

Pomponazzi on Identity and Individuation

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Abstract. Aristotle defines growing as a process in which an individual living being persists as it accumulates new matter. This definition raises the question of what enables an individual to persist as its material composition continuously changes over time. This paper provides a systematic account of Pietro Pomponazzi's answer to this question. In his *De nutritione et augmentatione*, Pomponazzi argues that individuals persist in virtue of their forms. Forms are individuated in part by their material, causal, and temporal origins, which commits Pomponazzi to the view that individuals necessarily have the material, causal, and temporal origins they do. I provide an account of why Pomponazzi was willing to this view. While his opponents remain unnamed, I argue that his arguments for this view are best read as addressing, among others, Paul of Venice and Gregory of Rimini.

In *On Generation and Corruption*, Aristotle describes growing as a process in which “any and every part of the growing magnitude is made bigger . . . by the accession of something, and thirdly in such a way that the growing thing is preserved and persists” (321a18–22).¹ For instance, when an animal grows as the result of the intake of food, all of its limbs grow larger as the result of the intake of new matter, in such a way that the same individual animal persists throughout the process.

¹ All Aristotle translations are taken from the Jonathan Barnes edition of the *Complete Works*.

Simple though it may perhaps appear, this definition confronted Aristotle's later followers and commentators with a problem. On the one hand, growing is described as a process in which one and the same individual is retained from beginning till end. But on the other hand, it also is a process in which the material composition of an individual can change quite dramatically as it accumulates new matter. And this raises the question of how one and the same individual can be said to remain identical over time even though the matter that composes it does not.²

One philosopher who was keenly aware of the difficulty here, was Pietro Pomponazzi. His last work, the treatise *De nutritione et augmentatione* of 1521 remains little studied,³ and has so far received no systematic treatment in the Anglophone literature. Yet it contains a detailed and rewarding discussion of what Pomponazzi describes as the "most difficult question"⁴ of how one and the same animal is retained as its bodily composition is altered and modified by the intake and digestion of food. The aim of this paper is to provide a systematic account of his treatment of this question. I will argue that, in order to understand the arguments Pomponazzi offers in support of his account, we need to place them in the broader context of

² On medieval Aristotelian treatments of this question, see Philip Reynolds, *Food and the Body*. On the same problem in sixteenth-century Aristotelians such as Jacopo Zabarella, see Andreas Blank, "Jacopo Zabarella and the Early Leibniz." On early modern Aristotelian accounts of nutrition as a function of the soul, Dennis Des Chene, *Life's Form*, 133–38.

³ Two notable exceptions here are Giancarlo Zanier, "La biologia teoretica," and Rita Ramberti, "Esegi del testo aristotelico." See also briefly Stefano Perfetti, *Aristotle's Zoology*, 34–5.

⁴ "Omnium quaestionum difficillimam de augumento" (*De nutritione*, 112v). The most reliable edition of *De nutritione* remains the text in the 1525 edition of the *Tractatus acutissimi*, and all references are to folio number and column in this text.

his polemical engagement with prominent scholastic predecessors such as Marsilius of Inghen, and especially Gregory of Rimini and Paul of Venice.⁵

The plan of the paper is as follows. As we will see in Section 1, Pomponazzi, after a critical review of the solution proposed by the Parisian philosopher Marsilius of Inghen, concludes that a growing animal remains the same individual over time because it retains the same form from beginning till end of its life. This form, according to Pomponazzi, is not merely a generic or specific form, but an individual form the animal shares with no other animal of its own or any other species. And this observation leads him to ask how forms are individuated, or what it is that makes some given form the individual form that it is.

As we will see in Section 2, Pomponazzi maintains that forms are individuated by factors intrinsic as well as by factors extrinsic to them. Intrinsically, they are individuated by haecceities that distinguish them from all other forms of the same kind. Extrinsically, they are individuated by their origins, or by the matter in which, the cause by which, and the time at which they are educed.⁶ As Pomponazzi is well aware, by committing to the view that forms are individuated by their origins in this way, he is also committing to the view that no individual form could have been educed from other matter, by another cause, or at another time. Although this commitment has been noted upon in the literature,⁷ the question of why Pomponazzi was willing to commit to a principle of individuation coming with such a heavy metaphysical ballast remains open. Pomponazzi notes that many of us have the intuition that individual forms could

⁵ On the reception of Marsilius's commentary on *De generatione et corruptione* in Italy in the fifteenth and sixteenth centuries, see Hans Thijssen, "Circulation and Reception."

⁶ Pomponazzi's commitment to haecceities has been noted by Andrew Halliday Douglas, *The Philosophy and Psychology of Pietro Pomponazzi*, 245, Antonino Poppi, *Saggi sul pensiero inedito di Pietro Pomponazzi*, 88, and Leen Spruit, *Species Intelligibilis*, 2:99. In *De nutritione*, however, it is the role played by material, causal, and temporal origin in the individuation of forms that takes centre stage.

⁷ Ramberti, "Esegi del testo aristotelico," 326.

have had other material or causal origins than the ones they in fact have, and observes that we occasionally wish some given form had appeared at a later or earlier time than it in fact did.⁸

So why was he willing to commit to a principle of individuation incompatible with these intuitions and wishes?

As I will argue in Sections 3 and 4, Pomponazzi believed that philosophers according to whom forms are contingently related to their material, causal, and temporal origins will face scenarios where they can give no satisfactory account of why some given form has the material and causal origins it in fact has, and originates at the time it in fact does. His opponents in the relevant chapters from *De nutritione* here remain unnamed. But as we will see, his arguments for individuation by material and temporal origin are best read as addressing the views of, among others, Paul of Venice and Gregory of Rimini.

1. Identity over Time

In Book I, Question 12 of his commentary on *On Generation and Corruption*, Marsilius asks whether the same individual persists in growth.⁹ One reason to think that the answer to this question is negative, is as follows. Consider a dog, and assume that at t_1 it is composed of a certain collection of material parts a . Now imagine that at t_2 the dog has dinner, accumulates some new parts, and comes to be composed of material parts $a + b$. Given that a whole is

⁸ See *De nutritione*, 132ra and 132vb.

⁹ “Utrum in augmentatione maneat idem totum ante et post” (*De generatione et corruptione*, Book I, Question 12, 78a). References to this text are according to book and chapter, followed by folio and column in the 1518 edition of *Egidius cum Marsilio et Alberto de Generatione*

identical to the parts that compose it, it would appear that we have one dog at t_1 , and a second one at t_2 :

Let the parts of which an object is composed before it begins to grow be called *a*. And let the parts that are added after it has grown be called *b*. Then we can reason as follows. This growing object is identical to *a* before it begins to grow, and no longer is or will be identical to *a* after it has grown. Therefore, it no longer is the same object after it has grown.¹⁰

Marsilius responds to this line of argument in two ways. First, he clarifies the ways in which a thing can be said to persist over time. Second, he clarifies in what sense a material substance can be said to be identical to the parts that compose it.¹¹ With these two clarifications in place, he believes, we can see how the dog survives its dinner and how, in general, material substances persist as the matter that composes them changes.

According to Marsilius, a thing can be said to persist in three ways:¹² in a most strict sense, in a strict sense, and in a broad sense. In the first and most strict sense, “a thing is said to remain the same in number if it remains substantially unchanged and unaltered as a whole and

¹⁰ “Vocentur partes ante augmentationem existentes *a* et post augmentationem partes superaddite vocentur *b*. Tunc arguitur sic. Hoc augendum ante augmentationem est *a*, et post augmentationem non est *a* nec erit *a*. Ergo non est idem post quod ante” (*De generatione et corruptione*, I.12, 78a).

¹¹ According to Marsilius, “totum est sue partes” (*De generatione et corruptione*, I.12, 78c).

¹² Marsilius is indebted to Buridan here. On Buridan on identity over time, see Olaf Pluta, “Buridan’s Theory of Identity.”

in all of its parts.”¹³ God persists in this most strict sense of the word. In the second and strict sense of the word, “a thing is said to be the same if its most important part remains the same in number.”¹⁴ Individual human beings such as Socrates persist in this second sense. This is so, because his most important part is his rational soul, and his rational soul remains the same substance over time. His rational soul remains the same substance over time because, being immaterial, it does not lose or gain any parts. To be sure, the material composition of his body will undergo significant changes over time. But the same man Socrates can be said to persist in the second and strict sense of the word in virtue of his immaterial rational soul. In the third and broad sense, a thing is said to persist when “in their continuous flow, its parts more or less retain the same position and the same order and composition.”¹⁵ The river Seine persists in this third sense, as more or less the same order and composition is preserved in the continuous flow of its material parts.

According to Marsilius, the dog from our example is a compound of matter and form. It is clear that its matter does not remain the same over time, so that the dog does not persist in the first sense of the word: It does not remain unaltered in all of his parts. Does the dog persist in the second sense of the word? For this to be the case, it would need to have a most important part that remains the same. But according to Marsilius, it does not. The most important part of the dog is its soul. But dog souls, according to Marsilius, are material. For Marsilius, this appears to mean that dog souls differ from human rational souls in at least three ways. First,

¹³ “Est notandum quod idem numero capitur propissime, proprie, et large. Propissime dicitur manens idem numero sic quod nec in subiecto toto, nec in parte substantialiter variatur aut mutatur” (*De generatione et corruptione*, I.12, 78c).

¹⁴ “Proprie dicitur idem quod manet secundum sui partem principaliorem idem numero” (*De generatione et corruptione*, I.12, 78c).

¹⁵ “Tertio modo dicitur idem numero large cuius partes sunt in continua successione in consimili situ et figura et partium situation” (*De generatione et corruptione*, I.12, 78c).

dog souls can never exist separated from a body they inform. They die when the body does. Second, all of the powers of a dog soul are exercised in and by means of some organ.¹⁶ Third, dog souls grow no less than dog bodies do. They do not remain the same over time in the way human souls do, making it impossible for dogs to persist in the second sense of the word.¹⁷ A dog that gains or loses new matter does persist in the third sense of the word, however. It persists in the weak sense of maintaining a more or less constant composition throughout the continuous succession of the material parts that compose it:

In the growth of a non-human animal, the same thing does not remain in the second way. This is clear, because in no other living being does the most important part persist in this second way, so that the conclusion follows. . . . The antecedent is clear, because in any such living being, the form, which is its most important part, varies as it accumulates new parts, just as the matter varies as it accumulates new parts.¹⁸

But if the dog persists as it accumulates new matter, albeit in a weak sense, can we really say that at t_1 it was identical to collection of parts a ? This may well seem odd. Indeed it would seem that either the dog was identical to a , and then we lose the dog as we lose a for a larger collection

¹⁶ On Marsilius on the powers of the soul in non-human animals, see also Sander de Boer, *The Science of the Soul*, 276.

¹⁷ On the view that horse souls do not remain the same over time the way human souls do in Buridan, see Robert Pasnau, *Metaphysical Themes*, 696.

¹⁸ “In augmentatione viventis alterius ab homine non manet idem numero isto secundo modo. Pater, quia in nullo alio vivente forma quae est principalior pars isto secundo modo. Ergo etc. Tenet consequentia. . . . Antecedens declaratur, quia in quolibet vivente forma quae est principalior pars ita variatur sicut materia cum sibi nove partes adveniant sicut materie” (*De generatione et corruptione*, I.12, 78c).

of parts, or the dog was not identical to *a*, and then this precisely what allows it to survive the accumulation of new parts.

Marsilius seeks to take away this concern by arguing that the dog's identity to *a* is a relation that holds but temporarily:

It is argued that, because *a* now is these parts but will no longer be these parts afterwards, *a* will no longer be this being, or the same being it is now. But this inference is invalid, like this one: Socrates is now this father and will no longer be this father afterwards. Therefore he will no longer be the same man.¹⁹

The passage is compact, but the comparison Marsilius wants to make appears to be the following. Suppose that at t_1 Socrates has a son called Menexenus. At t_2 Socrates loses his son, and thereby ceases to be the father of anyone.²⁰ Hence whereas, at t_1 , Socrates was identical to the father of Menexenus, at t_2 he no longer is identical to the father of anyone. His identity to the father of Menexenus, in other words, was temporary, and it is a relation Socrates can cease to stand in without ceasing to be. In the case of the dog, we can say that, while at t_1 the dog was identical to *a*, it no longer is identical to *a* at t_2 . Its identity to *a* was temporary, and it is a relation the dog can stand in without thereby ceasing to be. On this account then, the dog survives the accumulation of new matter, and its life can be characterized as a series of temporary identities such that:

¹⁹ "Arguitur *a* est nunc iste partes et post non erit iste partes, igitur post non erit illud ens vel idem ens quod est nunc. Talis consequentia non valet, sicut non sequitur: Sortes nunc est iste pater et post non erit iste pater, ergo post non erit idem quod ante" (*De Generatione et corruptione*, I.12, 79a).

²⁰ I take Marsilius to assume that being a father implies having a living son or daughter.

At t_1 , the dog is identical to a .

At t_2 , the dog is identical to $a + b$.

At t_3 , the dog is identical to $a + b + c$.

...

Intuitive as it may seem to be at first glance, the notion that identities can be temporary runs into some persistent problems. One of them is this. Because the dog remains the same individual over time as it accumulates new matter, the dog at t_1 has the property of being identical to the dog at t_2 . But a does not have the property of being identical to the dog at t_2 . Hence it seems that a philosopher who wants to maintain that the dog at t_1 is identical to a must be willing to give up, or at least to qualify, the principle of the indiscernibility of identicals, and to admit that the dog can be identical to a in spite of the fact that the dog and a do not share all of their properties in common.²¹

In *De nutritione*, however, Pomponazzi nowhere challenges the concept of temporary identity as such. Instead, his main worry appears to have been that, even if we grant that dogs can be temporarily identical to the parts that compose them, Marsilius is not entitled to saying that, as the result of the accumulation of new matter, one and the same individual goes from being identical to a at t_1 to being identical to $a + b$ at t_2 to being identical to $a + b + c$ at t_3 . Instead, what Marsilius is committed to, no doubt in spite of himself, is that we have one dog at t_1 , a second dog at t_2 , and a third dog at t_3 . How does Pomponazzi arrive at this conclusion?

²¹ For a modern defence of temporary identity, see André Gallois, *Occasions of Identity*. On the concern that temporary identity does not sit well with the indiscernibility of identicals, see Ted Sider, *Four-Dimensionalism*, 165–76.

1.1. Pomponazzi

Pomponazzi reasons as follows. If Marsilius is correct, when an animal accumulates new matter in nutrition, both its matter and its form change. The matter changes, because the result of nutrition is that the animal comes to be constituted by a larger portion of matter than before. And the form changes, because the form of an animal changes with the matter that realizes it. But if both matter and form change in nutrition, the end product of nutrition will be a new hylomorphic compound. And if the end production of nutrition is a new hylomorphic compound, nutrition turns out to be the generation of a new individual. The end product of nutrition will be an animal that is the same in species, but not the same in number, as the animal we started out with:

If in augmentation a new form is generated, as the position holds, the result is an individual that is similar to, but not identical with, that which grows, so that growing and nutrition will not be distinguished from generation.²²

Now for some objects, Pomponazzi grants, that which we call nutrition is indeed the generation of a new individual of the same kind. Thus when we say that a fire is nourished by the introduction of a new log, what happens is that a new fire is generated that is spatially and temporally continuous with the old fire. But what this goes to show, according to Pomponazzi, is that the nourishment of a fire is a fundamentally different process from the nourishment of a living being and that, in general, “the nutrition of a living being is different from the nutrition

²² “Si itaque in auctione nova forma generatur, ut inquit positio, fit igitur non idem aucto sed tantum simile, quare augmentatio sive nutritio a generatione non separabitur” (*De nutritione*, 115va).

of a fire or that of any other inanimate object.”²³ What we think of as a fire whose life is prolonged by nourishment really is a series of spatiotemporally continuous fires. But to say of a dog whose life is prolonged by the intake of food that it is a series of spatiotemporally continuous individuals of the same species, Pomponazzi believes, is ridiculous:

In all nations and according to all customs, a plant remains the same individual over time. The same is true for an animal and for a man who is born and dies, as all of these are born, grow, and die. But on their view, it is necessary to hold the opposite of this. For on their view the plant that grows is not truly the plant that is born, that lives, that grows smaller and eventually dies, and the same must be said of all animals.²⁴

That individual dogs persist throughout growth can be seen from their behaviour and cognitive abilities as well, Pomponazzi believes:²⁵

I testify that, before I left my homeland, I had a little dog I was very fond of. Then the dog grew bigger. When I returned to Mantua after a stay of four years in Padua, this

²³ “Viventis nutritio differt ab ea quae ignis vel vel cuiusvis inanimati” (*De nutritione*, 115va). As Zanier has argued, one of the main aims of Pomponazzi in Book I of *De nutritione* is to resist attempts to model life and its manifestations on inanimate processes such as the consumption of wood by fire. See Zanier, “La biologica teoretica,” 120–23. Also Ramberti, “Esegi del testo aristotelico,” 330, 335–6.

²⁴ “Planta communiter apud omnes nationes et secundum omnes leges est eadem, idem brutum. Idem homo quod nascitur et interit, quae omnia habent ortum interitum statum et augmentum. Horum autem opposita secundum hos necesse est dicere; non enim vere planta quae nascitur est illa quae crescit, quae stat, quae diminuitur, et denique quae interit, idemque de omnibus animalibus dicendum est” (*De nutritione*, 116va).

²⁵ On Pomponazzi on the cognitive abilities of non-human animals, Paolo Rubini, “Pomponazzi e l’anima degli animali.”

dog, which I barely recognized, ran into me on a square, placed itself in front of the horse I rode, made it halt, and tried to mount it with a noise and tail wagging that rather surprised me. Then, as the servant with whom the dog had come approached me, and as the dog was running back and forth between my family home and myself, as if to announce my arrival, I recognized in the dog now grown big the dog I had left a pup. Now if this dog had had an identity over time by equivalence only, as this position presumes, I truly fail to see how all of this could have happened.²⁶

The old dog has recollection of what the young dog saw and did. But the old dog can have recollection of what the young dog saw and did only if the old and the young dog are the same individual. It clearly does not suffice that they belong to the same species, or that they have what Pomponazzi here calls a mere identity by equivalence. Hence they are the same individual animal.²⁷

²⁶ “Testor enim ego quod prius quod recederem a patria mea, habebam parvum catellum in quo delectabar et tunc catellus iste crescebat. Moratusque deinde Paduae per quattuor annos continuos, redivi Mantuam dumque in foro catellus iste me offendisset (minime enim eum cognoscebam) opposuit se equo quem equitabam, fecit eum sistere tentabatque ascendere, tanto oris et caudae applausu, ut maxime miratus sum, verum quoniam villicus noster cum quo erat canis postea ad me accessit, cognovi canem iam magnum factum, quae catellum relinqueram; cucurritque ad habitationem nostrae matris quasi nunciando adventum meum, deinde redivit ad me, et sic multoties fecit. Si autem in in cane fuisset tantum identitas secundum aequivalentiam, ut fingit positio, profecto non video quomodo esta salvari possint” (*De nutritione*, 116va–b).

²⁷ A more detailed version of the argument from animal recollection here can be found in Jacopo Zabarella, *De rebus naturalibus*, 719. Zabarella’s version of the argument would be criticized in the seventeenth century by Sebastian Basso, in his *Philosophiae naturalis*, 269. On the argument in Zabarella, see Blank, “Jacopo Zabarella and the Early Leibniz,” 90.

So what is it that accounts for animal identity over time? According to Pomponazzi, the answer is: animal forms. Animals persist for as long as their forms do. Now as we have seen, Marsilius believed that, being material, animal forms last for just as long as the mass they inform does. But here Pomponazzi disagrees. It is true that animal forms are material. But this only means that they are never separated from a body and that they depend on matter in all of their operations.²⁸ It does not mean that they last for just as long as the mass they inform does. Indeed, as the purpose of animal forms is precisely to realize vital functions such as nutrition, it belongs to the very nature of animal forms to be able to inform masses of matter whose composition changes over time:

No such soul, however base it may be, is determined to some certain portion of matter in such a way that it could not also be under more or less.²⁹

Now according to Pomponazzi, the form that grounds the continued identity over time of some given animal is not a generic form the animal shares with all other animals or a specific form it shares with all other animals of the same species, but an individual form it shares with no other animal, be it of the same, or of some other species. But in virtue of what is it, according to Pomponazzi, that some given form is this one individual form and no other?

²⁸ This holds true for the intellectual soul as it well, which “semper indiget organo” in all of its operations (*De nutritione*, 130rb).

²⁹ “Omnis namque anima, quae materiam corruptibilem perficit, de necessitate habitudinem habet ad materiam. . . Omnis etiam talis anima, quantumcumque infima sit, non determinat sibi certam materiam, quin aut sub pluri aut sub pauciori non possit” (*De nutritione*, 119va).

2. Individuation

According to Pomponazzi, the individuality of any given being has a twofold root. In the first place, an individual is made the individual being it is by an intrinsic thisness, or haecceity.³⁰ In the second place, it is made the individual being it is by its origins. The haecceity of an individual serves as what Pomponazzi calls its intrinsic principle of individuation. Its origins serve as its extrinsic principle of individuation.³¹

The view that individuals are made the individuals they are by their haecceities clearly traces back to the ontology of Duns Scotus.³² For the source of the view that individuals are individuated extrinsically by their origins, however, Pomponazzi (*De nutritione* 132rb) refers his readers to the following passage from Aristotle's metaphysics:

When the matter is one, different things may be produced owing to difference in the moving cause, e.g. from wood may be made both a chest and a bed. But some different things must have their matter different, e.g. a saw could not be made of wood, nor is this in the power of the moving cause; for it could not make a saw of wool or of wood (*Metaphysics*, 1044a25–30).

³⁰ See *De nutritione*, 132rb. Also *De speciebus intelligibilibus* (in *Corsi inediti*, 2:204).

³¹ Pomponazzi describes the distinction between the intrinsic and extrinsic principle of individuation as follows: “Dupliciter possumus intelligere, quod aliquid sit principium individuationis; uno modo possumus intelligere, quod aliquid sit principium intrinsecum, quare hoc singulare sit unum et sit hoc ens ita, quod secluso quocumque extrinseco illud sit principium, per quod singulare hoc sit unum et ens; alio modo possumus intelligere, quod aliquid non sit intrinsecum, sed extrinsecum principium, per quod istud tale individuum dicatur hoc ens sic, quod istud individuum dicatur hoc ens a principio extrinseco” (*Quaestiones super libros de Anima*, Question II, Paragraph 2). References to this text are according to question and paragraph in the edition by Burkhard Mojsisch.

³² See Poppi, *Studi sul pensiero inedito*, 88.

According to Pomponazzi, what Aristotle is claiming here is that, for something to be an individual of a certain kind, a certain kind of matter and a certain kind of moving cause are required. For something to be a saw, for instance, it needs to be made from iron acted upon by an artisan who has mastered the art of saw-making. But Pomponazzi also reads Aristotle as implying that, for something to be *this* individual, *this* individual matter and *this* individual moving cause are required. On this account, individuals are made the individuals they are, at least in part, by their material and causal origins. And Pomponazzi adds a temporal dimension to this claim as well.³³ The intrinsic principle of individuation apart, individuals are made the individuals they are by the matter from which, the cause by which, and the time at which they originate. Or as he puts the matter at one point: “a determinate effect requires a determinate agent, a determinate matter, and a determinate moment of time.”³⁴

The picture that emerges from this account of individuation and the account of animal identity over time we encountered in the previous section, then, is this. An individual animal persists for as long as its individual form persists. And its individual form is the individual form it is in virtue of, on the one hand, its haecceity, and on the other, its material, causal, and temporal origins. Or as Pomponazzi himself puts it at a crucial juncture of *De nutritione*:

³³ Recently, Adam Wood has argued that when Aquinas claims that forms are individuated by the matter in which they originate, part of what he means is that forms are individuated by the spatio-temporal point at which they originate (“Mind the Gap,” 116–18).

³⁴ “Determinatus effectus exigat determinatum agens, determinatam materiam et determinatum tempus” (*De nutritione*, 132vb).

At least with regard to material things, the identity of the form suffices for the identity of the compound. A form, however, is the same because it is produced by one agent, in one matter and in one time.³⁵

To make this picture more concrete, we need to know a little bit more about what, according to Pomponazzi, the material and causal origins of an animal form are, or about how animal generation works. The animal Pomponazzi has most to say about in this connection, is the human animal. But his account of human generation is relevant to animal generation in general. For even though he is aware that, according to truth of faith, the human form is created directly by God and not educed from the potency of matter, in *De nutritione* and related works his concerns are with an Aristotelian account of animal generation, in which the human form is a natural form educed from the potency of matter just like all other animal souls.³⁶

2.1 Human Generation

According to Pomponazzi, a human form is educed from the potency of matter when a portion of menstrual blood is acted upon by a generative power contained in the male semen in such a way that the blood comes to be endowed with a degree of organic organization that will make

³⁵ “Ad identitatem compositi per se in rebus materialibus saltem sufficit identitas formae. Forma autem est eadem, quoniam ab uno agente in una materia et in eodem tempore producitur” (*De nutritione*, 132vb).

³⁶ “Si vero loquamur secundum veritatem, forsitan aliter esset dicendum. Nam anima non educitur de potentia materiae, sed tantum creatur” (*De nutritione*, 132ra). On the distinction in Pomponazzi between arguments that proceed *ex puris naturalibus* and arguments proceeding *secundum veritatem*, see also Craig Martin, *Subverting Aristotle*, 6–7, 67–8.

it receptive of a human form. On one occasion, Pomponazzi compares the way semen acts upon the blood to the way in which rennet works as a coagulant upon milk, and submits that human forms are educed from matter as the result of the action of semen upon blood only.³⁷

Matters are, however, a little bit more complicated than this. For lacking organization and life itself, Pomponazzi holds, male semen alone does not suffice to organize the female blood to a degree that will make it receptive of a human form. A clear statement of this view can be found in his 1518 lectures on the *Physics*:³⁸

It is hard to see how this semen would generate so noble a thing. For how would a uniform thing generate the amount of variety that is found in human anatomy? Moreover: this thing is not alive. So how would it generate a living being? For this reason, philosophers have concluded that, because a less perfect thing cannot generate something more perfect than itself, the semen does not do this work by itself, but serves as the instrument of another agent.³⁹

³⁷ “Adiuvatur etiam mas a femella ex menstruo eiusdem femellae cui admiscetur sperma hominis tamquam coagulans coagulato”. And: “Foetus non fit nisi ex menstruo, virtute tamen spiritus gignitivi, qui quidem est ut coagulans sicut fit in lacte” (*De universalibus*, in *Corsi inediti*, 2:106, 114).

³⁸ The *Quaestio de genitis ex putri materia* from his lecture on Book VIII survives in two *reportationes* conserved in Paris, Bibliothèque nationale de France, MS 6533, folios 515r–521r, and Biblioteca Città di Arezzo, Fraternità dei Laici, MS 390, folios 274v–278r. A full edition of the Paris manuscript is available in Vittoria Perrone Compagni, “La stagione delli frumenti.” Parts of the Arezzo manuscript are transcribed in the footnotes to that paper, and in Bruno Nardi, *Studi su Pomponazzi*, 316–19. I provide transcriptions of two further passages below.

³⁹ “Sed mirabile est quomodo illud sperma generaret [MS generet] tantam rem ita nobilem. Quomodo enim res uniformis generaret tantam diformitatem, ut patet in anathomia. Amplius: non vivit illa res. Quomodo ergo vivens generaret? Quapropter ratiocinati sunt philosophi quod illud sperma ex se non facit illud, quia nullum minus perfectum potest generare rem se ipsa perfectiorem, sed est instrumentum alterius agentis” (A, fol. 274r).

The other agent mentioned in the last line here are the celestial intelligences, which move the sperm the way a painter moves his brush.⁴⁰ Human generation thus comes out as a process in which a human form is educed from matter as a result of the organization the celestial intelligences bring about in the blood by means of the instrumental agency of the semen.

According to Pomponazzi in the lectures on the *Physics*, however, it is not possible to rule out that human forms can in principle be educed in other ways as well. In particular, Pomponazzi in that work maintains that we cannot rule out that the celestial intelligences could act upon inorganic matter directly, and bring about in it the kind of organization that will make it possible for a human form to be educed from it.⁴¹ Hence, Pomponazzi concludes, we cannot rule out that, in case a deluge or a plague should ever put an end to all human life on earth, human beings could re-emerge from mud or dirt acted upon by the celestial intelligences directly.⁴²

We are now in a position to draw a few conclusions. First, on the account we are offered in the lectures on the *Physics*, we cannot rule out that human forms in general may be generated in either one out of two ways: from blood acted upon semen, or from dirt under the direct

⁴⁰ “Penellus facit picturam, sed quomodo, cum ipse non cognoscat? Sed quia ductus est ab alio etc. . . . Ergo oportet venire ad deum et intelligentias, quia mediantibus [MS mediantis] corporibus caelestibus operantur” (A, fol. 274r).

⁴¹ “Hoc non sit impossibile, immo rationabile. Et per naturam non possumus hoc negare” (Perrone Compagni, “La stagione delli frumenti,” 207).

⁴² Pomponazzi traces back this hypothesis to Avicenna’s *De diluviis* and *De animalibus*. On Avicenna on the possibility of human spontaneous generation, see Nardi, *Studi su Pomponazzi*, 309–10.

influence of the celestial intelligences.⁴³ On the account we are offered in the lectures on the *Physics*, that is, we cannot rule out the possibility that “it is accidental for man to be generated from dirt or semen.”⁴⁴

Second, if human forms in general are perhaps not necessarily generated from dirt or semen, matters look different for an individual human form that is in fact educed from blood. For given that individual human forms are individuated in part by their material origins, a human form educed from blood could not also have been educed from dirt while still being the same individual form. By the same token, the same individual form that is in fact educed from dirt could not also have been educed from blood.

Third, if individual human forms are individuated in part by their material origins, a human form educed from this blood could not also have been educed from other blood. If the human form of Socrates was educed from the blood of Phenarete, for instance, his form could not have been educed from any other blood, and Socrates could not have had any other mother than Phenarete while still being Socrates.⁴⁵ In general:

The many who wish they were born from other mothers also wish, in an implicit way, that they had not been. In the same way, if someone wished he were a god, he would not be himself if indeed he were a god.⁴⁶

⁴³ As noted by Perrone Compagni (“Métamorphoses animales,” 73), Pomponazzi in *De nutritione* no longer mentioned the this second possibility. We cannot conclude from this, however, that by 1521 he no longer countenanced it.

⁴⁴ “Accidit homini quod generetur ex terra vel ex semine” (Perrone Compagni, ‘La stagione delli frumenti,’ 211).

⁴⁵ “Si Socrates fuit genitus Phenarete non potuit fuisse genitus alicuius alterius mulieris” (*De nutritione*, 131vb).

⁴⁶ “Si multi nollent esse geniti ex sua matris, nollent et esse implicate, sicut cum aliquis vellet esse deus, si enim esset deus non esset ipse” (*De nutritione*, 132ra).

Fourth, if individual human forms are individuated in part by their causal origins, and if the human form of Socrates was educed from the blood of Phenarete under the influence of some given celestial constellation, the same individual form could not have been educed under any other celestial constellation. A human being conceived under any other celestial constellation would not have been the individual man Socrates.

Fifth, if individual human forms are individuated in part by their causal origins, and if the human form of Socrates was educed from matter by the semen of Sophroniscus, the same individual form could not have been educed from matter by any other semen, and Socrates could not have had any other father than Sophroniscus. Finally, given that individual human forms are individuated in part by their temporal origins, Socrates could not have been conceived at any other time than the time he was in fact conceived. In general:

In vain is the lament of those who wished that they had had other parents, or that they were born in other times. For in so wishing, they wish they had not been themselves. In the same way, for Socrates to wish he had been Plato is for Socrates to wish that he did not exist.⁴⁷

The last two passages bring us to the final question of this paper. Pomponazzi is aware that some of us wish they had had other mothers, and that we speak as if we could have had other parents or lived in other times. So why is he willing to commit to a principle of individuation that makes these wishes and counterfactuals come out as impossible? Or in more general terms: why is Pomponazzi willing to commit to a principle of individuation that will also commit him

⁴⁷ “Vana est igitur querela hominum qui alios voluissent habere parentes et in aliis temporibus nasci, sic enim appetendo appetunt seipsos non esse. Sicuti Socratem appetere esse Platonem est appetere se non esse” (*De nutritione*, 132vb).

to the view that individual forms, of any kind, necessarily have the material, causal, and temporal origins they do?

This question will be topic of the following sections. As we will see, Pomponazzi believes that philosophers according to whom the connection between forms and their material, causal, and temporal origins is contingent will not always be able to account for why some given form has the material, causal, and temporal origins it in fact has. He does not mention the philosophers he has in mind by name here, but I propose we read his arguments for individuation by material and temporal origin as responses to predecessors such as Paul of Venice and Gregory of Rimini.⁴⁸

3. The Necessity of Material Origin

The third part of Paul of Venice's *Summa philosophiae naturalis* deals with generation and corruption. One question he addresses there is how forms relate to their material origins. Could this form have originated from other matter than that from which it in fact originated? According to Paul, the answer to this question is in the affirmative. He reasons as follows.

According to Averroes in his commentary on Book I of the *Physics*, prime matter is receptive of all forms and is therefore in potency to all forms.⁴⁹ But if prime matter is in potency

⁴⁸ Both are prominent interlocutors of Pomponazzi. Thus in *De nutritione*, we find detailed evaluations of Paul's account of the transformation of food into flesh (123ra–vb, 126rb–vb), and of Gregory's account of rarefaction and condensation (137va–138vb).

⁴⁹ “Si igitur prima materia innata est recipere omnes formas, necesse est ut sit in potentia omnes formae” (*De physico auditu*, Book I, Comment 69, 19vb). References are according to book and comment, followed by folio number and column in the 1550 edition.

to all forms, Paul reasons, forms in their turn need to be indifferent with regard to their material origins. It needs to be the case that any form can have any portion of prime matter as its material origin, for if there were a form that could not originate from some given portion of prime matter, that portion of prime matter would ipso facto not be in potency to all forms:

Every total matter is in potency to the generation of all forms. Therefore, from every portion of matter, every form can be generated. Hence from one and the same portion of matter two forms can be generated and one and the same form can be generated from two portions of matter.⁵⁰

Again, “prime matter is of the same nature in all of its parts.”⁵¹ Hence if a determinate form originates in some determinate part of prime matter, there seems to be no reason why it could not also have originated in some other part.

Paul here appeals to core Aristotelian principles such as the homogeneity of prime matter and the potency of prime matter to all forms. But even though Pomponazzi shares with Paul a commitment to at least some version of these principles, he resists the conclusion Paul wants to draw from them, according to which individual forms could have other material origins than the ones they in fact have. In Book I, Chapter 26 of *De nutritione*, Pomponazzi asks his readers to consider the following scenario:

⁵⁰ “Quaelibet materia totalis est in potentia ad quamlibet formam generandam. Ergo ex quaelibet materia totali potest generari quaelibet forma generanda. Et per consequens ex eadem materia possunt generari due formae et ex duabus materiis una forma” (*Summa philosophiae naturalis*, Book III, Chapter 21, 46vb). References to this text are according to book and chapter in the 1503 Venice edition, followed by folio number and column.

⁵¹ “Materia prima est eiusdem rationis in omnibus partibus eius” (*Summa philosophiae naturalis*, III.21, 46vb).

Let a and b be two qualitatively and quantitatively indistinguishable portions of matter that relate in the same way to a completely homogenous fire, so that between a and b there is a fire that relates in entirely the same way to a and b .⁵²

Now, assume that, as the result of the action of fire f upon a and b , fire form c originates from a and fire form d originates from b , as in figure 1:

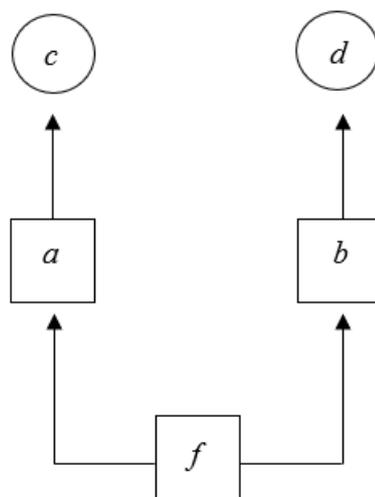


Figure 1

If Paul of Venice is correct, a scenario in which c and d had swapped places would also have been possible. But if such a scenario is possible, Pomponazzi reasons, we need some account of why it is that, as a matter of fact, we are not in that scenario:

⁵² “Ponantur ergo, a et b materiae omnino similes in qualitate et quantitate aequaliter se habentes ad unum ignem per totum uniformem, ita quod inter a et b materias sit ignis omnino aequaliter se habens ad a et ad b ” (*De nutritione*, 131va).

But if, as has been conceded, c was indifferent to being generated by a and b , then why is it that it is in fact generated by a rather than b ?⁵³

One possible answer, Pomponazzi writes, could be that a and b are under different celestial constellations, and that the celestial constellation over a produces c in it, while the celestial constellation over b produces d in it:

Perhaps it is said that this difference is due to the celestial constellations over a and b , so that, because the celestial constellation over a is different from the celestial constellation over b , c is produced from a rather than from b .⁵⁴

Indeed, Paul of Venice had suggested just this kind of account in claiming that “the a form is generated from one portion of matter rather than another is determined by the heavenly causes.”⁵⁵ But Pomponazzi rejects this answer:

⁵³ “Cum igitur per concessa c aequae bene poterat generari ex b veluti ex a , cur igitur c est magis genitum ex a quam ex b ?” (*De nutritione*, 131va).

⁵⁴ “Sed adhuc forte dicitur quod talis diversitas provenit ex diversitate aspectuum caeli, cum enim a materia diversimode aspiciatur a caelo quam b materia, hinc est quod c effectus magis producitur ex a quam ex b ” (*De nutritione*, 131vb).

⁵⁵ “Quod autem potius generaretur forma ex una materia quam ex alia, hoc est ex determinatione causarum celestium” (*Summa philosophiae naturalis*, III.21, 46vb).

But this, it seems to me, is not to solve the problem but to fly away from it. For we can ask the same question about these celestial constellations, because they are of the same kind.⁵⁶

The passage is compact, but Pomponazzi appears to be reasoning as follows. If his opponents are willing to allow that *c* could have originated from two portions of matter of the same kind, they must be prepared to allow that *c* could have been produced by two agents of the same kind as well.⁵⁷ But the celestial constellation over *a* will surely be of the same kind as the celestial constellation over *b*. Hence, his opponents must be willing to allow that *c* could have been produced, not only by the celestial constellation over *a*, but also by the celestial constellation over *b*. That is, they must be willing to allow that *c* could also have originated from *b*. But that will bring them back to the initial problem: Why are we in a scenario where *c* originates from *a* but not from *b*?

So why are we? According to Pomponazzi:

It remains that this is because of the difference in matter. Because *c* can be produced from *a* only.⁵⁸

But why could *c* only have been produced by *a*?

⁵⁶ “Verum, it mihi videtur, istud non est solvere, sed fugam arripere, quoniam eadem est quaestio de illis aspectibus, cum enim sint eiusdem rationis” (*De nutritione*, 131vb).

⁵⁷ Paul of Venice indeed held this view. See *Summa philosophiae naturalis*, III.21, 46vb

⁵⁸ “Relinquitur hoc esse ratione diversitatis materiae, quoniam *c* non potest produci nisi ex *a*, quod est propositum” (*De nutritione*, 131va–b).

I answer that this matter relates to this form and not that form, because this matter is this matter and this form is this form.⁵⁹

Taken at face value, Pomponazzi's answer here may well look disappointing. Taken at face value, indeed, his answer to the question of why *c* could only ever have originated from *a* appears to amount to little more than: because.

There is, however, a more charitable way to read Pomponazzi in the above passage. Indeed, when he claims that *c* could only have originated from *a* because this matter is this matter and this form is this form, he can plausibly be read as saying that *c* could only have originated from *a* because of the way *c* is individuated. On this reading, his answer in the above passage can be construed as follows. The extrinsic principle of individuation of *c* is its material, causal and temporal origin. Hence, given that *c* originates from matter *a*, it could not have originated from matter *b* while still being the same individual form *a*. In other words, the reason why *c* originates from *a* and not from any other matter is simply that it is *c* rather than some other form. The reason that *c* originates from *a* rather than from any other matter is simply because, as Pomponazzi puts it above, this form is this form.

Now Pomponazzi is well aware that if *c* could only have originated from *a*, matter *b* was not in potency to *c* so that, on his account, "some given matter would not be in potency to all forms."⁶⁰ But contrary to Paul of Venice, he does not see a conflict with Aristotelian matter theory here. For according to Pomponazzi, the claim that matter is in potency to all forms is best construed as a claim that every part of matter is in potency to all forms in kind but not in number:

⁵⁹ "Dicitur quod ista materia respiciat hanc formam et non illam est, quoniam haec materia est haec et illa forma est haec" (*De nutritione*, 131vb).

⁶⁰ "Tunc una materia non esset in potentia ad omnes formas aequaliter" (*De nutritione*, 131vb).

To what was said, that not all matter would be in potency to all forms, I reply that all matter is in potency to all forms in kind but not in number. Indeed any matter will receive any form in kind, but not any form in number.⁶¹

Pace Paul of Venice, the Aristotelian doctrine of matter's universal potency for form does not rule out that individual forms necessarily originate from the matter they in fact originate from.

4. Individuation by Temporal Origin

In Book I, Chapter 28 of *De nutritione*, Pomponazzi argues his account of individuation by temporal origin as follows:

The same individual effect cannot be produced in different moments of time. The reason is this. [1] Suppose that, for instance, whiteness *a* produces a species of itself in your eye, that *a* is then removed and then seen again by the same eye. [2] It is certain that the second species is not the same as the first, for then one and the same individual would return after its corruption. [3] So given that there are two acts of vision, what makes

⁶¹ “Ad illud quod addebatur videlicet quod materia non esset in potentia ad omnes formas dicitur omnem materiam esse in potentia ad omnem formam secundum speciem, non autem secundum numerum, etenim unaquaeque materia omnem formam secundum speciem recipiet, non autem secundum numerum” (*De nutritione*, 132ra).

them two? [4] As the difference is certainly not due to the material or efficient cause, what remains is that it is due to the temporal difference.⁶²

In the scenario Pomponazzi describes in [1], we are dealing with two species, a_1 and a_2 , which are perfectly similar to one another. They pertain to the same object seen by the same person under the same conditions. But as Pomponazzi tells us in [2], in spite of their perfect similarity, a_1 and a_2 are numerically distinct. That they are numerically distinct is clear, because once you close your eye for the first time, a_1 ceases to be. And as Aristotle had claimed in Book II of *De generatione et corruptione*, one and the same individual will not return once it has ceased to be. If air condenses into water and the water then vaporizes into air again, we will have air at the beginning and end of the process, but not the same air in number:

Those things, on the other hand, whose substance is perishable (not imperishable) must return upon themselves specifically, not numerically. That is why, when Water comes to be from Air and Air from Water, the Air is the same specifically, not numerically (*On Generation and Corruption*, 33b16–18).⁶³

⁶² “Idem etiam effectus secundum numerum per se produci non potest in diversis instantibus. Cuius causa est haec: quoniam sit ita quod a albedo producat speciem sui in oculo tuo, exempli gratia, deinde removeatur albedo a et iterum eadem a albedo ab eadem oculo videatur. Certum est quod secunda species et visio non est pima, sic enim corruptum rediret idem secundum numerum, cum itaque duae sint visiones; unde igitur habent quod sint duae? Et certum est quod ista diversitas sumi non potest, neque ex materia, neque ex efficientibus, reliquum igitur est ut sumatur ex temporibus” (*De nutritione*, 132va). Sentence numbers added by me.

⁶³ As Dominik Perler has recently shown, some scholastics argued against the return of one and the same individual form on the basis of their accounts of individuation. According to Godfrey of Fontaines, for instance, forms are individuated, in part, by the motion by which they are educed from matter. And as numerically the same motion does not return, the form it educes from matter does not return either. See Perler, *Eine Person sein*, 149.

But if a_1 and a_2 are numerically distinct, this raises the question in [3] of what makes them distinct. Or in other words: what makes a_1 this individual and a_2 that one? In [4], Pomponazzi argues that, given that a_1 and a_2 pertain to the same object seen by the same person under the same conditions, or given that they share the same causal and material origins, the only thing that can account for the fact that a_1 is this individual and a_2 that one has to be the fact that a_1 has one temporal origin and a_2 another.

So construed, Pomponazzi's argument may well look puzzling. For why would the fact that a_1 has one temporal origin and a_2 another be the only way to account for the fact that a_1 is this individual and a_2 that one? In the vicinity of the above passage, Pomponazzi explicitly reminds his readers that, intrinsically, things are made distinct by their haecceities.⁶⁴ So it seems that he has at his disposition a simple answer to the question of what makes a_1 is this individual and a_2 that one that does not appeal to extrinsic factors such as temporal origin. Indeed, it seems he could simply have said that what makes a_1 is this individual and a_2 that one, is the fact that a_1 has this haecceity and a_2 that one.⁶⁵ So why does he not take this route, and opt for an extrinsic principle of individuation that commits him to the necessity of temporal origin instead? As I will argue in the remainder of this section, the answer to this question is that Pomponazzi is looking for more than just an answer to the question of what makes a_1 is this individual and a_2 that one. And for this something more, haecceity, or the intrinsic principle of individuation, does not suffice.

⁶⁴ "Intrinsece autem, ut ego existimo, distinguuntur per suas hecceitates" (*De nutritione*, 132rb).

⁶⁵ In his *Quaestio de speciebus intelligibilibus*, he explicitly claims that species are intrinsically individuated this way (in *Corsi inediti*, 2:204).

4.1. *Gregory of Rimini*

Having argued that no form could have had another temporal origin than the temporal origin it in fact has, Pomponazzi contrasts his view with the view of certain unnamed theologians:

It is necessary to know that some theologians respond differently to how we will respond to the question of why one hour precedes another, or why a man born in these times is born after those who were born before him and before those who will be born after him. For they say there is no ground for such things other than the divine will that so orders matters.⁶⁶

One of the most famous theologians to have held that things are ordered in time the way they are because God wills them to be ordered so, was Gregory of Rimini.⁶⁷ In this section, I will briefly outline some of the arguments that led him to this conclusion. With this background in place, we can then return to Pomponazzi and the conclusion we have seen him draw in [4].

In Book I, Distinction 17 of his *Sentences* commentary, Gregory of Rimini provides what is among the most detailed and most influential accounts of the intension and remission of forms.⁶⁸ Intension and remission are the processes in which a form becomes more or less intense, but remains a form of the same species. The hotness of a surface, for instance, may

⁶⁶ “Quidem theologi aliter respondent quam nos responderimus, videlicet, cur una hora praecedat alteram, et homo qui nascitur in istis temporibus est posterius natus his qui fuerunt ante ipsum, et prius his qui erunt post se, dicunt enim quod huiusmodi nulla alia est causa nisi voluntas divina sic disponens” (*De nutritione*, 132vb).

⁶⁷ Later in the sixteenth century, he would be associated with this view by, among others, Gabriel Vásquez (*Commentarii ac disputationes*, 535–6).

⁶⁸ For a recent discussion, see Can Laurens Loewe, “Gregory of Rimini on the Intension and Remission of Corporeal Forms.”

become more or less intense over time, but remain an instance of hotness as its intensity increases or decreases. How does this work? Gregory defends what has come to be known as an addition theory of intension and remission. On this account, the hotness of a surface consists of a number of parts or degrees that all belong to the same kind, and which jointly form a single whole in the way in which many small water drops form a single large one.⁶⁹ It becomes more intense when a further part or degree is added to these parts or degrees,⁷⁰ and it becomes less intense when the hotness loses one of its former degrees and “one part of the form is taken away from the rest.”⁷¹

As Gregory was well aware, this addition theory faces a number of problems. The most important one of these for now is the following.⁷² Imagine a hotness composed of two parts or degrees called p_1 and p_2 , and assume that the hotness is acted upon by a remitting agent that removes these two degrees one by one. In what order will they be removed? There are two options: Either p_1 disappears first and p_2 disappears second, or the other way round. But because the two degrees are perfectly similar to one another⁷³ and resist the remitting agent to the same degree, there seems to be no reason to prefer any one order of disappearance over the other. Hence it appears that either both should go at the same time, in which case we would not have

⁶⁹ See *Lectura*, Book 1, Distinction 17, Question 4, 2:401. References to this work are according to book, distinction and question of the Trapp edition, followed by volume and page number.

⁷⁰“Cum aliquod calidum fit magis calidum . . . acquirit aliquam formam vel partem seu gradum formae” (*Lectura*, 1.17.4, 2:367).

⁷¹ “In remissione pars formae a parte tollitur” (*Lectura*, 1.17.4, 2:394).

⁷² The problem was originally raised by Walter Burley in his *Tractatus secundus de intensione et remissione formarum*. For discussion of Burley’s argument, see Anneliese Maier, *Grundprobleme*, 329–30, and Loewe, “Gregory of Rimini on the Intension and Remission of Corporeal Forms,” 312–14.

⁷³ They are “consimiles omnino” (*Lectura*, 1.17.4, 2:398).

a gradual remission, which is contrary to the initial hypothesis, or they should both remain intact, in which case we do not have a remission at all:

Any half of the form relates in the same way to the remitting agent in its intensity, and equals the other in its power to resist the agent. And in general, there is no reason why one would disappear before the other. And hence either both disappear at the same time, or none of them disappears.⁷⁴

Gregory's solution is to grant that no natural cause will trigger one degree to disappear rather than another. Rather, it is a free cause, God, who determines that p_1 will disappear in one instant and p_2 in the next:

The reason why one part is corrupted prior to another, is that the first agent, or God, whose providence determines all order in things . . . freely determines a natural agent so that this pars is corrupted prior to that part.⁷⁵

Gregory justifies this solution by pointing out that divine concurrence of this kind is in fact a very common kind of phenomenon. Consider the following scenario. At t_1 you look at a white surface that affects your eye with visual species a_1 . You then close your eyes for a brief time,

⁷⁴ "Quaelibet medietas formae secundum intensionem est aequae proxima agenti remittenti eam et est aequalis alteri in virtute resisitva; et universaliter, nulla est ratio, propter quam una potius corrumpatur quam alia. Et sic vel utraque simul corrumpetur, vel neutra corrumpetur" (*Lectura*, 1.17.4, 2:398).

⁷⁵ "Causa, propter quam una pars prius corrumpitur quam altera, est quia primum agens, scilicet deus – ad cuius providentiam pertinet omnis ordo qui est in entibus . . . determinat libere agens naturale, ut haec pars prius quam illa corrumpatur" (*Lectura*, 1.17.4, 2:409-10).

open them again, and at t_2 your eyes are affected with visual species a_2 . Species a_1 and a_2 are perfectly similar. They pertain to the same object seen by the same person under the same conditions. But if a_1 and a_2 are perfectly similar, why is it the case that at t_1 the surface produces a_1 and not a_2 , and that at t_2 the surface produces a_2 and not a_1 ? Again Gregory holds that it is God who at each moment of time selects one species out of the many species the surface could possibly have produced, and thereby establishes a temporal order in which a_1 precedes a_2 precedes a_3 , and so on:

It is clear that, when the same eye is opened and closed a number of times in a row, the same visible object successively causes various species or acts of vision that all belong to the same kind and which, prior to their production, were all equally in potency to being produced, and between which no essential order is found. . . . In brief, no cause of this order can be found other than the free determination of the first agent, because, had he so wished, the effect produced third could have been produced first, and the effect produced first could have been produced third.⁷⁶

At this point we can return to Pomponazzi. In his discussion of species a_1 and a_2 , part of what he wants to know is what makes a_1 this individual and a_2 that one. But what the contrast he draws with Gregory reveals that he also wants an answer to this question: Why is a_1 the

⁷⁶ “Constat namque quod idem visibile in eodem oculo frequenter clauso et aperto successive causat visiones aut proprias species, quae sunt eiusdem rationis et, antequam causarentur, aequaliter in potentia ut fiant nec aliquis omnino inter eas essentialis ordo est. . . . Breviter concludendo, nulla omnino huius ordinis causa poterit assignari nisi libera determinatione agentis primi, quia, si voluisset, primo fuisset producta quae fuit tertio et tertio quae primo” (*Lectura*, 1.17.4, 2:410).

individual that originates at t_1 and a_2 the individual that originates at t_2 rather than the other way round?

Here, his account of individuation by haecceity will be of no avail, of course. The haecceity of a species is a purely intrinsic feature of the species that will not tie it to any one time or other in particular. As Pomponazzi notes, one prominent answer to the question of why a_1 and a_2 are ordered in time the way they are was the answer given by theologians such as Gregory. To be sure, Pomponazzi gracefully notes that “in these matters we no doubt need to abide by the decision of the Church.”⁷⁷ But the answer he appears to be looking for in *De nutritione* is one that proceeds from natural reason only.⁷⁸ And it is at this point that an account of individuation by temporal origin proves helpful. If beings are individuated in part by their temporal origins, neither of the two species could have originated at any other moment of time. There simply is no way in which they could have appeared in any other order while still being the individual species they are.

5. Individuation by Causal Origin

In Chapter 28, Pomponazzi cites a number of cases in support of his account of individuation by causal origin. One of them he borrows from Pseudo-Dionysius’s *De divinis nominibus*. In a famous passage from Chapter 2 of that work, the union of the divine persons is compared to the blending of beams of light in the same medium.⁷⁹ When many lamps project their beams in the same medium, Pseudo-Dionysius writes, the beams will unite to such a degree that “no one

⁷⁷ “Verum in hoc sine dubio standum est determinatione Ecclesiae” (*De nutritione*, 132vb).

⁷⁸ On the naturalism of *De nutritione*, see Ramberti, “Esegi del testo aristotelico,” 339–40.

⁷⁹ Pomponazzi refers to this chapter in *De nutritione*, 132rb.

is able to tell apart in the air containing all of them the light of any one lamp from that of the others, and to see one of them without another.”⁸⁰ Even so, anyone could ascertain for himself the numerical plurality of the beams filling the medium, since, “if someone removes one lamp from the house, its light will be removed with it at the same, without drawing anything of the other lights with it or leaving anything of itself with them.”⁸¹

In *De nutritione*, Pomponazzi is not interested in the analogy with the divine persons here, but uses Pseudo-Dionysius’s example to raise a question about individuation. Suppose lamps *a* and *b* project their beams *c* and *d* in one and the same medium, as in figure 2:

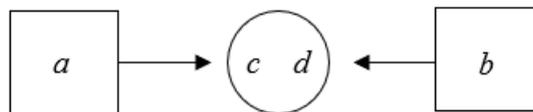


Figure 2

With Pseudo-Dionysius, Pomponazzi submits that we can easily ascertain that *c* and *d* are numerically distinct. But what makes them so? Assuming that the two beams are of the same kind and that they occupy the same medium at the same time, Pomponazzi reasons, the only thing that could make them numerically distinct are their causal origins:

⁸⁰ “Neque quisquam, ut arbitror, potest unius lampadis lumen ab aliarum ex aere cuncta lumina continente secernere, atque alterum absque altero videre” (*De divinis nominibus*, Book II, Section 4. In *Patrologia Graeca*, 3:642). References to this text are according to book and section.

⁸¹ “Si quis unam lampadam educat e domo, simul exhibit totum proprium lumen, nihil quidquam caeterorum luminum in seipsa simul trahens, neque aliquid sui illis relinquens” (*De divinis nominibus*, II.4. In *Patrologia Graeca*, 3:642).

What is it that makes them two? The only answer can be that this is in virtue of their efficient causes.⁸²

Without further clarification, the argument here may well seem a bit puzzling. After all, it is in the immediate context of his discussion of the two lamps that Pomponazzi reminds his readers that, intrinsically, created beings are individuated by their haecceities (*De nutritione*, 132rb). But if that is so, it seems the answer to the question of what makes the two lights numerically distinct could simply have been: their haecceities. It is not clear that there is a need for Pomponazzi to appeal to efficient causes to account for the fact that *c* is this individual and *d* that one.

The situation becomes clearer, however, if we assume that Pomponazzi wants to know, not only what makes *c* this individual and *d* that one, but also why *c* is the individual caused by *a* and *d* the individual caused by *b* instead of the other way round. For an answer to this second question, an appeal to the haecceities of *c* and *d* will clearly be of no avail. As intrinsic principles of individuation, their haecceities will not connect *c* and *d* to one cause rather than another. Indeed it is no surprise that according to Paul of Venice, according to whom forms are individuated by their haecceities, there is no reason why a form caused by some given agent could not also have been caused by another agent of the same kind.⁸³

An account of individuation by causal origin, however, provides just the kind of answer Pomponazzi appears to be looking for. For on such an account of individuation, *c* could not have originated from any other cause than *a* on pain of becoming, in virtue of that very fact,

⁸² “Unde igitur habent quod sint duo, et non est dicere nisi ratione agentium” (*De nutritione*, 132rb).

⁸³ “Identitas vel distinctio numeralis transcendentaliter sumpta est generaliter per haecceitatem” (*Summa philosophiae naturalis*, III.5, 95vb). And: “idem generabile a diversis agentibus tam per se quam per accidens concurrentibus potest generari” (*Summa philosophiae naturalis*, III.21, 46vb).

another individual. Given an account of individuation by causal origin, indeed, beams *c* and *d* could not have swapped causal positions, as it were, while remaining the same individuals they are.

Conclusion

How do individuals persist throughout nutrition and growth? Pomponazzi's little studied treatise *De nutritione* provides a rich and polemical discussion of that question. According to Pomponazzi, animals survive the accumulation of new bodily mass thanks to their forms, which remain the same over time as they successively inform smaller or larger portions of matter. As we have seen, forms are individuated in part by their haecceities and in part by their material, causal, and temporal origins. With this account of individuation by material, causal, and temporal origin, Pomponazzi commits to the view that no form could have been educed from other matter. He is well aware that this conclusion will come as a surprise to many, and that it seems intuitive to assume that we could have originated from other parents or at other times. But as Pomponazzi argues in *De nutritione*, this intuitive sense of contingency is misleading, as forms are tied to their material, causal and temporal origins as a matter of necessity. Indeed the conclusions he arrives at in *De nutritione* seem to be of a piece with the deterministic worldview he develops in other works from the same period, in particular *De fato*, according to which seemingly contingent events are in fact determined to take place by the motions of the celestial bodies.⁸⁴

⁸⁴ Perrone Compagni speaks of a "déterminisme cosmologique" in this connection ("Métamorphoses animales," 65–8). Accounts of Pomponazzi's determinism have understandably concentrated on *De fato* and *De incantationibus*. The connection between these works and *De nutritione*, however, remains to be explored in

In this paper, I have asked what motivates Pomponazzi in *De nutritione* to commit to an account of individuation that comes with strong deterministic implications. I have argued that, according to him, philosophers according to whom forms could have had other origins than the ones they in fact have face situations where they can give no compelling, naturalistic, account of why some given form is realized in this matter and no other, why it is educed by this agent and not by some other agent of the same kind, or why it emerges at this time and no other. Pomponazzi does not name his opponents here. But as we have seen, his arguments for individuation by material and temporal origin are best read as addressing the views of Paul of Venice and Gregory of Rimini.⁸⁵

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further detail. On the problem of determinism and free will in *De fato*, see the important study by Ramberti, *Il problema del libero arbitrio*.

⁸⁵ I am grateful to two anonymous referees for their helpful comments on an earlier version of this paper.

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