

Miracles and Matter: Henry of Harclay on Dimension and Multiple Location

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1. Introduction

Pluralistic approaches to problems have decided advantages. Chief among them is the novel suggestions and solutions that such approaches inevitably produce. A biologist who reads a psychological thriller might gain new insights into the aggression behavior of the fish she studies (as my wife can personally attest!), and there are countless examples throughout the history of thought in which one's religious commitments—e.g., to mystical Pythagoreanism or to Catholic Christianity—have led to new and deeper understandings of the phenomena under study. This of course raises a host of questions. Is it pluralism *per se*, irrespective of the particular alternative approach, that matters, or are some alternative approaches fundamentally more fruitful than others? Is a pluralistic approach more beneficial merely because it allows more thinkers of diverse backgrounds to buy in to the enterprise, and thus increases the value of the approach insofar as it is taken more seriously as a live possibility by a greater number of people?

On the other hand, there are problems with such a pluralism as well. To the true believer (in philosophy, or science, or a particular religion), a result that has been “contaminated” by unorthodox sources is unsound; for such thinkers, a result is only as strong as its weakest premise. In contemporary Anglo-American philosophy, for example, many thinkers refuse to consider any view that relies upon a religious commitment of any sort. In the medieval period, this worked in the reverse: in Western Europe, a view that was inconsistent with theological doctrine (however understood) was usually rejected outright, no matter how strong the philosophical argument for it might otherwise be.

In this paper, I will focus on a particular case of this last sort. Though the thinker in question, Henry of Harclay, is not a household name, and though the problems he is considering are highly technical ones, there is value, nevertheless, in seeing how things play out in this circumstance. I will begin by explaining the basic metaphysical problems under discussion by Henry, then I will explore some alternative views he considers before he lays out his own position. After explaining Henry's final account, I will then return to the larger questions about pluralism raised at the beginning of this paper. On to the metaphysics, then.

Let us begin with a commonly held claim: material items are located in space.

One could disagree with this in many ways. One might think that there are no material items at all, and thus that the claim is at best vacuously true. One might argue that something can be material without being located. One might hold that the universe is a plenum, and thus that there is no such thing as object-less space.

Or, less radically, one could agree with the statement only if understood in a certain way.

In this paper, I will explore a number of puzzles that are connected with this seemingly simple statement. These are puzzles that drew the attention of many 13th and 14th century philosophers, especially insofar as they related to issues that arose in particularly thorny theological debates. Henry of Harclay (ca. 1270 - 1317), an English secular master in the schools who eventually rose to the rank of Chancellor of Oxford, was one such thinker. Though not affiliated with either of the most prominent Catholic intellectual orders of his day—the Dominicans and the Franciscans—in thought, he tended towards the Franciscan side of things, especially given that he studied under one of its most famous members, John Duns Scotus, while in Paris just after the turn of the 14th century.

As we will see, for Harclay, the key to working through these puzzles is grasping the way in which an Aristotelian subject/accident ontology works. Once one understands that “place”, as with all other accidents, exists *in* subjects and not vice-versa, then one will see that counterintuitive or seemingly contradictory claims about matter, quantity, and spatial location lose much of their mystery: the puzzles of place are dissolved without appeal to miracles or other ad hoc modes of explanation. Of course this doesn’t mean that his solutions will seem reasonable—at least at first—to the philosophically modern reader. But within the world Henry inhabits, in which Christian theology and Aristotelian science dominate, one can appreciate the creative and suggestive moves he makes.

I will begin with an Aristotelian puzzle concerning matter at its most fundamental level. How exactly is “prime matter”—the basic stuff out of which all material items are composed—arranged in the world? Is it “pre-chunked” into atomic bits that take on and lose forms over time, is it an extended substratum that invisibly fills *all* (material) space, or is it some other sort of thing altogether?

As Henry inherits the problem, the debate centers on the question of whether matter must be pre-chunked—in medieval terminology, whether matter has “indeterminate dimensions” (*dimensiones interminatas*)—before it can take on the substantial form that will make it into the determinate and individual material thing it will come to be.

2. Prime Matter and Indeterminate Dimensions

In Q. XXIV of his *Ordinary Questions*, Henry considers a number of different thinkers’ accounts of prime matter and the way that it manifests itself in (potentially multiple) material objects. He focuses primarily on the views of Aristotle and his most important medieval commentator, the Islamic philosopher and jurist Ibn Rushd (1126 - 1198)—known to the Latin west as Averroes—who lived and worked in Moorish Spain and Morocco. He also discusses some important passages in the works of Ibn Sina (980 - 1037), who was also known to Christians by a Latinized name, Avicenna. Avicenna lived on the other end of the Muslim world, moving from place to place in what are now the countries of Uzbekistan, Turkmenistan, and Iran. In short, then, we have a dialogue between a 4th century BCE Greek philosopher, an 11th century Muslim medical doctor and philosopher, a 12th century Muslim

jurist/philosopher, and a 14th century Christian theologian. As is clear from Henry's text, the fact that his interlocutors are coming from different religious and cultural traditions has no bearing whatsoever on the worth of their views philosophically, and he freely uses them to support his claims in overtly Christian contexts. For Henry, then, pluralism is both a natural and a philosophically legitimate approach to the world.

a. Averroes

We'll begin with an examination of Averroes' position. In his *De Substantia Orbis* and his commentaries on Aristotle, Averroes holds that individual material substances have both indeterminate dimensions—the first steps in a process by which prime matter is sectioned off—and determinate dimensions, which every individual material substance has after having taken on its substantial form. Consider a donkey, for example. The donkey's substantial form of asininity comes to exist in a bit of prime matter that itself has been previously sectioned off by an indeterminate dimension. Only after having received its substantial form does it take on a determinate dimension (that is, only at this point does one have a certain size).

Averroes gives two main arguments for the existence of indeterminate dimensions. As Henry explains the first, for Averroes:

“...form is divided only according to the division of matter. Matter, however, is divided only by dimensions, therefore <indeterminate dimensions in matter precede substantial form>.”¹

Averroes also argues that these indeterminate dimensions are inseparable from matter. That is, matter cannot exist without being pre-chunked into smaller bits. Here, again, is how Henry explains Averroes' view:

“...were this not so, then a body could be made out of a non-body, and a dimension from a non-dimension.”²

In short, for Averroes, denying indeterminate dimensions is tantamount to denying the principle *ex nihilo nihil fit*. Since nothing comes out of nothing, a substantial form and its determinate dimensions cannot come from something that doesn't already itself have dimensions. Thus the view that Averroes ultimately defends really amounts to a species of atomism, despite the overlay of Aristotelian

¹ Henry of Harclay, *Ordinary Questions XV – XXIX*, ed. Mark G. Henninger and trans. Raymond Edwards and Mark G. Henninger (The British Academy and Oxford University Press, 2008), q. 24, par. 3, pp. 880-881. Hereafter, this work will be cited by abbreviated title (OQ *II*), question and paragraph (24.3), and pages (pp. 880-881). Unless otherwise indicated, I follow the translation given in the bilingual Latin/English text.

² Ibid.

terminology. The material world is composed of bare particulars that later take on substantial forms.

Now we can turn to Henry's detailed arguments against this view. It should be noted that at no point does Henry make *ad hominem* arguments against Averroes, and the latter's religious views have no bearing whatsoever on the worth of his claims, as far as Henry is concerned.

b. Henry of Harclay

I'll discuss four main arguments Henry gives against Averroes. The first two involve Henry directly responding to Averroes's arguments.

1. Against Averroes' first argument—that different substantial forms require different bits of matter in which to inhere—Henry argues on straightforwardly Aristotelian grounds: matter is divided by form, and not vice-versa. As he puts it, "Matter, previously one, is made distinct by the coming of form".³ Furthermore, if matter were in fact pre-chunked by indeterminate dimensions, then each distinct bit of matter would take on an independent ontological status—it would already be a "being in act" before it received its substantial form, as he puts it—and thus what Aristotle would normally describe as an item's coming-into-existence (or "generation", to use his terminology) would in fact be mere "alteration".⁴ Becoming an individual donkey, to return to our example, wouldn't be as significant an event as it needs to be.

2. Henry thinks Averroes' second argument—concerning creation *ex nihilo*—is problematic as well. We can understand Averroes' argument in two ways. First, an individual thing might be created by something that lacks even the possibility of having dimension. But if this is the case, says Henry, then the same argument would apply to matter's gaining an *indeterminate* dimension. That is, the act of pre-chunking a bit of matter would itself occur *ex nihilo*.

The second possibility is that an individual thing might be created by something that happens to lack dimension *at present*, but could possibly have it. But if this were a good reason, then it would have bad consequences for Aristotle's philosophy of mind and epistemology. For Aristotle, one comes to know a thing by taking on the form of that thing in one's mind (specifically, in the "material intellect"), which in itself is devoid of all form. In other words, coming to know a thing—which amounts to taking the form of the thing known into the undifferentiated mind—would also be impossible.⁵

³ *OQ II*, 24.24, pp. 890-891.

⁴ *OQ II*, 24.1, pp. 880-881: "...were this so, then generation would not differ from alteration, for the subject of generation would then be a being in act."

⁵ *OQ II*, 24.25, pp. 890-893.

3. Henry adds in some other arguments as well. If each individual material item has both a determinate quantity and an indeterminate quantity, then there would be “two quantities simultaneously in one substance, which is nonsense”.⁶

4. Finally, Henry appeals to Avicenna’s remarks about the ways in which a bit of wax can change all of its dimensions (length, width, breadth, etc.) while nevertheless remaining the numerically the same.⁷ If this is the case, Henry says, then it is obvious that a substantial thing cannot have a fixed dimension throughout its existence, and hence it cannot have a fixed, indeterminate dimension that precedes its becoming the sort of thing it is.⁸ In other words, if dimensions can change—as Avicenna demonstrates—then since for Averroes a substantial form can only come to a bit of matter after it has been pre-chunked by indeterminate dimensions, then this would mean that with the change of dimension there would necessarily be a loss of the substantial form, for it would have nothing in which to inhere.

To sum up then, for Henry, the fact that Averroes’ view has philosophical problems, as well as contradicting both Ancient Greek and earlier Islamic authorities, is enough to convince him that it is in fact incorrect. For Henry, prime matter in itself is undifferentiated and extended until the time at which a substantial form inheres in it. At that point, it is capable of taking on a distinct place of its own. Next, then, we’ll look more closely at Henry’s somewhat odd account of place and location.

2. Place and Spatial Location

In *Ordinary Questions* XXI, Henry argues ultimately—and surprisingly—that one thing can simultaneously exist in many places. After presenting a number of fairly common-sensical arguments to the contrary, Henry develops his own view by relying most heavily on Aristotelian metaphysics and Christian theological doctrine. Here too Henry references both Averroes and Avicenna to support his position, but they play a less explicit role than they did in his discussion of prime matter. Instead, Henry focuses almost exclusively on the thought of other Christian theologians, most notably Godfrey of Fontaines (ca. 1250 – ca. 1306) and Henry of Ghent (ca. 1217 - 1293)—with whom he largely disagrees—and John Duns Scotus (1265 -

⁶ *OQ II*, 24.16, pp. 886-887. Note that for Henry, “quantity” is the genus term under which “dimension” is a species, as he claims in *OQ II*, 24.19, pp. 888-889.

⁷ Descartes of course appeals to the same example in his Second Meditation. For a discussion of this issue in both thinkers, see

Allan T. Bäck, “Avicenna and Descartes on the Wax Example”, in *Meeting of the Minds. The Relations between Medieval and Classical Modern European Philosophy. Acts of International Colloquium Held at Boston College, June 14-16, 1996, Organised by the Société Internationale pour l'Etude de la Philosophie Médiévale* cur. Stephen F. Brown, Turnhout, Brepols 1998 (Société Internationale pour l'Etude de la Philosophie Médiévale. Rencontres de philosophie médiévale 7), pp. 163-78.

⁸ *OQ II*, 24.19, pp. 888-889.

1308), with whom he has a great deal of affinity. And of course Aristotle is mentioned at many points as well. Euclid (fl. 300 BCE) too makes a brief appearance.

a. Arguments against Multiple Location

A wide range of arguments are discussed in this context. We'll look at five of the most important ones here. The first four are concerned with physics and mathematics, and the last is purely theological in character.

The first argument comes from Henry of Ghent; we can call this the **contradictory features** argument. Ghent gives a number of examples to make his point:

For suppose that here is ice and there fire: an object would be at once burnt up and chilled. Or a person might be stabbed and killed in one place, and yet be alive in another. Or one item of food might be in different stomachs, or something be in motion in one place and not in another.⁹

In short, since different places often have different features, one thing would simultaneously be subject to those different features, which often results in contradiction.

In the second argument, Godfrey argues that multiple location is impossible due to an **analogy with time**. As he puts it, "it is impossible for the same temporal thing to be in different times at once; therefore it is impossible for the same located thing to be <at once> in different positions."¹⁰ If one thing can't exist in two times at once, so too it can't exist in two places at once.

Third, we can appeal to a principle in **Euclid's geometry**: two lines are parallel just in case they never meet. But if multiple location were allowed, then "the same point could be the end of two parallel lines, which is impossible, for then parallel lines would meet."¹¹

The final non-theological argument relies on **Aristotle's account of accidents**, and Godfrey presents it as follows:

If a thing were in two locations at the same time, it would have in itself two places at the same time. These two places, therefore, would either [i] be contraries (such as 'place above' and 'place below'), which would mean contraries were in the same thing at the same time, or [ii] those two places would not be contraries...but this would mean that two accidents of the same species could be in the same subject at the same time.¹²

⁹ *OQ II*, 21.9, pp. 816-817.

¹⁰ *OQ II*, 21.5, pp. 814-815.

¹¹ *OQ II*, 21.10, pp. 816-817.

¹² *OQ II*, 21.4, pp. 814-815.

In other words, we either have yet another case of Ghent's contradictory features argument mentioned above, or we have to deny an important principle of Aristotelian metaphysics: for Aristotle, a subject can have at most one accident of given kind at the same time.

The fifth and last argument again comes from Godfrey, but it is theological in character, focusing on **God's ubiquity**. God is unique insofar as he exists everywhere, according to Christian theology, and thus "it is a contradiction for a condition that is an exclusive property of an unlimited being to pertain to a limited thing. Existing in several places [simultaneously], however, is such a condition of an unlimited being. It cannot, therefore, pertain to a limited thing like a body."¹³ Material things, as limited, cannot share the property of ubiquity with God himself.

b. Henry of Harclay's view

Henry develops his own view in light of a number of cases that, in his mind, clearly indicate that multiple location is possible. The first group of cases involves having multiple items in a single place; some are theological in nature. The prime ones Henry mentions are Christ's virgin birth, which requires him to pass through his mother while she remains intact; Christ's passing through the door of a tomb without moving the door; and in an appeal to mathematics, the fact that multiple points and lines can exist or intersect in the same place.¹⁴ If multiple items can exist in one place, Henry argues, then there's nothing mysterious about one thing existing in many places.

He also gives examples of this second sort of case. Two of these are theological in character, and the third appeals to Aristotelian metaphysics. First, as mentioned before, God is everywhere,¹⁵ and (second) more specifically, Christ can exist in multiple places as once when, according to Catholic Doctrine, his body and blood are found wherever a priest has consecrated the host during the Eucharist.¹⁶ Since many priests in distinct locations can perform these consecratory acts simultaneously, obviously Christ can exist in many places at once. Finally, following Aristotle, a human soul exists in all parts of the body it animates. Since a finger and a toe are in different places, one soul can thus be multiply realized.¹⁷

Now that he has established what in his mind are clear cases of multiple realization, he of course needs to form a theoretical account to explain these cases. He develops this account by focusing in on the notion of place. What exactly does this term mean?

First, following John Duns Scotus, Henry differentiates between what I'll call "internal place", and "external place". Internal place—in Scotus's terminology, the order of constituent parts to the whole of which they are part—is intrinsic and necessary to every material entity. If a thing is material, its parts must exist in

¹³ *OQ II*, 21.6, pp. 816-817.

¹⁴ *OQ II*, 21.28-30, pp. 830-831 and 21.38, pp. 834-837.

¹⁵ *OQ II*, 21.47, pp. 840-841.

¹⁶ *OQ II*, 21. 14-19, pp. 818-823.

¹⁷ *OQ II*, 21. 54, pp. 842-843.

certain spatial relations to one another and to the whole. These relations can change over time, of course, but they must exist in some relation or other. External place—the relation of “parts to place”, as Scotus somewhat confusingly puts it—has to do with the location of a given material item vis-à-vis other material wholes. For both Henry and Scotus, these two kinds of place are distinct from one another, and thus a material whole could maintain the same place internally without necessarily having it change externally. The donkey we mentioned earlier could exist either in a field or in a barn—that is, it could have two distinct external places—while remaining unchanged in the internal organization of its bodily parts. As Henry explains it:

A created agent can change position and the order of its parts to place, while remaining the same in quantity and in the order of parts in the whole (this ability to move from one position to another is clear to the senses).¹⁸

Given this separation, then, Henry develops the notion of external place even further.

For Henry, external place—again, the way a given material thing is located vis-à-vis other material wholes—is not something absolute. Rather, external place is a relative notion, and amounts to a relation between two or more material wholes. The donkey, e.g., exists in certain spatial relation to the barn when it is in the field. As Henry puts it:

I prove that place is only a respect thus: a thing that comes anew to another thing and makes no change in it is not an absolute form. And it seems that a new place comes to this body, with the body not changed at all.¹⁹

Now we can return to Aristotle to see how all of this adds up. Since place, on Henry’s view, is not only an accident of a thing, but is a *relative* accident of a thing, there is nothing contradictory in a thing having more than one place at once. A donkey can simultaneously have a location with respect to the barn and with respect to a cow in the next field over, and thus have two places at once. And in fact, according to Henry, this external place (qua relative accident) is something that arises automatically once there are two or more material items in the world. Even God cannot stop these relative accidents from coming into being.²⁰

A further consequence of this view: in a limiting case—a case in which there is only one material object in existence—that material item would have no external place at all. That is, it would have no location whatsoever. Here’s how Henry explains this possibility:

¹⁸ *OQ II*, 21.20-21, pp. 822-825.

¹⁹ *OQ II*, 21.44, pp. 838-839.

²⁰ *OQ II*, 21.22, pp. 824-825.

...it does not follow that...God could make the sun without any relation to the earth, if both of the terms of this relation were still existing. He can, of course, make the sun lack any relation to the earth, for he can destroy the earth....God can destroy every quantity except this one...²¹

In a world such as ours, a world in which there are multiple material items, not only is it possible that a single item can exist in many places at once, it is necessary, insofar as it simultaneously has relations to every other material item.

With this in mind, we can now see how Henry can respond to the arguments against multiple location raised above. First, and most obviously, he can dispatch the objections concerning the uniqueness of multiple location to God—that is simply not the case—and the threat of a violation of the Aristotelian principle that contraries cannot exist in the same thing at the same time. Relative accidents are not contraries; only absolute accidents are. He is similarly quick in his denial of the analogy with time: the analogy is a false one.²²

The toughest objections, however, still stand: how are we to account for one item that is multiply realized having contradictory properties (being simultaneously hot and cold, e.g.), or one point existing in two parallel lines that should never meet? At the end of his discussion of this topic, Henry maintains that contradictory absolute accidents cannot simultaneously exist in one thing. Given this, the different sorts of case that Ghent mentions have to be dealt with in different ways. If an item is apparently hot in one place and cold in another, it will in fact have a “moderate” temperature overall.²³ This is no different than the way we can be hot in one part (e.g., with a hand over a campfire), and cold in another (e.g., with the rest of one’s body in the cold night air). In the case of injuries, on the other hand, an injury to one’s body in one location—e.g., a blow to the head—is an absolute injury to one’s body. It cannot exist without existing everywhere the body exists.²⁴ And finally, he simply denies that the same point could exist in more than one place at the same time.²⁵ Though he doesn’t explain this last response in any detail, it might be that a geometrical point is non-material in its nature, and thus that the same rules don’t apply to it as apply to material bodies.

One new objection, however, still can be raised against Henry’s view. If relative accidents of place are automatically generated, then for something existing in many places at once (e.g., Christ’s body and blood in a Parisian church during the Eucharist and Christ’s body and blood in an Oxford Church during the Eucharist), there would seemingly be multiple contradictory relative accidents that are produced. Christ, in this case, would be simultaneously close to the Seine (insofar as he is in Paris) and far from the Seine (insofar as he is in Oxford). Though multiple relative accidents are possible in one thing simultaneously, it seems that in this case

²¹ *OQ II*, 21.22, pp. 824-827.

²² *OQ II*, 21.42-46, pp. 838-841.

²³ *OQ II*, 21.49, pp. 840-841.

²⁴ *OQ II*, 21.50-52, pp. 840-843.

²⁵ *OQ II*, 21.53, pp. 842-843.

we would have to say that the relative accidents in question are in fact contradictory.

Of course, Henry can respond by appeal to a miracle to explain this sort of case, but he shuts off this line of attack quite clearly:

...all of these events can be explained as miraculous, rather than by allowing two bodies to be in the same place...This line of argument, however, does not stand up, being no more than an evasion.²⁶

For Henry, a scientifically and philosophically sound view, buttressed by support from authorities both within and outside of his religious tradition, is to be preferred to any sort of intellectual laziness. To be a true scholar, one must look to the world as a whole for objections and solutions to the problems in question.

4. Conclusion

Henry's basic point throughout both of these questions is the following: matter functions in the way substances do. Just as a substance can have multiple (relative) accidents of place simultaneously, and thus can exist in more than one place at the same time, so too prime matter can have multiple substantial forms, whose own "quantities" give them separate material existences. Both place and dimension function in the same way with regard to their respective substrata.

Though the middle ages are often seen as an era characterized by intolerance and parochialism, it is clear that the greatest intellectual accomplishments of the period occurred because its leading lights distinctly and consciously rejected this sort of insular view. It was by allowing the thought of Aristotle, pagan authors, and their Muslim and Jewish commentators that the high middle ages made such great advances over what had been going on in the Latin West during the 500 years prior. Pluralism, at least in this case, is clearly an intellectual virtue.

²⁶ *OQ II*, 21.28-29, pp. 830-831.