animals, all humans and only humans are "risible" (able to laugh). But, unlike *rational*, *risible* is not (according to Porphyry) part of what it is to be a human; it doesn't really belong in a definition of *human*. Something like *risible* (which belongs to all members of a species, and only to members of that species, but is not a differentia) is called a "proprium." (So you can use a proprium to pick out a species—for example, you could say: "a human is a risible mortal animal"—but, in that case, you aren't picking out the species by its true definition.) Finally, a predicate which applies to many things but is neither a genus, a species, a differentia, nor a proprium, is here called an "accident." (We will have to discuss what this has to do with the "accidents," i.e. non-substances, from last time.)

(K) Since it is necessary, Chrysaorius, in order to teach Aristotle's *Categories*, to know [1] what a genus is and [2] what a differentia is, and what [3] a species or [4] a proprium or [5] an accident is ... I will try, making a brief exposition, to go over, in brief words, what [we have received from] the older [authorities]....

[1] Something like this is the correct definition according to Porphyry. As we'll see below, Aristotle often implies that the genus of *human* is *footed animal* (animal that walks on feet), and the differentia is *bipedal*. In that case the definition would be: "a human is a bipedal footed animal." Definition = genus + differentia.

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On genus

. . . Although genus is said in three ways, discussion [*logos*] among philosophers is about the third. To describe this, they have given [a definition], saying that a genus is what is predicated in the what-is-it of many things which differ in species. Such as, for example: "animal."[2] For some predicates are said of one thing only, as individuals are—such as, for example, "Socrates" and "he" and "this"; but some are said of many things, as [1] genera and [2] species and [3] differentiae and [4] propria and [5] accidents which pertain to something in common [with other things]. . . .

On species

. . . But species is . . . said of that which is under the genus given [in a definition]. In this way we are accustomed to say that human is a species of animal, animal being a genus, and white is a species of color, and triangle a species of shape. . . . Therefore, they also give [the definition] of "species" thus: a species is what is ordered under the genus, and which the genus is predicated of in the what-is-it; and further they also [define "species"] thus: a species is that which is predicated in the what-is-it of many things which differ numerically. But that last [definition] given would be [a definition] of the most specific species, which is *only* species, whereas the others would also be [definitions] of the species that are not most specific. . . .

Let what has been said become clear with respect to one category. Substance itself is a genus; under it is body, and under body animate body, under which is animal; but under animal is rational animal, under which is human; but under human are Socrates and Plato and [all] the particular humans. But of these *substance* is the most generic and that which is only genus, whereas *human* is the most specific and that which is only species; but *body* is [i] a species of substance, and [ii] a genus of animate body; [etc.]. . . .

On differentia

. . . Defining [differentiae] they say: a differentia is that by which the species surpasses the genus. For human has rational and mortal, beyond what animal has. . . .

They also give [the definition of "differentia"] thus: a differentia is that by which each thing differs. For human and horse do not differ according to genus, for both we and the irrational animals are mortal animals, but "rational," when it is added, divides us from them. . . . But, further working out matters concerning differentiae, they say that a differentia is not any chance thing which separate members of the same genus, but only that which contributes to the being and is a part of the what-it-would-be-to-be of the thing. For "being naturally apt to sail" is not a differentia of human, even if it is a proprium of human. . . .

[2]Note (important!): Porphyry and Aristotle don't use quotation marks or italics (neither of those had been invented yet). I've put them in sometimes where I think it will make things easier to follow, but there's no particular system to the way I've done it. (The same applies to all punctuation marks, in fact.)

On proprium
They divide proprium four ways.... Fourth, that in which only, all, and always run together, as "risible" [i.e., able-to-laugh] belongs to human [i.e., *only* humans are able to laugh, and *all* humans are *always* able to laugh].... As, too, "hinnible" [i.e., able-to-neigh] belongs to horse. But these, they say, are *strictly* propria, because they convert: for if it is a horse, it is something hinnible, and if it is something hinnible, it is a horse.

On accident
An accident is what comes to be and passes away separately from the corruption of the subject. But they divide it in two: for some of them are separable, others inseparable. Thus sleeping is a separable accident, but being black is an accident which pertains inseparably to raven and Ethiopian.... But they also define it thus: an accident is what can [both] subsist and [at another time] not subsist in the same thing, or: what is neither genus nor differentia nor species nor proprium, but is something which always subsists in a subject.

2 Readings from Aristotle on the categories and the predicables

The following passage is from the very beginning of the *Categories*—which means, following the traditional order, the very beginning of all of Aristotle's works (notice that it begins at 1^a1). That traditional order probably doesn't have much to do with anything Aristotle actually intended, but the subject of this passage really is pretty fundamental: the difference between a word applying the same way (with the same meaning) to different things, versus being used in different senses ("said in many ways"). In the first case, Aristotle says that the word is used "univocally" (*sunōnumōs*); in the second case, he says it is used "equivocally" (*homōnumōs*).

Aristotle explains, roughly speaking, that when a word is used univocally, not only the same word but also the same definition applies in all cases. When the word is used equivocally, on the other hand, we would define it differently in the different cases. What he actually says is not "definition" but "account [*logos*] of the essence."[3]

Note the example of equivocal uses of a word: "animal" applied (1) to a human being or an ox and (2) to a picture of a human being or an ox (so for example one might point to such a picture and say "this is an animal"). While these certainly aren't both "animals" in the same sense of the word, it's no mere coincidence that the word is used for both. Moreover one of the two kinds of "animal" is an "animal" in the primary sense; the other

[3]The following terms are more or less equivalent: "essence," "what-it-would-be-to-be," and "quiddity" (*quidditas* means "whatness" in Latin). They all refer to the fundamental characteristics which make something what it is, so that it doesn't even make sense to imagine that thing existing without those characteristics. "What-is-it" is also often used to mean this (but sometimes "what-is-it" seems to refer to substances in particular; we'll discuss this issue). (A related confusing point, which we'll also discuss: "essence" and "substance" are actually both translations of the same Greek word, *ousia*; it's traditional to translate it in different ways in its different contexts.)

kind is called an "animal" secondarily, because of some relationship it has to the first kind (it's a picture of one). Recall that Aristotle said something similar about "virtue": it is used equivocally, but the different senses are related, and one (intellectual virtue) is primary.

This type of equivocality plays a very important role in Aristotle's thought. Another important example (which we've already seen): "being" is said in many ways, but one of them (substance) is primary.

(L) Things of which the name only is in common, but the account [*logos*] of the essence according to the name is different, are said to be equivocal. As, for example, both a human and a picture [of a human] are "animals": for of these only the name is in common, but the account of the essence according to the name is different. For if someone were to give [an account of] what it is for each of them to be an animal, he or she would give a special account for each.

But things of which both the name is in common and the account of the essence according to the name is the same are said to be univocal. As, for example, that both a human and an ox are "animals": for the common name "animal" is assigned to each of these, and the account of the essence is the same. For if someone were to offer an account of what it is for each of them to be an animal, he or she would give the same account. (*Categories* $1.1^{a}1$–12)

Here Aristotle makes a connection between genus and univocality: the name of the genus is always used univocally of all the species that fall under the genus. ("Animal," in the previous reading, is an example of this: every species which actually falls under the genus *animal* is called an "animal" in the same sense—human beings and oxen are "animals" in the same sense—whereas pictures of animals, on the other hand, are not members of that genus or of any of its species.)

(M) [When something is offered as a genus,][4] one must investigate whether the [supposed] genus is not univocal in [each] species. For the genus is predicated univocally of all its species. (*Topics* $4.4.127^{b}5$–7)

As we've already seen, "being" is equivocal ("being is said in many ways"). It follows that there is no one genus of beings to which everything that exists belongs (either the genus *being* or the genus *one*). (You might think that *one* was a genus that included everything, because no matter what something is, there's always one of it. For example, every individual horse is *one* horse.) That there is no such super-genus which includes everything is the most important point in the following selection.

Also interesting is the odd argument which Aristotle uses here to prove that there is no such all-inclusive genus. The argument has to do with differentiae. If *being* were a genus, it would have species falling under it, and every species would have to be picked out by

[4]The main subject of the *Topics* is how to detect certain kinds of fallacies in philosophical arguments. Here Aristotle is giving a test to determine whether something has properly been suggested as a genus under which some species falls, or whether there has been a mistake.

a differentia. But, Aristotle claims, every differentia would itself have to be some kind of being. So, either it would itself *belong* to one of the species of being, or it would somehow fall under the genus without belonging to any particular species. Aristotle claims that both are impossible. (What does this imply about the differentiae in cases in which there *is* a genus—for example, the genus of substance? Apparently: they can't be substances.)

(N) But there cannot be one genus of beings—neither *being* nor *one*. For each of the differentiae of each genus must necessarily be both a being and one. But it is impossible either [i] for the species of a genus to be predicated of their own proper differentiae, or [ii] for a genus be predicated [directly] without [any of] its species.[5] So if either *one* or *being* is a genus, no differentia will be either a being or one [which is absurd]. (*Metaphysics* 3.3.998^{b}22–7)

If "being" is equivocal, in what ways is it used? Here Aristotle says that the most important meanings of "being" ("being per se") apply to the ten categories. Within each category, he says, being "signifies the same"—i.e., is used univocally. (For example: two substances are both called "beings" in the same sense, but a substance and a quality are called "beings" in two different senses.) So it looks like (1) the categories are genera of beings and (2) there aren't any higher genera. (Remember we already saw Porphyry say this about *substance*: that it is a "most generic" genus, which is *only* a genus, not also a species of some higher genus—as opposed to, say, *body*, which is a genus, because different species of bodies fall under it, but is also a species of substance.)

(O) But the things which are said to have being per se are the ones which the figures of category [*ta schēmata tēs katēgorias*] signify: for in as many ways as they are said, in so many ways does "being" signify. If, then, some predicates [*katēgoroumena*] signify a what-is-it, some a quality, some a quantity, some a relation, some an action or a passion, some a where, some a when, then, for each of these, "being" signifies the same. (*Metaphysics* 5.7.1017^{a}7–13, 22–7)

Some of you will recall the following passage from the *Nicomachean Ethics*. I hope it makes more sense now. The argument, apparently, is that since "good" applies to things in all categories, and the categories are the highest genera, "good" can't possibly be predicated univocally in all cases.

Notice this implies something stronger than we saw before. We already know that, according to Aristotle, there are no super-genera that include *all* of more than one category—

[5] So, in this case: suppose that *being* is a genus and that some species under that genus is defined by a certain differentia. Then: (i) it's impossible for that differentia to belong to any of the species of that genus, *being*, and (ii) it's impossible for it to belong to that genus, *being*, without belonging to any of its species. For example, suppose that *substance* were a species of being. Then it could be defined by adding a differentia to the genus, *being*. Call the differentia X (so the definition of substance would be: "a substance is an X being"). Aristotle claims that (i) it's impossible for X to belong to any species of being and (ii) it's impossible for X to belong to the genus, *being*, without belonging to one of its species. Therefore—as Aristotle goes on to say—X can't belong to the genus, *being*, at all. That is: X is not a being; it doesn't exist.

for example, no genus which includes both all substances and all qualities. So if there were a word, say "substaquality," that meant "either a substance or a quality," we would know that it applies equivocally (otherwise it would be the name of a genus, *substaquality*, which includes both). But now we learn that, according to Aristotle, there are no words at all that apply univocally to *any* members of more than one category. (For example: if both humans and colors can be called "ugly," the word "ugly" must not mean the same thing in both cases; it is used equivocally.)

(P) Since, furthermore, good is said equally of every being (for it is said in the what, as for example God and intellect; and in quality, the virtues; and in quantity, the proper measure; and in relation, the useful; and in time, the proper time; and in place, the proper place; and so forth)—it is clear that good could not be any one universal common thing: for it would not be said in all the categories, but in one only. (*Nicomachean Ethics*, 1.6.1096^{a}23–9)

Now we come to the real problem. Here is a passage where Aristotle seems to say, first, that differentiae are *qualities*. But then he says something else: that the differentia cannot "exist per accidens" in the thing they help define. We're not sure exactly what that means, but look at the last sentence, and compare the definitions of "accident"—which Porphyry takes from Aristotle—at the end of reading (K). It looks like the differentiae can't be accidents. But, wait, we just said that differentia are qualities. Aren't qualities supposed to be accidents?

(Q) [When something is given in a definition as a differentia,] one should check whether the differentia given signifies, not a certain quality [*poion ti*], but a certain individual this. For it seems that every differentia signifies a certain quality.

And one must examine, too, whether the differentia subsists per accidens in the thing defined. For no differentia is among the things that subsist per accidens, just as neither is the genus: for it is not possible that the differentia [both] subsist in something and [at another time] not subsist [in it]. (*Topics*, 6.6.144^{a}20–27)

The next two passages are just to help understand the one that follows them, from the *Physics*. They make a distinction between substance and quality: qualities have opposites (or, technically: "contraries"), whereas substances do not.

(R) Contrariety subsists in quality, such as, for example: injustice is contrary to justice, and whiteness to blackness, and so forth. (*Categories* 8.10^{b}12–13)

(S) It belongs to all substances that there is no contrary to them. For what would be the contrary of primary substances? Such as, for example: there is no contrary to a certain individual human, nor any contrary to human or to animal. But this is not a proprium of substance, but rather [belongs] to many other things, such as quantity: for there is no contrary to two-feet long, nor to ten, nor to any such thing.

(*Categories* 5.3^{b}24–7)

The following is part of a difficult argument in the *Physics*. Aristotle there is engaged in figuring out what are the "principles" of natural things. He argues that there must be at least two, which must be contrary to one another, because change or motion happens from one contrary to another. (Remember that "natural" things contain a "principle of motion.") But then he gives various arguments showing that two are not enough; there must be some third "principle" in which both contraries are found.

All of this raises a lot of problems, but we need to concentrate on just one of his arguments, which I've given you below: the "principles" can't *all* be pairs of contraries, because contraries are qualities, i.e. accidents, and substances can't be composed of accidents. Since there *are* some natural substances, there must be at least one "principle" of natural things which is *not* an accident, and is therefore not a quality, and therefore doesn't have a contrary. The main point for us here is: Aristotle assumes that substances can't be composed of accidents; and in particular: that *substances can't be composed of qualities*.

(T) It is manifest, then, that [some of] the principles must be contraries.

But it remains to say whether [the principles] are two or three or more. For they cannot be one, because the contrary is not one ...

But, furthermore, we said that substance is not opposite to substance. But how could a substance be composed of non-substances? Or how can a non-substance be prior to substance? Therefore if someone believes that this and the first argument are true [i.e., both (i) that substances have no contraries, and (ii) that substances can't be composed of non-substances], then it is necessary, to defend against both of those [arguments], to posit some third [principle]. (*Physics* 1.5.189^{a}9-10; 1.6.189^{a}11–12, 32–4)

Here, on the other hand, Aristotle appears to say that some substances, and in fact some very important ones—namely, the four elements—really are defined by qualities. Is this inconsistent with the previous reading, which says that a substance can't be composed of qualities, and that qualities (as non-substances) can't be prior to substance? Is it inconsistent with reading (Q), which says that differentiae can't be accidents (can't "exist per accidens" in the things they help define)? Maybe.

(U) Since, then, we are seeking the principles of sensible bodies—that is, tangible ones—and the tangible is that which touch is the sense of, it is manifest that not all contrarieties make species and principles of body, but only those according to touch. For they [i.e., bodies] differ by contrariety, and by contrariety according to touch. ...

But we must distinguish first which of the tangible [qualities] themselves are primary differentiae and contrarieties. The contrarieties according to touch are these: hot/cold, dry/moist, heavy/light, hard/soft, viscous/brittle, coarse/fine. [Here follows a long argument] ... It is clear, then, that all of the other differentiae are reduced to the first four [i.e., hot, cold, dry, and moist], but not those to fewer. ...

But since the elementary [qualities] are four, and of four things there are six [possible] pairs, but contraries are by nature not paired together (for it is impossible that the same thing be hot and cold or, again, dry and moist), it is manifest that there will be four pairs of the elementary [qualities]: hot and dry, and hot and moist, and again cold and moist, and cold and dry.[6] And they are consequent by definition [*logos*] to the simple apparent bodies, fire and air and water and earth. For fire is hot and dry, and air is hot and moist (for air is like vapor), and water is cold and moist, and earth is cold and dry, so that the differentiae are reasonably [*eulogōs*] distributed to the primary bodies, and the number of [primary bodies, i.e. elements, follows] according to reason [*logos*]. (*On Generation and Corruption*, 2.2.329^{b}7-11, 16-20; 330^{a}24–6; 2.3.330^{a}30–^{b}7)

Now comes something that might help with our problems. It looks like "quality" itself is equivocal, when used of "passions" such as heat and whiteness,[7] versus when used of the differentiae of substance. (But wasn't heat—a "passion"—supposed to be a differentia of fire—a substance?)

(V) "Quality" is said, in one way, as the differentia of substance. A human, for example, is a certain quality of animal, namely bipedal, whereas a horse is quadrupedal, and a sphere is a certain quality of shape, namely one without angles, so that the differentia is the quality according to the substance [or "essence"]. . . . Furthermore, ["quality" is said of] the passions of movable substances, such as heat and cold and whiteness and blackness and heaviness and lightness and such things as that, according to which bodies are said to alter and to change. Furthermore, ["quality" is said of] virtue and vice and in general the bad and the good. Roughly, then, quality is said according to two ways, and of these one is the chief one: for primary quality is the differentia of substance [or "of the essence"] . . . and [secondarily] the passions of movable things as moved, and the differentiae of motion. (*Metaphysics* 5.14.1020^{a}33-^{b}1, ^{b}8–15, 17–18)

Here is another relevant passage about the way "quality" is used. It is talking about secondary substances—i.e., species and genera—rather than differentiae; here Aristotle says that even these are in a certain way "qualities."

(W) Every substance seems to signify a certain individual this. Now, with respect to primary substances, it is indisputable and true that they signify a certain individual this: for the indicated thing is individual and numerically one. But with respect to secondary substances: they seem, similarly, from the figure of usage [*schēma tēs*

[6] I.e., out of the six possible pairs: (1) hot-cold; (2) hot-dry; (3) hot-moist; (4) cold-dry; (5) cold-moist; (6) moist-dry, numbers (1) and (6) are impossible, leaving just the four others.

[7] Note: "passion" as a kind of quality translates *pathos*, plural *pathē* (see reading (J) from last time), whereas "passion" as the name of one of the categories translates a different, though related, Greek word, *paschein*.

prosēgorias], to signify a certain individual this, when one says "human" or "animal"; but this is not true: rather, they [i.e., secondary substances] signify a certain quality [*poion ti*]. For the subject is not one, as is a primary substance, but rather human and animal are each said of many things. But it [the secondary substance] does not simply signify a certain quality, as does white: for white signifies nothing other than a quality, whereas a species or genus determines a quality with respect to a substance—for it signifies a certain quality of substance [*poian tina ousian*]. (*Categories* $5.3^{b}10$–21)

Here, finally, we learn (1) that the differentiae are not substances (not even "secondary substances"), but (2) that they have something important in common with substances—namely, that they are not "in a subject." Could this be said of qualities—I mean, things belonging to the category of quality? Why not? Could it be said of *any* accident? If not, it seems that, when Aristotle says that differentiae are "qualities," he must be using the term in a special way—they can't literally be qualities in the sense of belonging to the category of quality, nor can they belong to any other category of accident. But if it follows from (2) that the differentiae are not accidents, whereas (1) says that they aren't substances, then what are they? This is the problem of "the categorical status of the differentiae."

(X) It is common to all substances not to be in a subject. For a primary substance is neither said according to a subject nor is in a subject, and it is thus also manifest of the secondary substances that they are not in a subject. For [the species] *human* is said of a subject, a certain individual human, but is not in a subject, for *human* is not *in* a certain individual human, and similarly [the genus] *animal* is said of a subject, a certain individual human, but *animal* is not *in* a certain individual human. . . .

But this is not a proprium of substance; rather, a differentia, too, is not in a subject.[8] For neither bipedal nor footed is in a human. (*Categories*, $5.3^{a}7$–15, 21–5)

[8]Note: the argument of this sentence makes sense only if a differentia is *not* a substance! (This is like saying: "Black is not a proprium of ravens, because panthers are also black." It makes sense because panthers are *not* ravens.) (Remember that for X to be a proprium of Y, it has to be true that (a) *only* Y's are X and (b) *all* Y's are *always* X. In this case the problem is with (a), the "only" part: "black" is not a proprium of ravens because some things which aren't ravens, namely panthers, are black; "not in a subject" is not a proprium of substance because some things which are not substances, namely differentiae, are also not-in-a-subject.)