

Summula philosophiae naturalis (Summary of Natural Philosophy)

William Ockham

Translator's Preface

Ockham's *Summula* is his neglected masterpiece. As the prologue makes clear, he intended it to be his *magnum opus* of natural philosophy, and those parts that he completed bear out that ambition. The depth and originality of the ideas presented here, as well as the force of the arguments, place this among the most important works of natural philosophy written in the Middle Ages. Inasmuch as Ockham's ideas in natural philosophy are as influential and interesting as his ideas in any domain, this work deserves to be considered one of Ockham's most important treatises, rivaling in importance his *Summa logicae*. And inasmuch as medieval natural philosophy concerns itself with the fundamental questions of metaphysics, this work should be regarded as one of the great masterpieces of medieval philosophy. Amazingly, however, it has only rarely been studied with any care, and has never been translated.

Here I attempt to help remedy that neglect. At present, the translation is unchecked, unpolished, and incomplete, extending only through the first of four books, and with some of the less interesting material omitted. I would be glad for corrections and additions.

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August 2012
Boulder

Prologue

Fervently and frequently, a great many scholars have asked me to convey in writing, in a single *summula*, following the footsteps of Aristotle, the responses I have routinely offered, in the weakness of my understanding, to those who have asked me about the difficulties of natural science. These scholars claim to be satisfied by my responses and judge them to be adequate, and so charity compels me to yield to their fervent request. I shall therefore attempt a great work (*opus magnum*), one that exceeds my powers. I shall convey to memory, in writing, the things that it seems to me ought to be said in natural philosophy according to Aristotelian principles. Let the world know, then, that this treatise is being undertaken out of a desire to make clear, to those who have asked, in a style crude and unlearned, not what I hold in firm faith according to the catholic truth, but what should be said, as it seems to me, according to the views of Aristotle. Even so, I judge to be true everything examined below that does not clash with the truth of the faith, just as I judge to be spurned as false the entirety of what contradicts the Church of Rome's teaching.

Preamble

It is customary, before entering into sciences, to look into some of the preliminary issues that concern those sciences. Let us here, then, with respect to natural philosophy, briefly consider these issues:

- first, its unity;
- second, its subject;
- third, its causes;
- fourth, under which part of philosophy it is placed, practical or speculative.

1. Unity

With respect to the first I say that this science, according to the intention of Aristotle, is not numerically one through lack of parts that are distinct even in species, although it could be said to be numerically one by the unity of a collection or aggregate. To show this it should be known that 'numerically one' can for now be taken in two ways. In one way, it can be taken strictly and properly,

30 and then that is said to be numerically one which is one *per se* – that is, either something simple or
else a composite whose parts are either matter and form, or whose parts are distinct only in number
and not in any other respect. In this last a certain way fire is numerically one and a certain whiteness
is numerically one, and so on in other cases. In a second way, ‘numerically one’ is taken broadly and
improperly for that which is one by an aggregation of many things, distinct either in species or in
35 number alone, that do not make one thing *per se*. In this way a heap of stones can be said to be
numerically one because it is one heap and not multiple heaps. This is how Aristotle explains
‘numerically one’ in *Physics* III.¹ So too it can be said that this house is numerically one, and a
kingdom is numerically one and a population is numerically one, because although they are multiple
people, they nevertheless are not multiple populations. It is in this second way, but not in the first
way, that this science is numerically one. That it is not numerically one in the first way is clear from
40 the fact that one part is added before another, inasmuch as someone who grasps one part can err
regarding another part, meaning that this science concerning one conclusion coexists with error
concerning another conclusion, which would not be possible if the knowledges of the two
conclusions were numerically one, on the first way of taking ‘numerically one.’

This argument is confirmed as follows.

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2. *Subject*

Second we should look into the subject of this science. To this I say that there is not
precisely one subject for this whole science, but instead there are different subjects for the different
parts, inasmuch as there are distinct conclusions with distinct subjects. Hence it should be known
50 that nothing is a subject unless it is the subject of a conclusion. Thus it is commonly said that the
subject is that concerning which properties and affections are demonstrated. Therefore, when there
are distinct things of which distinct properties and affections are demonstrated, there are then
distinct subjects. But it is clear that in the case of natural science distinct properties and affections
are demonstrated of distinct subjects. Therefore there are distinct subjects in natural science.....

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3. *Cause*

Third, we should look into the causes of this science. I say that if we take ‘cause’ strictly, as
the Philosopher does in *Physics* II [194b1-195b30] and *Metaphysics* V [1013a24-1014a25], there are in
this science only two causes, efficient and final. The reason is that, if we take ‘cause’ in this way, then
60 no simple thing, not composed of matter and form, has more than two causes, because a simple
thing does not have matter or form. This is clear because if it is a simple thing then either it is
abstract from matter and subsistent *per se*, and it is clear of such a thing that it does not have matter
or form, or it is part of some composite, and then it *is* matter or form, and consequently it does not
have matter and form. For if it is matter then although it has form, still it does not have it as a cause,
65 because according to Avicenna [*Metaph.* VI.4] form is the cause not of matter but of the composite,
nor does it have matter as a cause, but rather it *is* matter. If, on the other hand, it is form, then it
does not have matter as a cause, nor does it have form, clearly, since it *is* form. Therefore it is plain
that no simple thing has matter and form as its causes. But this science is a simple thing, since it is
an accident. Therefore etc.

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4. *Practical or Speculative*

Concerning the fourth, whether this science is practical or speculative, I say that this science
is either as a whole or for the most part speculative. To make this clear it should be known first what

¹ The editor directs the reader instead to Averroes’s commentary on Book III, text 68.

75 practice is, and what practical knowledge (*notitia*) is – from these our view will be clear. *Practice*, then,
from which we speak of *practical knowledge*, is an operation existing within our power. This
description cannot be proved, however, just as neither can the signification of any word, but it is
clear to those who consider how authors’ speak. For everyone takes practice, from which one speaks
of practical knowledge, for a human act, calling a human act an act existing within the power of a
80 human being.

From this it is clear that natural science, either as a whole or in large part, is speculative and
not practical, because either as a whole or in large part it concerns those things that are not our
works, such as the earth, the heavens, animals, and the other bodies with which it deals. If, however,
it deals with certain of our works, such as our thoughts (which are dealt with in the *De anima*) and
85 sensations – works that are sometimes in our power, and by virtue of which knowledge such acts
can be quickly and more easily or better be elicited – then, with respect to this part, natural science is
practical. . . .

How to Proceed

90 Now that we have looked into these things, we can look at how in this science we are to
proceed, to consider, and to demonstrate. In this regard it should be said that although there are
demonstrations *propter quid* in this science, as there are in other sciences, still in order of teaching –
which ought to begin from things that are better known to and easier for the community to whom
the science is being conveyed – we should proceed from effect to cause and from more general to
95 less general – that is, from propositions having terms that are more general, and then to propositions
having less general terms. This is not to deny that the first thing understood by each of us is
something singular. Even so, no singular thing, and indeed perhaps not even the singular things
from any one species, are the first things understood by the whole human community that needs to
be taught. Instead, some things are known to one group of people and others to another group. In
100 contrast, the *general* concepts are known to the whole community, for those concepts are known to
each and every group. For instance, one people have knowledge of lions and not horses, whereas
others have knowledge of horses and not lions, and yet both groups have the general concept of
animal. Hence those who want to convey a perfect and complete knowledge of animals should begin
with the general concept *animal*, setting out its properties before taking up the case of horses and
105 lions. Similarly, with regard to passions one should first reach conclusions about those that can more
easily be known by the whole community and then afterwards turn to others that more difficult to
grasp.

This notwithstanding, the first thing grasped by each of us is something singular. Nor can
anyone grasp the universal before the particular, although perhaps in terms of natural priority the
110 particular is grasped by a confused knowledge before it is grasped by a distinct knowledge. But how
this is true will be clear in the treatise on the soul and its thoughts.²

This is so notwithstanding what Aristotle says in *Physics* I [184b12-14], that boys first call all
men *father*, etc. For the Philosopher speaks there of boys who do not yet have intellectual cognition,
but only sensory, which does not concern universals but only singulars – just as the lamb first
115 follows all sheep and later discriminates, and yet does not grasp any universal. Thus it is clear that
this authority does not show the intellect to be of universals before singulars. So it should be said
that just as the intellect first has an imperfect and confused cognition of many things, so too the
senses first have an imperfect and confused cognition and later a distinct cognition of one thing
apart from another. Thus it follows that general concepts are possessed more easily than proper
120 ones, through an imperfect cognition of singulars, and so one should begin from these, in the order

² Evidently this refers to part four of this treatise, which was never written. (See next section.)

of teaching.

With these preliminaries set out, we can move on to the main issue.

Division of the Treatise

125 Of the things that are, some are simple and some are composite. Of simple things, some lack
all composition of any sort of parts. Belonging to this kind are abstract intellectual substances –
namely, the intelligences. Also of this kind are all thoughts and all accidents of the intellective soul, if
that soul is indivisible, as many claim to be Aristotle’s view.³ Other things are said to be simple not
130 by lacking all sorts of parts, but by lacking parts that are dissimilar and of a distinct character. Of this
kind are all heavenly bodies, on Aristotle’s view,⁴ as well as all corporeal accidents, and prime matter,
and every form. Each of these is one *per se*, although they are composed of parts that are similar and
of the same character rather than composed of parts that make a thing be one *per se*, or of parts of
reason. The heavens, for instance, are composed of parts that do not differ in character, but they are
not composed of matter and form, or from what makes something one *per se*.

135 Of composite things, some are composite *per accidens*, and some are composite *per se*. The
first kind of composite is one thing *per accidens*, as artifacts are, such as a house, a bed, and the like.
The other kind of composite is one thing *per se*, such as fire, air, stone, plants, animals, and human
beings. Each of these is composed of matter and form, which are not of the same character but
instead more distinct in their nature than are a human being and a donkey. Some composites of this
140 sort are animate, such as plants and animals, whereas others are inanimate, such as air and stone. Of
animate things, some are animated by a sensory soul, whereas others are not. Of things that are
animated by a sensory soul, some are animated by a rational soul, as human beings are, whereas
others, such as brute animals, are not.

145 The aforesaid division gives rise to the parts of this treatise. The first part will concern the
general conditions of all natural things that are more well-known and easily known. The second part
will concern the heavenly bodies and their properties. The third will focus on inanimate bodies and
their passions. The fourth will teach about the body animated by a rational soul and its accidents.
The fifth will concern other souls and their properties. The sixth will concern plants and their
150 powers.⁵

³ Ockham himself, for example, at *Summa logicae* I.45.

⁴ See Averroes, *In Phys.* VIII.79.

⁵ This ambitious table of contents justifies Ockham’s pledge, in the prologue, to attempt an *opus magnum*. As it happened, he completed only the first four chapters of Book 1, corresponding to the first four books of Aristotle’s *Physics*. The remainder of the work would presumably have paralleled other parts of Aristotle’s work in natural philosophy, in particular the *De caelo*, the *De generatione*, the *De anima*, the *De sensu*, and the inauthentic *De plantis*.

Book I. Matter, Form, and Privation

Chapter 1. That matter and form exist and are distinct

155 Every composite is composed of parts without which it cannot exist, and depends on causes without which one part of the composite is not united to another. So since natural science must consider composite things, it follows that a consideration of natural science involves a composite's parts and causes. Now the *per se* parts of a composite are matter and form, which are called its principles and causes. Therefore it is the concern of natural philosophy to teach about both matter and form.

160 Now concerning matter and form there are many things to ask. First it should be shown *a posteriori* that they exist, since we cannot prove this *a priori*. That they exist and are distinct is proved through natural generation. For we see that certain bodies are naturally generated and corrupted – such as animals, plants, fire, air, and the like – things that are sometimes generated and sometimes corrupted. But nothing is generated from nothing (*ex nihilo*). Therefore in every generation there is something presupposed. But what is presupposed cannot be an extrinsic presupposition, entirely distinct from the thing generated, for if it were something extrinsic entirely distinct from the thing generated, then the thing generated would not be said, on its account, not to be made from nothing. For example, if fire presupposes earth that is entirely distinct from the fire, then the fire would not be said, on account of the earth, not to be made from nothing. Therefore it is clear, since everything generated is not made from nothing, that every generation and every generated thing presupposes something that is not entirely distinct from the thing generated.

170 It should be asked about this presupposition whether it is the very thing generated or a part of it, in which case it is not entirely distinct from the thing generated. It cannot be said that it is the thing generated, since then the same thing would presuppose itself, and so the thing generated would exist before its generation. So it follows that what is presupposed by the thing generated is a part of the thing generated. But if it is a part, then belonging to that same generated thing is another part that enters into composition with this presupposed part. Therefore belonging to every thing naturally generated are two parts – one of which is presupposed by the generation, which is called *matter*, and another that is not presupposed, which is called *form*. Therefore on account of natural generation we need to posit matter and form, both that they exist and that they are distinct.

175 This argument is grounded in the principle 'nothing is made from nothing,' which the philosophers⁶ posit as a principle granted by all and accordingly known. Because of this no philosopher has dwelled upon proving this principle. Even so, I will offer a plausible argument⁷ that nothing is made from nothing. First, though, we should look at how philosophers understand this proposition. Here we should know that something is said to be made from nothing when some necessary effect presupposes nothing as a part or a subject of that effect – even if it presupposes something as an efficient cause. So if the sun right now were to cause heat without any subject, it would truly be said to make heat from nothing – even if that effect, the heat, presupposes something, namely the sun that heats it. For since that heat does not presuppose the sun as a part or subject of the heat, the heat would thus be said to be made from nothing. Therefore to prove that nothing can be made unless something is presupposed by it as a part or as its subject is to prove that nothing is made from nothing.

I prove from experience that nothing can be made unless it presupposes something as a part

⁶ See Aristotle, *Physics* I.4, 187a26-b1.

⁷ Ockham uses the verb 'persuadebo', signaling that he does not think he can *demonstrate* this principle, but only support it through a weaker, dialectical argument – an argument whose premises are not self-evidently true but merely plausible.

195 or as its subject. For we see that nothing is ever made unless (1) some preceding thing is destroyed
or corrupted (just as fire is generated when earth or wood is corrupted, and likewise air is generated
when fire is corrupted) or (2) it is made in something else, with nothing else's being destroyed (just
as the sun illuminates air, without destroying or corrupting anything else, and likewise a sensation is
made in vision without destroying anything). Now if (2) something is made into something without
200 any destroying of a thing, it is clear that this effect presupposes something as its subject, and
consequently it is not made from nothing on this construal of 'being made from nothing.'

On the other hand, if (1) something is made when another is destroyed, then still it is made
from something and not from nothing. I prove this, because if something is made when another is
destroyed, then that would never be made unless the other were destroyed, just as we see through
our senses that fire is never made anew unless when something else is destroyed and ceases to exist.
205 Then we should ask: either (1a) that thing is totally destroyed, so that nothing of it remains in the
generated fire, or (1b) something from it remains in the generated fire (which is what one has to say
if it remains, since it cannot remain anywhere else). If one says the second (1b), that something
remains in the generated fire, then it is certain that what remains is not the fire itself, for then that
fire would exist before its generation. Therefore it is part of the fire, and we have the intended
210 conclusion, that the generated fire presupposes something as a part. If, on the other hand, (1a)
nothing of what is destroyed remains, then the fire could have been made regardless of whether the
other thing was or was not destroyed. The opposite of this is clear from experience. The proof of
this inference is that every effect can sufficiently be made by its causes when they are disposed in the
proper way and brought close and there is no intervening impediment nor any stronger
215 countervailing agent. But the thing's being destroyed is not, according to you, a cause of the fire's
being produced, nor is there an intervening impediment, nor a stronger countervailing agent.
Therefore it can be made regardless of whether the thing was or was not destroyed – which appears
false to the senses.⁸

220 *Chapter 2. How matter and form relate to generation*

Having shown that matter and form should be held to be things (*res*),⁹ and that they are
distinct, we should now see how they relate to the generation of natural things. Now Aristotle holds
that they are the principles of natural things, both in becoming and in existing. For from the very
fact that they are parts of the thing generated they are its principles both in becoming and in
225 existing, because a thing cannot come about nor exist without its essential parts, which is what
matter and form are.

Matter is a principle of generation – either of a thing's becoming or of the thing when it is
made – in the following way: that first it is deprived of the form that it is suited to receive and then
it receives that form, is informed by it, and with it constitutes the whole generated composite. For
230 this reason not only matter and form are held to be the principles of natural generation, but also
privation is held to be a third principle of every natural generation, and also of artificial generation.
This is proved from the fact that principles are contraries, but this contrariety can occur only
according to privation and possession. Therefore the principles stand as privation and possession,
and accordingly privation is a principle. That principles are contraries is clear inductively, since it is
235 not the case that anything is made from anything else, indifferently; instead, only contrary is made

⁸ On this argument see Pasnau, *Metaphysical Themes* pp. 25-26.

⁹ In general, *res* is a very broad and vague term that means simply a *thing*. But Ockham – like many other authors from this period – uses *res* as a technical term for an entity with the fullest ontological standing. Often, below, when I think it bears that technical sense, I leave *res* untranslated.

from contrary, as is clear inductively.¹⁰ Therefore principles are contraries.

240 It should be known, however, that ‘privation’ here is taken broadly for a contrary and for a privation understood strictly. Thus one of two contraries is said to be the privation of the other on account of the formal incompatibility of the one contrary to the other. It is by so taking ‘privation’ that a privation is held to be a principle. This is proved as follows: if something is generated, the matter either does or does not prepossess the form of the thing generated. If it prepossesses it, then the thing generated exists before its generation, which is impossible. If it does not prepossess it and can possess it, then it is deprived of that form. Therefore without privation there is no generation.

245 Therefore matter, form, and privation are principles, and a definition expressing the real meaning (*quid nominis*) of ‘generation’ and ‘thing generated’ ought to define ‘generation’ as *the existence of a thing whose matter was first deprived of the form that it now for the first time possesses* and define ‘thing generated’ as *an existent thing whose matter was first deprived of the form that it now for the first time possesses*. Thus these three – matter, form, privation – are put into the definition both of ‘generation’ and of ‘thing generated,’ and for this reason they are said to be principles. In contrast, time, efficient cause, and final cause are not mentioned, nor are they said to be principles, as we now use the term ‘principle,’ since they are not put into a definition expressing the real meaning of ‘generation’ and ‘thing generated.’

Chapter 3. Privation

255 Now that we have seen that matter, form, and privation are principles of generation and of the thing generated, we should look at each of these individually, beginning with privation. Here we should realize that the term ‘privation’ is taken in various ways by different authors and in different places. In one way, the privation is said to be the form that is to be cast out when another is introduced. When so understood, one contrary form is the privation of another, and one substantial form is the privation of another when those forms cannot coexist in the same matter. Thus blackness is the privation of whiteness, and vice versa, and likewise the substantial form of fire is the privation of the substantial of air, and vice versa. In another way, the privation is taken as the *subject*, with the result that the term ‘privation,’ when so taken, signifies altogether the same thing as does ‘the thing deprived,’ and does so in the same way, and the two are predicated of one another.

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Chapter 4. Privation is not a thing other than matter, form, and the composite.

270 Having set out the above distinction regarding the term ‘privation,’ we should look at how privation should be held to be a principle of natural generation. But first it should be shown that privation is not anything imaginable outside the soul distinct from matter, form, and the composite. Instead, whatever is intelligible in external reality when a thing is generated is either matter, or form, or the composite – unless perhaps you want to say that beyond these there is *accident*. But it is clear that an accident is not the privation that is the principle of a substance’s generation.¹¹ That privation is not anything distinct from matter, form, and composite can be proved first by reason and second by authority.¹² By reason, as follows.

275 If privation were something distinct from the three just mentioned, it would have to be in matter, according to the claim of those who claim that privation is distinct from matter and form.

¹⁰ That is, by running through examples, an exercise Ockham leaves to the reader. As a first example, think of heat’s coming from cold.

¹¹ Chapter 3 had already allowed that blackness and whiteness might be privations. But these are not the sorts of privations at issue in this treatise.

¹² See Chapter 6.

280 But privation is not in matter, because if it were then, since there is a distinct privation for each distinct form (according to those who take this view), and given that one privation is removed without another, inasmuch as one form is introduced without another, it would follow that there would be infinitely many such things in matter. But this is absurd, since there is no infinity in the natural world, speaking of infinite things that are distinct in their own right, not making one thing per se.¹³

285 Also, if privation were in matter, then since no privation is coeternal with matter, it would follow that matter is at some time *deprived* of this privation, and that it will be deprived of that [second-order] privation by the matter to come. As a result, the form that is to come would not only expel the privation but would introduce the privation of the preceding privation, which does not seem intelligible.¹⁴

290 Also, if privation were distinct, outside the soul, from matter, form, and the composite, then it would be either nothing or something. Not nothing, because that which is nothing is distinct from nothing, since the same and distinct are distinctive features (*differentiae*) of being.¹⁵ If it is something, then privation would be form, since the only *res* in matter is form.

295 But perhaps you will say that privation is not anything positive but is rather negative, and is in matter as something negative rather than positive. This, however, does not work, because I ask: either privation is something or it is entirely nothing. If it is something, the prior arguments go through. If it is altogether nothing, then it is not in matter, because that which is altogether nothing is in nothing, since it is impossible for what is altogether nothing to be in anything. From this it further follows that privation is not a principle of generation, since what is altogether nothing is the principle of nothing. Therefore it should be said that privation – in whatever way it is distinct from matter and form – is not anything in the natural world outside the soul. Instead, the privation that is 300 outside the soul is either matter, according to one signification, or is the form to be expelled, according to another signification.¹⁶

305 *Chapter 5. In what way privation is a principle distinct from matter and form*

Therefore, since privation is not something distinct from matter and form, we should look at how privation is a principle and how it is a principle distinct from the [other] two, matter and form, since Aristotle posits three principles: matter, form, and privation [*Phys.* 189b30-190b17].

310 For if privation is taken for the form to be expelled, it is easy to see how it can be a principle of natural generation – not *per se*, to be sure, but *per accidens*. Even so, such a privation is not a principle for every generation, because there are some generations where no form is expelled but only introduced. This is clear in the case of accidental generation – for instance, in the cases of illumination, sensation and many others. There is more of a doubt, however, with respect to the generation of substance, but this will be worked out in its place [ch. 17]. However, in the case of generation that occurs with the corruption of another form, the form that is cast out (*abjecta*?) can 315 be called the principle of generation, not because it is a cause or part of a real generation outside the

¹³ The ‘no real infinity’ claim is commonplace among medieval authors, but Ockham has to qualify it here because elsewhere he rejects the Aristotelian potential parts doctrine, even while embracing the infinite divisibility of matter. This leaves him with the view that, within each substance, there is a real infinity of material parts – a consequence he here seems to tolerate because those parts are *unum per se*. See Pasnau, *Metaphysical Themes* §26.2. My argument there, especially in note 6, would have been strengthened by citing this passage.

¹⁴ Perhaps the point is that we cannot make sense of the idea of a second-order privation – the privation of a privation.

¹⁵ That is, only *beings* are eligible for sameness and distinctness. But if nothing is not distinct from anything, then it is not distinct from matter, form, and the composite.

¹⁶ These are the first two meanings of ‘privation’ described in Chapter 3.

soul, or a part of the thing generated, but because from its expulsion generation begins to be, in such a way that, when it is expelled, there is then first a generation and a thing generated. And if such a generation that is distinct from the generation that can occur without the expulsion of a form needs to be defined by a definition expressing its real meaning (*quid nominis*), the name will be imposed of the form that is to be expelled or that has been expelled, and so it will be a principle not *per se*,
320 constituting the essence of the thing generated, but *per accidens*, necessarily preceding the thing generated, as something to be received in a definition expressing its real meaning. Further, if the privation is taken from the subject then it is easy to see how it is a principle, given that the subject is a principle.

325 The difficulty concerns how it is a *third* principle, distinct from matter and form. In this regard it should be said that we should not imagine that, beyond the form to be expelled there is some third thing, as a *res*, distinct in any way from matter and form, that is a third principle, either *per se* or *per accidens*. Nor does Aristotle intend this, in positing three principles, as will become clear [ch. 6]. Instead, with respect to the number of *res*, there are two principles of which one, the subject, is
330 that which at first is necessarily deprived of form and afterwards possesses it. Given that this subject necessarily, in order to be the subject of generation, must first be deprived of form and afterwards possess it, it accordingly can be named by two names, one positive and the other privative, having distinct definitions. These two names, together with the name ‘form,’ ought to fall into the definition of ‘generation’ and ‘thing generated,’ so that ‘principle’ is truly predicated of three non-synonymous
335 names, each of which ought to be placed in the definition of ‘generation’ and ‘thing generated.’ For each of the following is true: ‘matter is a principle;’ ‘form is a principle;’ ‘privation is a principle.’

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Chapter 6. *The Philosopher’s intention regarding this issue*

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Chapter 7. *Objections and their solutions*

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345 Chapter 8. *Matter and form as per se principles*

Suppose, given the above, and given the claims of the Philosopher, that matter and form are *per se* principles of both generation and the thing generated, and that privation is a *per accidens* principle, in the sense that matter is deprived of a form before having it through generation. Now we should look at the number of principles – how many there are. My plan is strictly to discuss
350 matter and form, since it will be clear from what has been said that we should speak in parallel terms about privation. So I say that although Aristotle held that in a way there are three principles and in a certain way only two, still he did not mean this as it sounds *prima facie* and as many moderns understand it.¹⁷ For he did not hold that there are a certain two that are the first principles of *every*
355 generation and thing generated, while claiming that there are some principles posterior to the first principles. Rather, he meant that for each generation and each thing generated there are two first principles *per se*, namely matter and form. For different things generated, however, there are different first principles, so that for each thing generated there are two first principles, namely the matter and form of that generated thing. And so there are distinct first principles for this generated thing and that one, even if, as will be said later [ch. 12], some one same thing is sometimes the principle of
360 different composed, generated things that stand in succession to one another. But then how does the Philosopher say that there are only two principles? It should be said that this is true:

¹⁷ The editors cite Giles of Rome here.

For each single generation there are only two principles
since each individual case is true, namely:

For this generation there are only two principles

365 and

For that generation there are only two principles

and so on for the individual cases. Still, it is consistent with this that there are more principles than two speaking absolutely, since, for as many generated things as exist at once, there are that many principles and more, since that is there are twice as many principles *per se*. This is what the
370 Philosopher has in mind. (Alternatively, it should be said – and this amounts to the same thing – that there are only two kinds (*genera*) of principles *per se*, namely matter and form, so that each one of the *per se* principles is either matter or is form. But these kinds are not principles of external things but are common names for the principles of things, names that vary in step with how the generated things vary.¹⁸)

375 These claims should be more than just recited – they should also be proved. And they are proved, as follows. *For as many generated things there are that many principles* etc., because *per se* principles are either singular or universal. If they are singular, it is clear that one singular form is in one generated thing and another in another, and so for as many generated things there are that many forms in them, and these forms are their *per se* principles.

380 If it is said that those *per se* first principles are certain universals common to all singulars, then on the contrary:

[a] According to Aristotle, in *Metaphysics* VII [1038b7-9], no universal is a substance. Therefore no universal is a *per se* principle of any singular.

385 [b] Also, the *per se* first principles of singulars are themselves singulars. Therefore they are not universals.

[c] Also, although that prime matter that is a first principle precedes the generated thing, nevertheless the form that is a first principle does not precede the generated thing. But if it were something universal then it would precede the generated thing. Therefore that principle is not a universal.

390 [d] Also, the form that is a *per se* first principle of something generated has its existence through generation. Therefore it does not precede it. But the universal does precede; therefore etc.

[e] Also, change *per se* occurs with respect to first principles. But those who postulate universals outside the mind say that there is no change with respect to universals except *per accidens*. Therefore the first principles are not universal.

395 Therefore since the Philosopher expressly rejects the view that takes universals to be substances, from which it follows that we should reject the view taking universals to be the principles of substances, it should be said that principles are not universals but rather singulars that are numerically distinct in different things. Hence this form of this generated thing is the first principle of this generated thing, and that form of another generated thing is the principle of that
400 one. And so it is for matter, since my prime matter is distinct from yours, and so on in other cases. Still, for each generation two first principles suffice, namely matter and form. But for a distinct generation distinct matter is required (if it is simultaneous with the other generation),¹⁹ as is a distinct form.

¹⁸ This parenthetical remark shows Ockham at his most fastidious. He might have just said right away that there are two *kinds* of principles, but he prefers his original linguistic formulation, despite its complexity, because it avoids the temptation to rarify *kinds* as some further basic principle.

¹⁹ If the two generations in question are non-simultaneous, then it might be a sequential case of one thing's corruption leading to another thing's generation. In that case the matter would be the same.

Thus it is clear, logically speaking, that we should concede this:

405 *For each generation and generated thing there are only two principles*
namely, matter and form, since each individual case is true. But this is false:

There are only two principles for every generation and generated thing
because every individual case of this affirmative claim (*exponentis?*) is false.

410 *Chapter 9. An overview of matter and its properties*

After having asserted and shown that there are two principles, matter and form, and having said what privation is and how it is a principle, we should now discuss matter and form in particular: what they are, and also their properties. First, matter. With regard to matter one should know that it is a certain *res* actually existing in the natural world, one that is potentiality for all substantial forms, 415 having no form that necessarily and always exists within it. And if one picks out any one substantial form, this matter can be deprived of it and can possess it, according to how an agent sometimes causes that form within matter and sometimes does not. And so it should not be imagined that matter is something that is of itself only in potentiality, in the way in which a future whiteness is only in potentiality, but rather it is of itself truly actual. Accordingly, there is no power through which it 420 can be in potentiality for existing in the natural world, but rather it is always actual in the natural world, even if it is always in potentiality for a form of which it is deprived. Indeed, it is of itself ingenerable and incorruptible, and there is no power through which it is able not to exist. And thus it does not possess its proper existence from a form; rather, it is a certain entity that is not distinct from a certain existence. This existence or entity is deprived of another existence or another entity 425 that it can receive – namely, form – in such a way that it receives nothing beyond form. For it should not be imagined that a form causes something else in matter, as if the matter receives from the form a certain existence in between matter and form. Rather, the matter receives that form and the existence that is really the form, and receives nothing else. These two partial existences or partial entities constitute or make one whole or, more properly speaking, they are two parts of one being or 430 one total existence that is the whole composed from them.

Matter receives in succession distinct forms and distinct formal existences that really are those forms. This matter is numerically one in the thing generated and the thing corrupted, although in distinct generated things existing at the same time there are distinct matters that are altogether of 435 the same character and can make numerically one matter in the way in which two waters that are separate from one another can be united and can make numerically one water. Thus the prime matter of a human being and the prime matter of a donkey can be transformed from the substantial form of a human being and donkey to the substantial form of air or fire or of another body that can be united and make numerically one thing. If that happens then in the same way those conjoined matters make numerically one matter.

440 This prime matter, although it is a true *res* existing in the natural world, is nevertheless not graspable by sense or intellect through a cognition that is simple and proper to it. Instead it is intelligible only through analogy to form – that is, it can be cognized only through a knowledge that has been compiled under form – because matter is a certain entity that stands to substantial forms just as a subject stands to the different qualities that it receives or can receive successively, and just 445 as the same body can successively exist in different places.

Chapter 10. That matter is an actual entity

That matter is a certain actual entity is clear, because that which does not exist can be a part or principle of no being. But matter actually is a part and principle of a composite being. Therefore 450 it is actually an entity in act.

Further, every substance is in act in the natural world.²⁰ But matter is a substance, since it is a part and principle of substance, and that which is a substance is composed only of substances, according to the Philosopher.²¹ Therefore matter is truly in actuality.

455 Further, that which is not in actuality but can be in actuality can be produced and exist anew. But matter does not exist anew, because then it would not be presupposed in generation. Therefore matter is truly in actuality.

460 Further, if matter were not in actuality, then this would be only because matter never exists without form. But just as matter never exists without form, so form never exists without matter. Therefore for the same reason that matter is said not to exist in actuality – because it never exists without form – for the same reason form would be said not to exist in actuality, because it never exists without matter. The consequent is false; therefore so is that from which it follows.

But you will say that [i] this goes against the intention of the Philosopher and the Commentator, who say that matter is sustained by capability (*posse*).²² Therefore matter or the substance of matter is a certain potentiality. Therefore it is not actuality.

465 Further, [ii] if matter were of itself a certain actuality, then it would not be in potentiality to all actuality, which seems to go against the Commentator [ibid.], who seems to say that matter is in potentiality to all actuality and that it has no actuality of itself.

470 To clarify this and others like it we should know that ‘actuality’ is taken in many ways. Sometimes it is taken strictly for an actuality informing something else and attaching to it. Other times it is taken as distinct from existence in potentiality – that is, as distinct from what does not exist in the natural world but can exist. Taking ‘actuality’ in the first way, it should be said that matter is in potentiality for every substantial actuality and has no actuality of itself. It is instead pure potentiality, distinguishing potentiality from actuality so understood, because actuality is in this way understood as a substantial form attaching to matter anew. This is how the Commentator understands actuality, and in this way all of his authoritative texts are true. But taking ‘actuality’ in the second way, I say that matter is a certain actuality – that is, matter is existent in the natural world, nor is it in potentiality for every actuality, since it is not in potentiality for itself.

475 In this way it should be said to the first [i], that the Commentator says that matter is sustained by capability because the substance of matter is always and necessarily in potentiality for some form, because from the very fact that it receives one form it is in potentiality for another.

480 And if you ask whether it is not the case that potentiality belongs to the substance of matter, and that matter is its potentiality, it should be said that there is a good sense in which each can be granted, although it should more properly be said that potentiality is the substance of matter – that is, potentiality is the substance that is matter – and matter is potentiality, because matter is a certain potentiality for substantial form, so that potentiality is not some intermediary between matter and form, but matter is the very potentiality that can receive form.

Now perhaps you will say²³ [a] that potentiality is a relation grounded in matter, and therefore it does not belong to the essence of matter nor is it in matter.

490 Also, [b] if matter were potentiality, then matter would be the potentiality for some form. But it is not the potentiality for some form, because matter can exist without the potentiality for that form. Therefore etc.

Also, [c] potentiality and actuality are opposites, and therefore they are not truly predicated

²⁰ The sense of the argument requires following two manuscripts here in preference to the text of the edition.

²¹ *Cat.* 5, 3a29-33 and *Phys.* I.6, 189a33-34. Compare *Metaph.* VII.13 1039a7-8 and VII.16, 1041a4-5, which seem to take the contrary view.

²² The editor refers to *Phys.* I 7, 191a12-13, and Averroes’s commentary on that passage (text 69).

²³ The editor cites Henry of Ghent, *Quod.* III.14 (ed. 1518, f. 67r).

of the same thing. But matter is actuality, as was said. Therefore matter is not potentiality.

495 Also, [d] if matter were potentiality, it would hold per se in the first mode that matter is potentiality. But this is false; therefore etc.

To the first of these [a] it should be said that potentiality is not a relation grounded in matter, but it is the very matter and is not grounded in it. Still, ‘potentiality’ is a relative term suited to be truly predicated of matter and suited to supposit for matter. It is not required for this that matter has something in itself; rather, it suffices that it can have something that it does not have, just as a person is in potentiality for whiteness not because he has something of whiteness in actuality, because he can have something that he does not have.

500 That potentiality is not such a thing existing in matter, as many imagine,²⁴ is clear, because if it were such a thing, it would be either substance or accident. Clearly it is not a substance, because then some substance would precede the substantial form in matter. Nor is it an accident, because no such quality can be posited, nor is it any other accident, according to the principles of Aristotle, as will be shown elsewhere.²⁵

Likewise, if it were an accident, then since it does not remain once the form arrives, it would truly be corrupted. This does not seem true, since the form does not seem incompatible with such potentiality. Therefore it is not corrupted at the arrival of the form.

510 Further, according to those who posit “respects” of this sort, there is no real relation with respect to non-being. But the form to which matter is in potentiality is a non-being when the matter is in potentiality to it. Therefore there is no real relation with respect to it. But, according to those, potentiality is not an absolute *res* distinct from the form, nor is it a real relation. Therefore it is not a *res* existing in matter.

515 Further, if the potentiality of matter were some *res* existing in matter, it would not be more in respect to one form than in respect to another. Therefore such a *res* would be in respect to *every* form that the matter is deprived of and can have. But there are infinitely many such forms. Therefore there would within matter be infinitely many *res* in actuality, which is impossible.

520 If you say that there are distinct potentialities in matter only in respect to forms that are distinct in species, this does not work, because when one form arrives, matter is still in potentiality to another form, even in respect to another form of the same character. Therefore there is in the matter a potentiality in respect to that form. But there is no potentiality in the matter in respect to a form that it actually has. Therefore, earlier there were distinct potentialities in respect to those forms when it lacked both of them – if the potentiality is a *res* distinct from matter.

525 Further, for whatever reason the potentiality by which matter can exist under a form would be a distinct *res* from the matter, for the same reason the potentiality by which a body can be in a place would be a distinct *res* from the body. The consequent is false; therefore so is the antecedent. That the consequent is false is clear, because if the potentiality by which a body can be in a place were a distinct *res* from the body then, since the body when it is in a place does not have that potentiality, if it is such a thing and [the body] can have it, then there would be a potentiality in respect to that potentiality in the same [body], because in that case the body would be in potentiality for that potentiality, which is absurd.

530 It should therefore be said that potentiality is not some *res* existing in matter, but instead it is the matter itself, and that very matter is potentiality in respect to substantial form. And the more proper way to talk is to say that matter *is* potentiality in respect to substantial form, rather than that matter is *in* potentiality in respect to substantial form – even if authors use one expression for the other.

²⁴ Again, the editor cites Henry of Ghent.

²⁵ See Ockham’s *Expositio* of the *Categories* (*Opera phil.* II:244) [not translated].

To the second [b], it should be said that although matter is potentiality for form, it is not always the potentiality for that form. Instead, it is the potentiality for that form only when it does not have it and can have it. Nothing more is implied by the proposition ‘Matter is in²⁶ potentiality for that form.’ And so when it is said that “matter can exist without the potentiality for that form,” it should be said that this proposition can have two meanings. One of them is that it is possible for matter to exist and for it not to be potentiality for that form, and this meaning is true. But it does not follow from this that it is not potentiality for that form, but rather that it *can* not be potentiality for that form, which is plainly true. So just as, notwithstanding the fact that Socrates can be not white, he is nevertheless in truth white, so notwithstanding the fact that matter can not be potentiality for that form, nevertheless in absolute truth it is potentiality for that form. The other meaning it can have is this: that matter can exist without that *res* that now is potentiality for that form, and this sense is false, just as a person cannot exist without that *res* that is now white – even though he is white contingently.²⁷

To the third [c] it should be said that ‘potentiality’ and ‘actuality’ are not opposites when taken so generally, because the potentiality for form and the actuality existing in the natural world are not opposites. In contrast, existing in potentiality for form and existing actually beneath that form are truly contraries. But these do not belong to matter at the same time.

To the last [d] it should be said that the following inference is not valid: ‘Matter is potentiality for this form; therefore it holds per se in the first mode that matter is potentiality.’ This no more follows than it follows that ‘the man is white; therefore it holds per se in the first mode that the man is white.’

But perhaps you will say that the cases are dissimilar, because although when something concrete is predicated of another concrete thing or of something abstract such an inference is invalid, still when something abstract is predicated of something abstract the inference holds. So it is here, since ‘potentiality’ is abstract.

It should be said that such an inference is not generally valid with respect either to abstract things or concrete things. Now when the subject and the predicate are truly abstract and absolute, in no way differently importing anything, then if the predication is direct, the inference can be granted. But ‘potentiality’ is not this sort of abstract term, because it signifies matter directly while obliquely signifying the non-existent form.

To the two following arguments²⁸ and all other similar ones, the response is clear from the above, because matter is in²⁹ potentiality for every actuality that is suited to inform something, and matter has no such act of itself, although it is truly a being in actuality.

Chapter 11. Prime matter is ingenerable and incorruptible

Not only is prime matter in potentiality for all the forms of all the species of generable and corruptible forms, but also it is a certain actually existent *res*, and it is ingenerable and incorruptible, in such a way that there is no power through which it can be generated and corrupted. This is not only true when we take ‘generated’ and ‘corrupted’ strictly for what is generated from its part and corrupted into a remaining part – which is how a form is ingenerable and incorruptible – but it is also true when we take ‘generated’ for *existence anew* and ‘corrupted’ for *not existing in the natural world*.

²⁶ I doubt that ‘in’ belongs here, though the editorial apparatus lists no alternatives.

²⁷ The *res* that is now white is the person, and of course he cannot exist without himself. Similarly, the *res* that is now potentiality for form is the matter itself. Evidently, Ockham’s view is that although matter just *is* potentiality for form, it is not *essentiality* such potentiality.

²⁸ The editor refers back to [ii], which is indeed an objection of the right form for this response, even if it looks to be one argument and not two.

²⁹ Omit ‘in’? The slip, if it is a slip, is harmless, because to be potentiality for form is a way of being in potentiality.

580 Thus prime matter can neither begin nor cease to exist, but instead it always exists in actuality. For it exists in actuality after the composite has been generated, although in such a way that it is not separated from the form, just as the form is not separated from the matter.

Aristotle proves that it is not generable.³⁰ For everything that is made, is made either from something as from its part or is made in something as in a subject that it presupposes. But prime matter is not made from something as from its part, for if so then prime matter would be
585 composite, and consequently would not be prime. For that is called prime matter than which no [matter] is simpler. But prime matter is not composite, because then before prime matter there would be prime matter. Therefore prime matter is not made from something as from its part. Nor is it made in something as in a subject that it presupposes, because prime matter is in no subject. Therefore prime matter is in no way made, nor does it acquire existence anew, but rather it always
590 exists.

But perhaps you will say that matter has existence only from form, that form exists anew, that therefore form gives existence anew to matter, that consequently matter has existence anew, and that therefore matter is generated. It should be said that ‘existence’ is taken in two ways: first, for something’s informing another thing; second, for whatever exists in the natural world. When we take
595 ‘existence’ in the first way, it is true that form gives existence to matter: this is nothing other than the form’s informing the matter. In the second way, however, it is not true. Instead, matter is a certain existence – that is, a certain being truly existent in the natural world before the form exists. Nor does that existence vary, however much the forms vary or their formal existences vary (that is, the existences that belong to the forms). The Commentator discusses this existence when he says that
600 prime matter varies in existence;³¹ this is to say nothing other than that matter can possess distinct forms in succession.

Here you might say that if matter has existence distinct from form, then the form would attach to an actual being, but what attaches to an actual being is an accident, and that therefore a substantial form is an accident. What we should say is that ‘actual being’ is for now taken in two
605 ways. In one way it is taken broadly and generally for every being existing in the natural world. In this way it is not true that everything attaching to an actual being is an accident, and in this way matter is an actual being. In the other way ‘actual being’ is taken more strictly for that which exists *per se*, not existing within another as a part and not naturally suited to be so conserved in existence. In this way it is true that everything attaching to an actual being is an accident. But prime matter is
610 not in this way an actual being, because it never exists except as a part in another – in a composite, that is – nor can it exist unless it is a part. For this reason the form attaching to it is not an accident.

Chapter 12. Matter has the same character in all composites but is numerically distinct

This prime matter has the same character in all composites, but is not numerically one in all
615 composites. Instead in distinct, simultaneously existing, generated things that there are distinct matters, numerically different.

That the prime matters of all generable and corruptible things have the same character (*ratio*) is proved, because it is pointless to do through multiple things what can be done through fewer. But we can account for every natural generation through matter of the same character, without a
620 multiplicity of distinct matters having distinct characters. Therefore since matter is postulated only because of natural generation, it is pointless to postulate matters having distinct characters. This argument’s assumption, that it is pointless to postulate distinct matters having distinct characters, is clear as follows. The same matter belongs to things between which there is immediate and

³⁰ *Phys.* I.9, 192a29-34. See the discussion of this argument in Pasnau, *Metaphysical Themes* pp. 29-30.

³¹ The editor cites Averroes, *In Phys.* I.82.

625 substantial change, since the same matter that is in the thing corrupted must subsequently be in the
thing generated. But every generable and corruptible thing can be changed into any other generable
and corruptible thing, either mediately or immediately. Therefore matter of the same character must
belong to all generable and corruptible things. The inference is clear, because if distinct generable
and corruptible things were to have matter having distinct characters, this would be true of
630 generable and corruptible things of which one cannot be changed into another immediately, but only
mediately. But this is not true even in these cases. For suppose matter of the same character were to
be in immediately changeable things and not in mediately changeable things. Then let *a* be changed
into *b* by the mediation of *c*. Then in *a* and *c*, between which there is immediate change, there is
matter of the same character. Likewise in *c* and *b*, between which there is immediate change, there is
635 matter of the same character. Therefore in *a* and *b* there is matter of the same character. It can
likewise be argued for any things between which there is mediate change, since it makes no
difference whether there are multiple intermediaries or one. And so it is therefore clear that there is
matter of the same character in all generable and corruptible things.

There is not, however, *numerically one* matter in all things. This is proved first as follows. What
is numerically the same is not subject at the same time to things that are incompatible, just as neither
640 is the same thing at the same time subject to things that are contrary. But some forms are mutually
incompatible, as for instance are the forms of fire and air. Therefore numerically the same matter
does not exist under those forms at the same time.

Also, numerically the same thing existing in a place circumscriptively does not exist at the
same time in distinct, distant places.³² But matter exists circumscriptively in a place, given that it has
645 quantity. Therefore it does not exist at the same time in distinct places. But if numerically the same
matter belonged to all generable and corruptible things, then numerically the same thing would exist
at the same time in distinct places.

Further, matter is extended, and therefore it has part distant from part. But it is certain
matter can be divided, at least at the division of the whole. Therefore when the whole has been
650 divided into parts, one part of the matter will be in one part [of the whole] and the other part of the
matter in the other part. Therefore there are distinct matters there, and consequently it is not the
same matter that exists in all distinct things existing at the same time.

But perhaps you will say that unity and distinctness comes from form; that therefore, setting
aside every form, matter is neither one nor many; and that consequently it is not numerically distinct
655 of itself, but only from form.

Confirmation of this comes from the Commentator, according to whom nothing is distinct
at the foundations of nature.³³ Therefore prime matter has no distinctness of itself.

To the first of these we should say that all unity and distinctness comes from form in the
case of what exists *per se* in some final, completing genus.³⁴ For nothing that exists *per se* in a genus
660 counts as one thing in that genus unless it has a form – nothing, for instance, is a human being, a

³² “Existing circumscriptively” is to exist part outside of part. This is the normal way of existing in space, and is how things possessing quantity exist. Excluded are things that exist *definitively* (or *holenmerically*, to use a later term). Such things – God, angels, human souls – do “exist at the same time in distinct places,” inasmuch as they wholly exist wherever they exist, rather than being spread out part outside of part. See Pasnau, *Metaphysical Themes* pp. 337-38.

³³ The editor cites Averroes, *In Phys.* I.69, but the correct reference is *In Meta.* I.17. In fact this provocative dictum started out its life as a mistranslation of Aristotle, *Metaphys.* I.8, 989b6-7. By Ockham’s time the remark is generally ascribed to Averroes, having by then been recognized as a mistranslation of Aristotle. See the discussion of Averroes’s view in Pasnau, *Metaphysical Themes* §4.3.

³⁴ That is, using less technical terminology, Ockham accepts his opponent’s major premise when it is limited to substances that are not part of some larger, complete substance, where a complete substance is here thought of as one that falls under some ultimate natural kind (or “genus”). The parts of a complete substance, however, may be individuated in some other way.

665 donkey, a plant, a stone, or air, before it has a form. On the other hand, the distinctness and unity of what does not exist *per se* in a genus, such as matter, does not come from form, but rather it precedes form. For just as the whole matter is presupposed by the whole form received in it, so part of that matter is presupposed by part of the form, and distinct parts of that matter are presupposed by distinct parts of the form. Accordingly, the distinctness of the parts of matter does not come from the distinctness of the parts of form – instead, it is presupposed. But that distinctness is not that of distinct things existing *per se* in a genus.

670 The same response should be made to the Commentator. At the foundations of nature nothing is distinct that exists *per se* and completely in a genus. But there is distinctness there among incomplete beings – not through themselves, but through reduction to what exists in a genus.

Chapter 13. How matter stands to quantity

675 It was said in the last chapter that matter is extended. So we should look at how matter stands to extension, from which it will be clear how it stands to quantity and to the indeterminate dimensions that the Commentator postulates.³⁵

680 It should be known that although the proposition ‘matter is extended’ holds *per accidens*, distinguishing what holds *per accidens* from what holds *per se* in the first mode, still that proposition is necessary and always true and holds *per se* in the second mode,³⁶ because it is impossible for there to be matter without extension, since it is not possible for there to be matter unless it has part distant from part. Hence although the parts of matter can be united in the way in which the parts of water and air can be united, still the parts of matter can never exist in the same place. As a result, matter always has part distant from part, and this is for matter to be extended and quantified or dimensioned, because dimension, quantity, or extension is nothing other than the distance of one part from another. Accordingly, just as ‘matter has part distant from part’ is not *per se* in the first mode, so neither is ‘matter is extended’ *per se* in the first mode. Still, the one is necessary just as the other is. And just as matter does not have part distant from part on account of *something else* that attaches to it and without which it cannot have part distant from part, so it is not extended through any such *res*. Rather, just as the distance of one part of matter from another is not some absolute *res* distinct from those parts, so neither are the extension and quantity or dimensions distinct *res*.

690 These are the indeterminate dimensions that the Commentator talks about, and they should be understood in this way: not that those indeterminate dimensions are certain *res* without limit attaching to matter, but that matter does not of itself necessarily have any fixed quantity – for example, this extended matter does not of itself necessarily have one-foot in quantity or two-feet, but has a greater or lesser quantity in virtue of differences in form. Numerically the same matter is more extended, for instance, when it is under the form of fire, and less extended when it is under the form of air, and less when it is under the form of water and still less when it is under the form of earth. Therefore just as matter is not of itself under this form or that one, but sometimes under this one and sometimes under that, so matter with respect to itself does not have any fixed quantity, and consequently is not of itself limited by any fixed limit – that is, it is not of itself necessary two-feet or three-feet and so on. This is what the Commentator has in mind with regard to the indeterminate dimensions of matter.

³⁵ The editor cites *In Phys.* I.36, but perhaps a better reference is *De substantia orbis* ch. 1. On Ockham’s views in this chapter, against Averroes, see Pasnau, *Metaphysical Themes* ch. 4.

³⁶ Aristotle (*Post. An.* I.4, 73a35-b24) distinguishes four modes in which it holds *per se* that A is B. According to the first mode, B occurs in the definition of A (e.g., man is an animal). According to the second mode, A occurs in the definition of B (e.g., some numbers are even). Evidently, then, Ockham thinks that ‘extended’ is defined in terms of matter. Perhaps this is implied a few lines later, when he says that “... extension is nothing other than the distance of one [material?] part from another.”

I show as follows that matter is of itself quantified and dimensioned, even though it does not have a fixed quantity or dimensions determined so as not to be able to have greater or lesser dimensions. Matter is quantified and extended either through its essential parts being positioned at a distance from one another, or through some other *res* attaching to it, in the way in which a person is white through a whiteness that attaches to it. If the first is granted then I have my conclusion. The second cannot be granted, because just as matter is presupposed by every³⁷ substantial and accidental form, so the parts of matter are presupposed by the parts of the substantial and accidental form. They are presupposed, moreover, not only to exist substantially, but also to lie at a distance in position. Therefore matter has part outside of part before the substantial or accidental form of a thing does, and accordingly it is quantified before form, and therefore the extension and quantity of matter is not some absolute *res* distinct from matter.

Further, matter has of itself distinct parts in distinct parts of its place. Therefore it is of itself quantified, even if ‘matter is quantified’ does not hold *per se* in the first mode.

Now perhaps you will say that quantity is an accident and therefore is not matter. The reply is that it is not an accident, except because it is contingently predicabile of things – either itself, or its species. In this way, although being colored is predicated of an animal necessarily, nevertheless each [shade] contained under it is contingently predicated of an animal.

But perhaps you will still say, given that it was said that matter has a fixed quantity through form,³⁸ that therefore it is not quantified of itself, and likewise matter is [said to be] limited through form and therefore is not quantified of itself. The reply is that although it does not possess of itself its having a certain, determinate quantity, still it possesses of itself its having such or such a quantity.

But now it is asked: if matter were separated from all form, what quantity would it have? In reply it should be said that the assumption is impossible, and so there is no absurdity in granting the absurdities that follow. Still, it should be said that if matter *were* separated from all form, substantial and accidental, it would have a fixed quantity that suits it either by its nature or by the action of what acts on it.

But still you will ask: why does matter have a great quantity when it is under one form, and a lesser quantity when it is under another? The reply is that when a natural agent introduces a substantial form into matter, it first disposes the matter by condensing and rarifying it. Once that matter has been suitably rarified or condensed according to the diversity of forms to be introduced, then the substantial form of that certain kind is introduced, and once that has been introduced, the agent continues, for an imperceptible period of time, to rarify or condense the matter together with the form up to the appropriate limit for such a form. Hence the matter is not made to have a greater or lesser quantity through the reception within it of some absolute accident, but solely through the condensation or rarefaction that is nothing other than the parts of the matter coming more or less close to each other. This can occur through local motion alone with respect to those parts – that is, through the parts of matter being dilated and contracted.

Let this be enough³⁹ with respect to quantity and extension or the dimensions of matter, since elsewhere we have shown in more detail how quantity, on Aristotle’s line of thought, is not a *res* distinct from substance and quality.⁴⁰

³⁷ Reading *cuiilibet* instead of *cuiuslibet*. The sense of the passage is not in doubt.

³⁸ See four paragraphs earlier.

³⁹ Reading *sufficiat* for *sufficiant*.

⁴⁰ Ockham discusses the status of quantity in many places. For discussions available in translation see *Summa logicae* I.44-48 (tr. Loux) and, at much greater length, *De sacramento altaris* (tr. Birch 1930). See also the extensive discussion in Marilyn Adams’s two-volume *William Ockham*, and in Pasnau, *Metaphysical Themes* ch. 14. For the issues that are the focus of this chapter, see Pasnau, *Metaphysical Themes* ch. 4.

Chapter 14. How prime matter is intelligible

745 However much matter is a *res* actually existing and necessarily distinct from form, still it is not intelligible *per se* – that is, it is not intelligible by a cognition that is simple and proper to it. Even so, once the intellect has grasped simple concepts of other things, common and particular, it can compose them together and through reasoning state that such a composite made from such concepts signifies something in reality, and that it can truly stand for a *res*. In this way, once the
750 intellect has grasped the concept *something*, the concept *to be deprived of something*, and the concept *to exist under something*, it can conclude that there is something in the natural world that first is deprived of form and later exists under it and possesses it. This is called matter. Through this approach one does not acquire a non-complex and simple cognition of matter but only a composite one that picks out (*declarat*) matter and no other *res*, even though each part of this complex thought expresses something other than matter. In the same way, each part of the sentence ‘An uneven number
755 *utrobique primum*’ [Post. An. 96a24-b14] expresses something other than the number three, and nevertheless the whole sentence picks out only the number three.

It is important to know, however, that this is true not only of matter but also of form, because we cannot grasp substantial forms in any other way. On the contrary, just as matter is grasped by analogy to form, so substantial form is grasped by analogy to matter. Nor can we grasp
760 the existence of form by taking form not for every existing *res* that is not matter,⁴¹ but for a *res* that is suited to inform another – not unless we somehow grasp matter. In the same way one cannot grasp that a father exists unless we somehow grasp that a son exists. Still, some conceptions *are* more readily and widely possessed about form than about matter, and for this reason the Philosopher says that matter is grasped by analogy to form,⁴² rather than vice versa.

765

Chapter 15. Form

Having discussed matter, we should now look into form. It should be known that although form is taken in many ways, just as matter is – and we will speak of this below [chs. 18-20] – still for now form is taken in two ways. In one way it is taken for every being distinct from matter and the composite, and in this way ‘form’ is said [i] of the form that is the other part of the composite, and [ii] of accidents, and [iii] of separate substances or intelligences. In the other way form is taken
770 narrowly for the other part of the composite substance, distinct from matter, and this is how we should talk about form here.

Form in this sense is a certain *res* that cannot exist through itself, but rather always exists in a composite, attaching to matter that is presupposed, without which it cannot exist. Sometimes it exists in the matter that sustains it and sometimes it does not exist in matter but entirely ceases to exist, in the way in which whiteness ceases to exist when it ceases to exist in a body. This form, however, is not entirely ingenerable and incorruptible, because although it is ingenerable and incorruptible if one takes ‘generated’ and ‘corrupted’ as applying only to the composite – that is, for
780 that which is generated from something as its part and corrupted into something as its part – nevertheless it is not ingenerable and incorruptible if one takes ‘generable’ and ‘corruptible’ more broadly for everything that can exist anew and can cease to exist. That form is not ingenerable and incorruptible in this way is clear from the fact that, if it were, then just as matter is presupposed when the composite is generated, so form would be presupposed, and consequently the whole
785 composite would not be generated. Generation also would not be distinct from aggregation. Instead, just as when a house is made the parts of the house are aggregated and properly arranged in position, and this is the house’s being made, so when a composite is generated, the preexisting

⁴¹ The start of the next chapter introduces this way of defining form.

⁴² *Physics* I.7, 191a7-15.

matter and form would simply be aggregated, and this would be the composite's being generated. Hence generation would not be distinct from aggregation, which is absurd. In the same way, natural
790 corruption would be merely the separation of matter and form, just as the corruption of a house is the separation and dispersal of one part from another.

Therefore since natural generation is distinct from aggregation and natural corruption is distinct from separation, we have to say that some part is generated anew when the composite is generated, and ceases to be when the composite is corrupted. But this cannot be true of matter,
795 because it is ingenerable and incorruptible substance, as was proved above [ch. 11]. Therefore it is true of form, because it first exists when the composite is generated and ceases to exist when the composite is corrupted. But this form does not have the same character in distinct generated things, in the way in which prime matter has the same character in all things [ch. 12]. For if form had the same character in all things, and prime matter had the same character in all things, then it would
800 follow that all generated things would have the same character, which is not true. This form is, however, extended, possessing part distant from part just as matter does. This can be proved in the same way as it was proved above [ch. 13] for the case of matter.

Chapter 16. On being generated and corrupted

805 Having said this much about the individual principles separately, now we should look at how they are principles of generation and of the generated thing, and how they serve as principles together, given that one of them never serves as a principle without the other. It should be known, however, as was noted above [ch. 5], 'being generated' and 'being corrupted' are taken in three ways. First, strictly, and when 'being generated' is so taken it can be described as follows: that is generated
810 that [a] now exists for the first time after not having existed, that [b] has a part that preceded it, and that [c] receives another part that it has and that did not previously exist. A thing is corrupted that [a] does not exist after it did exist, and that [b] has some part that remains, which part is deprived of another part that now does not exist. Second, 'being generated' and 'being corrupted' are taken more broadly, for everything that exists anew and that earlier did not exist, whether or not any part of it
815 existed. Likewise, that is said to be corrupted that does not exist after having existed, whether or not any part of it remains. Third, 'being generated' and 'being corrupted' are taken most broadly. In this way, 'being generated' is taken for everything concerning which existence is truly predicated of a name suppositing for it, where existence was earlier not truly predicated of it, regardless of whether no part exists anew as a whole or some part does.⁴³ Likewise, 'being corrupted' is taken for
820 everything concerning which non-existence is truly predicated of its name after existence was predicated of it, whether or not every part of it remains as a whole.

'Being generated' and 'being corrupted,' when taken in the first way, apply only to composites of which one part existed earlier while another did not, or else one part remains and another does not. But when 'being generated' and 'being corrupted' are said in the second way, then
825 they apply not only to composites but also to forms, both substantial and accidental, because these exist anew as a whole and cease to exist as a whole. 'Being generated' and 'being corrupted' likewise apply to composites when they are so understood, because these truly exist and cease to exist. When taken in the third way, however, 'being generated' and 'being corrupted' apply not only to composites and to forms, but also to artifacts and to anything where existence is truly predicated
830 anew of a name suppositing for it, or else ceases to be predicated, regardless of whether any part of such a thing begins to exist anew as a whole or ceases to exist as a whole. For a house is said to be

⁴³ This third formulation switches from the material to the formal mode – i.e., Ockham is now talking about cases where we begin or cease to truly predicate existence. This is broader because it encompasses cases where we truly predicate existence even though there is no *thing* that exists anew. Chapter 19 returns to such cases.

made or to be generated not because some newly exists as a whole, but simply because its parts are aggregated by local motion and properly positioned. In this case no *res* arrives anew, but instead one thing is placed next to or on top of another. Likewise, a house is said to be corrupted simply through the separation of its parts.

835 One should know that being generated and being corrupted are found not only in composites of matter and substantial form, but also in aggregates of a subject and an inhering accident. For instance, when a human being is made white there is one aggregate from the human being and the whiteness, which is neither the human being nor the whiteness. This composite did not exist before as a whole, and a part of it did not exist before with respect to any part, although 840 another part did exist before.⁴⁴ The Philosopher describes the first generation as generation *simpliciter*, where he describes the second generation as qualified (*secundum quid*).⁴⁵

Chapter 17. How matter and substantial form are principles of generation

845 With these distinctions in hand, we should look at how matter and substantial form are principles of generation and of the thing generated *simpliciter*. And we should know that for matter and form to be principles of generation and the thing generated is nothing other than for matter and form newly to exist together in the same place and position, in such a way that the matter is presupposed by the form received in it, and the form, just as it is newly received in the matter, so it 850 is newly made with respect both to its whole and with respect to each of its parts. So if, impossibly, a *preexisting* form were to come about within preexisting matter,⁴⁶ then that composite would not be generated in the first way of taking ‘being generated.’ It would be generated only if we take ‘being generated’ in the third way. Such a generation would be nothing other than the aggregation of parts through local motion.

855 If you ask for the cause⁴⁷ of why matter in itself is able to receive form and make a *per se* unity with it, it should be replied that there is no cause of this other than that the one is actuality and the other potentiality⁴⁸ – that is, that matter is a certain potentiality suited to receive that form, and the form is a certain actuality suited to be received in that matter.

860 And if it is asked why matter is potentiality and form actuality, it should be replied that this is because the nature of the thing is such, nor can any other cause be given, other than because matter is matter and form form. Since properly speaking this will not be a cause, there is no cause, properly speaking.

865 One might say that if a cause of this [*per se* unity] cannot be given, then this [unity] should not be posited, on the grounds that nothing should be posited without necessity and without a cause. The reply is that many things should be posited that do not have causes, and that we do so on account of experience or reason. Thus on account of experience and reason taken *a posteriori*⁴⁹ we

⁴⁴ That is, the whiteness did not exist before, even in part, whereas the human being of course did exist before. The new composite is the *per accidens* unity of substance + accident, in contrast to the *per se* unity that is the human being, which is a composite of matter + form. On the status of such *per accidens* unities, see Pasnau, *Meta. Themes* pp. 101-2 etc.

⁴⁵ *Phys.* I.7, 190a31-34.

⁴⁶ *Unde si per impossibile forma praeexistens fieret in material praeexistente*. Surviving manuscripts are divided between this text and an alternative text, which is the one the editor chose: *Unde si per impossibile forma adveniens non informaret materiam praeexistentem* (So if, impossibly, the arriving form were not to inform preexisting matter). The editor’s preferred text makes equally good sense in isolation, but does not fit with the remainder of the paragraph.

⁴⁷ Here and in the remainder of this chapter, it is important to keep in mind that *causa* bears the broader Aristotelian sense of reason or explanation.

⁴⁸ Ockham is echoing Aristotle’s remarks at *Metaphys.* VIII.6, 1045a21-35.

⁴⁹ *A posteriori* in the Aristotelian sense, as the grasp of a conclusion not from what is explanatorily prior (*a priori*), but from what is explanatorily posterior. This is a non-ideal way to understand a thing, but it is sometimes unavoidable, Ockham here tells us. Sometimes *a posteriori* conclusions will be based on experience – I conclude that the moon is

posit many things about whose causes we are ignorant, either because they do not have causes or because they have them but we do not know them. So it is in the present case, since we should posit on account of reason and experience that matter and form come together to constitute a composite, in such a way that from the potentiality of the matter a form is brought forth as its actuality.

Chapter 18. Does anything of the form preexist in the matter?

Someone will wonder whether something of the form preexists in the matter. Some call this its active potentiality; others call it the inchoate form.⁵⁰

It has seemed to many that inchoate forms necessarily preexist in matter, and that later these become complete forms. They arrive at this conclusion through both reason and authority. By reason, as follows.

First, if nothing of the form preexists in matter, then since the matter is not anything of that form, the form would be pure nothing before being brought about in the matter, and consequently the form would be created *ex nihilo*.

Second, if nothing of form were to preexist in matter, then since the form is brought about in matter by an agent, the form would exist totally from without, and so agents would be the “givers of forms,” inasmuch as the form would exist totally from without.

Third, if nothing of form were to preexist in matter, then form would not lie within the natural potentiality of matter, and consequently nothing that is truly one would be made from them.

This same conclusion is confirmed by the authority of the Commentator, who says that an agent bestows not multitude but perfection.⁵¹

Yet this view goes against Aristotle’s doctrine, because if something of form preexists in matter, whether it be an active potentiality or an inchoate form, one needs to ask whether it is matter or something other than matter. If matter, then just as matter is not something of the form as its part but as its subject, so neither is that preexisting thing something of the form – except as its subject. If it is something other than matter, and is not an accident, then it is a substantial form, and therefore substantial form preexists substantial form in the same thing at the same time.

Also, either the whole form preexists in matter or a part of it does. If the whole, then there is no generation there, because the whole essence of the composite, both matter and form, preexist. If a part preexists and not the whole, then there is another part that does not preexist. With regard to that part I argue that it is wholly new, in such a way that nothing of it preexists. Therefore that part is created, if their argument is sound.⁵² Similarly, there is no greater reason for why one part preexists in matter than that another does, given that they have the same character. Therefore either no part of the form preexists in matter or each part of the form preexists in matter. But it is not the case that each part of the form preexists, and therefore no part does.

Also, if some part of the form were to preexist in the matter, and later another part were to arrive, then the substantial form would truly admit of more and less, just as whiteness admits of more and less inasmuch as a body possessing whiteness later has come to it another degree of whiteness that becomes unified with the preexisting whiteness. But substantial form does not admit of more and less. Therefore no part of it preexists.

eclipsed because I *see* it – and then this sense of *a posteriori* overlaps with the usual modern sense of the Latin phrase. But other times, as here, a conclusion will be based on *a posteriori* reasoning, as when Ockham here concludes that matter and form make a *per se* unity, but without being able to give a deeper reason why.

⁵⁰ On this debate in general the editor cites the thirteenth-century Franciscan Roger Marston, *Quodlibet* II.22 (ed. Etzkorn and Brady; untranslated). For inchoate forms, the editor cites Matthew of Aquasparta, who traces the idea back to Augustine.

⁵¹ Averroes, *In Metaphys.* VIII.15.

⁵² Invoking the first of the above arguments.

910 One might say that it is not a part of the form that preexists in matter, but that the whole
form preexists, according to incomplete and potential existence, and that the agent brings it to actual
and complete existence. On the contrary, this is not enough, because that which is in something only
915 according to potential existence is not there in reality. For to be in something potentially is nothing
other than to be able to be in exactly that thing. For instance, Socrates is in the market according to
potential existence because he is able to be in the market. Therefore if form preexists in matter
according to potential existence, then in truth it is not in matter, but it is able to be in matter – this is
the main point. Therefore it should be said that form is no more in matter on account of its
920 potential existence than Socrates in Rome is in Paris, inasmuch as he is able to be in Paris, or than
whiteness is in something black, light in the dark, or cold in what is hot. Just as he who is in Rome is
not in truth in Paris, although he is able to be there, so matter that is actually under the form of air
does not have the form of fire, although the form of fire is able to be in it.

It is not hard to reply to the arguments to the contrary.

925 [To the first,] I grant that form is nothing before it exists, when one distinguishes nothing
from being. But in truth it is not nothing, when that is said to be nothing that *cannot* exist.⁵³ And
when it is said that form would in that case be created, it should be replied that although this can be
granted on one way of taking ‘created,’ still, when we take ‘created’ in the way that the Philosopher
930 does, the conclusion does not follow. For two things are required for something to be created: that
it first be purely nothing, so that no part of it is actual, and that it be made by an agent whose action
does not presuppose anything as its subject or as its part. Hence for that which is apt to be created it
is apt that nothing be presupposed. But although form presupposes nothing as a part of that form,
in the way in which matter is presupposed by the whole composite, still form presupposes
935 something as its subject. Hence form is not created.

930 To the second it should be replied that forms are not totally from without, because they
necessarily presuppose the matter in which they are received. For this reason agents are not “givers
of forms.” For that is a giver of forms that impresses a preexisting form on something or produces
a form in something without which it can produce it. Each of these is impossible for a natural
agent, since it can neither impress a preexisting form on matter, nor produce it without matter.

935 To the third it should be replied that form is said to lie within natural potentiality not
because something of the form preexists in matter but because it is able to exist in matter. Such
natural potentiality applies to matter itself – namely, that it is able to have form from the nature of
matter without any inclination to the contrary.

940 [Objection 4] One might say that a substantial form lies within the potentiality of matter
differently from how an accident lies within the potentiality of its subject. But an accident lies within
the potentiality of its subject because it can exist within that subject. Therefore a substantial form
lies within matter in a different way.

945 [Objection 5] Likewise, a form lies within the natural potentiality of matter. But for
something’s to lie within the natural potentiality of something it is not enough for it to be able to
exist within that thing. For if so, then something heavy would lie within the natural potentiality of
upward motion because it is able to be moved upward, and heat would lie within the natural
950 potentiality of water because it is able to exist in water. These are false. Therefore it is not enough,
for something’s to lie within the natural potentiality of a thing, that it be able to exist within that
thing. Therefore more is required, and the only way to account for this is if some inchoate form
preexists.

To the first of these [4], it should be replied that just as substantial form lies within the
potentiality of matter, so an accident lies within the potentiality of its subject. And so just as a

⁵³ Following those variants that yield ‘cannot’ rather than ‘can.’

substantial form is drawn from the potentiality of matter, so an accident is drawn from the potentiality of its subject – that is, just as a substantial form is brought about in matter that before was a certain potentiality with respect to that form, so an accident is brought about in a subject that before was a potentiality with respect to that accident.

To the second [5], it should be replied that something is said to lie within the natural potentiality of a thing when [a] that thing of its own nature is able to receive it and [b] the thing is not inclined of its own nature to the contrary of that nor is it inclined against it – regardless of whether anything of it preexists within that thing. This is the way it is for matter: matter is able to have form and the nature of matter is in no respect inclined against that form. But heat does not in this way lie within the natural potentiality of water, because regardless of the fact that water is able to receive heat, it is still of its nature inclined against heat inasmuch as, unless it is impeded by an extrinsic agent, it loses its heat and acquires coldness. Likewise too, something heavy is inclined against upward motion. Hence the potentiality of matter with respect to substantial form is not like the potentiality of water with respect to heat or the potentiality of what is heavy with respect to upward motion.

To the Commentator [lines 886-87] it should be said that he means that an agent does not bestow a multitude of one or more preexisting things as if impressing something preexisting on the matter. Rather, an agent bestows perfection by impressing on the matter something for which the matter lay in potentiality. Hence the agent makes something exist that before did not exist, but it does not bring forward to that matter something preexisting. This is his point.

Chapter 19. That the form of the whole is nothing other than form and matter

Having shown that matter and form are principles of what is generated, we should now look at whether they are the *sufficient* principles of this – that is, whether something else is required, a form of the whole, just as some claim who say that the composite involves not only matter and form but also a form, which is called the form of the whole.⁵⁴

They are persuaded to make this claim on the authority of Aristotle's *Metaphysics* VII [1041a22-24], where he holds that beyond the parts there is something else in the whole that is not the parts, given that the parts remain while the whole does not. For after we take apart *b* and *a*, *b* remains and *a* remains, and yet the syllable *ba* does not remain. Therefore *ba* is something beyond *b* and *a*.

This view runs contrary to the thinking of Aristotle, however, and I argue against it on the grounds that according to him a whole is nothing other than its parts joined together and united (*simul iunctis et unitis*). For if there is some form or entity there beyond those parts, that entity would be either (a) simple or (b) composite. (a) Not simple, because then it would be either matter or form,⁵⁵ and so there would be there two partial substantial forms distinct in themselves as a whole, and consequently one of these forms would no more be form than the other would.⁵⁶ Likewise, if there are two forms there, then they either do or do not make something that is *per se* one with matter. If they do, then there either is or is not another entity beyond these three. If there is another, then I ask about it as before, and so there will be an infinite regress. If there is not another, then these three parts make something *per se* one without a fourth entity, and for the same reason the two

⁵⁴ *Reportatio* II.1 (Opera Theol. V:18) ascribes this view to Scotus, who does indeed use this phrase at *Ordinatio* III.2.2 n. 9 (ed. Wadding, VII:80; the passage is also quoted in the Ockham edition). But it is debatable whether Ockham's characterization of the view fits Scotus's intention.

⁵⁵ Oddly, the possibility that this third thing might be matter does not show up again. I suspect the text here is corrupt. But perhaps the possibility is so obviously unsatisfactory as to be dismissed without comment.

⁵⁶ Perhaps the idea is that, if each is simple, then there would be no reason for one to be the form of the whole and the other the form of the part.

995 could make something *per se* one without a third entity. If, however, they do not make something *per se* one, then it is pointless to posit [this further form] for the sake of the composite's unity. If, on the other hand, (b) this third entity is composite, and it is clear that it is composed from nothing other than matter and form, then there is nothing beyond matter and form except a certain composite that is nothing other than the parts joined together.

1000 It should be said then that beyond the parts that are matter and form there is no other third entity distinct from them. What there is is a composite that is neither one part nor the other, so that this composite is neither matter nor form but matter and form united together and conjoined. This is the Philosopher's point with regard to the syllable *ba* – that it is neither *b* nor *a*, given that both *b* and *a* can remain without *ba*. And with regard to composites that are one thing *per se*, it is true without qualification that each of these is its parts together and conjoined, so that a given whole is
1005 nothing other than its parts existing together. But the case of artifacts is different, because one part can remain distinct from another, in such a way that the parts can exist at the same time (*simul*)⁵⁷ in the natural world even though they are not united. Hence that whole is not always and necessarily those parts in existence. It is only those parts in existence when the parts are united in the right way and positioned in a place that is appropriate. When on the other hand they are separate or
1010 inappropriately arranged in place, then the whole – a house, for example – is not those parts. And since it is possible that those remaining parts are sometimes properly arranged and located and sometimes divided from each other, it is thus sometimes true and sometimes false that the house is those parts. But whenever those parts are arranged in the proper way and place, then the house is those parts.

1015 [Objections]

1. You might say that the house is destroyed, and that therefore some entity is lost there.

2. Likewise, matter and form are causes, and not causes of themselves. Therefore they are causes of something else. That is what is posited as the third entity.

3. Likewise, if the form were together in location with the matter and were not to inform it,
1020 then a composite would not result from them. Therefore matter and form do not suffice for the composite. Therefore something else is required, which is called the form of the whole.

It should be replied to the first of these that a house's being destroyed is not some *res*'s ceasing to exist of itself as a whole. It is instead only the parts' being separated locally, on account of
1025 which local separation it is false to say that the house exists, something that earlier was true. Hence 'being destroyed,' when predicated of a house, is taken like 'being corrupted' in the third way, not like 'being corrupted' in the first way.⁵⁸

To the second it should be replied that matter and form are causes of a thing only because they are parts. Therefore just as they are not parts of themselves, so they are not causes of
1030 themselves, but are parts and causes of the whole composite, which is nothing other than matter and form when they are united together. Nor is there in this regard any greater difficulty for matter and form with respect to the composite than there is for a group of people with respect to a single population, since a group of people can be called the parts of a population inasmuch as if one of the

⁵⁷ *Simul* can refer either to spatial or temporal togetherness. Elsewhere in this chapter (e.g., lines 985-86), I have translated it as "together," which in the context suggests a spatial relationship. Sometimes, indeed, it is *clear* that Ockham is using *simul* to express spatial togetherness – see. e.g., line 1019, where the Latin is '*simul localiter*.' But here it seems he must have in mind a temporal relationship: you could have all the parts of a chair at the same time, without their being together. Unless, conceivably, he means that you could have all the parts together spatially, but not properly united. (Because you lack glue? Or because you've put them together wrong?) It would be interesting to see whether his use of *simul* throughout this discussion could be brought under some more systematic control.

⁵⁸ See Chapter 16 for the three ways in which we say that a thing is corrupted.

1035 population perishes we do not say for this reason that the whole population perishes but some part
of the population. Nevertheless, nothing is a part of itself. So matter and form are parts of the
composite that is those parts, just as a population is a group of people. And so to say that matter and
form are parts of a composite, one of them informing the other, is the same as to say that they are
causes of that same composite.

1040 To the third it should be replied that on Aristotelian principles it is impossible for this matter
and this form that are one composite or that are parts of the composite to be existent in the natural
world unless they are together locally. But if, impossibly, they were separate locally, then they would
not be one composite, but rather matter and form would be no composite. It should also be replied
that, to Aristotle's way of thinking, it involves a contradiction for matter and form to be together
1045 locally and for matter not to be informed by the form. In the same way, on his view, it should be
said that it is impossible for an accident to be locally together with a substance and not to inform it.
For this reason if numerically the same accident were together with two subjects then it would
inform both and there would be two composites, one of which would be composed from the one
subject and that accident and the other from the other subject and that same accident. The same, in
proportion, would be said about matter if the same form were with two matters. Therefore it is clear
1050 in this way that the whole is nothing other than all of its parts – not always, but only when they are
collected, arranged, or united in the right way. For different wholes require a different union of their
parts: sometimes it is required that the parts be locally together, sometimes that they are non-distant
in such a way that nothing comes in between, and sometimes something could be in between but the
correct arrangement is required, as when a group of people make one population.

1055
Chapter 20. The form of artifacts

The previous chapter maintained that a house and other such things are destroyed solely
through the local motion of the parts away from each other. The contrary, however, appears to be
the case to many, who say that the form of an artifact is an accidental form distinct from matter and
1060 coming to it through art in just the way that heat naturally comes to fire even while being really
distinct from it. So to understand better artifacts and their generation, we should now briefly discuss
whether the form of an artificial thing is distinct in its own right as a whole from every natural thing.

1065 What we should say, in keeping with Aristotle's path, is that when artifacts are made, no new
res is generated anew in its own right as a whole. Or we should say that it is not *necessary* that there
always be generated a *res* that, with respect to each of its parts, exists anew. Sometimes, at the action
of an agent, mediated by natural causes, new forms are produced anew, sometimes accidental forms
and sometimes substantial. This is clear in agriculture and other arts. It is not always the case,
however, that *res* that are new with respect to all of their parts are produced in the generation of
artifacts. A plausible⁵⁹ argument for this runs as follows. If there is some form there that is new with
1070 respect to each of its parts, either [i] this form exists as a whole in the whole artifact and in each part
of it, or [ii] it exists as a whole in the whole and part in part, or [iii] it exists only in part of the
artifact. The first cannot be held, because no accident (other, at least, than an accident of the rational
soul) is indivisible, existing whole in the whole and whole in each part. Nor can the second be held,
because if a house is constructed of wood and stones, no new thing attaches to the wood or stone.
1075 For if it does, then I ask about that thing caused in the wood or stone: either it is a substance or an
accident. Clearly, it is not a substance. Nor is it an accident, because it is not a quantity, not even
according to those who hold that quantity is something other than substance.⁶⁰ Nor is it a quality, as

⁵⁹ See note 7 on the meaning of “plausible” (*persuadeo*) in this context.

⁶⁰ For Ockham's own reductive view about quantity, see the references in note 39.

is clear inductively.⁶¹ Nor can it be said that it is a relation, because such a relation should not be postulated in the external world, according to Aristotle's views, as has been proved elsewhere.⁶²

1080 Likewise, I ask: What causes that *res*? Not the agent, because the agent brings about something only through local motion, but local motion does not cause a new *res*, but only makes a *res* exist in a place where it before did not exist. Nor can this *res* be caused by anything else, as is clear inductively. Therefore no *res* that is new in itself as a whole is caused there.

1085 This conclusion is confirmed, because through local motion alone the only thing that is necessary acquired is a new place. But, in the case of many artifacts, the local motion of natural things suffices by itself for their construction. Therefore it is not necessary to generate there a *res* that is new in its own right as a whole.

1090 Against this view there are several arguments that can be made. First, artifacts are distinguished from natural things. But if there were no new *res*, then every *res* would be natural, and so there would be no distinction between natural and artificial things.

Second, according to the Philosopher,⁶³ artifacts are composed from a natural thing, as its matter, and from an artificial form, as its form. But a natural thing is not composed from these. Therefore etc.

1095 Third, according to the Philosopher, it is false that the statue is the bronze.⁶⁴ It is true, however, that the statue is bronzen. If, however, the statue did not involve some *res* beyond the bronze, it would be true that the statue is the bronze.

To the first of these it should be said that no artificial thing that is one thing *per se* is distinct from a natural thing. To make this clear it should be known that some artificial things are one *per se*, as when they are made solely through the removal of parts from the whole, as Mercury is made from a stone, or when they are made by change of shape alone, as when bronze is made into a statue.
1100 Other artifacts, however, are composites, as are a house and other such things.

With respect to the first sort I say that every artificial thing⁶⁵ is truly and really natural. The second sort, however, is not a natural thing but natural *things* – a house, for instance, is not a natural thing but is many natural things. A statue, in contrast, truly is a natural thing, and so is a bath. The
1105 Philosopher does not intend to deny this; rather, he means by the proposition

An artificial thing is not a natural thing

to say that such a thing is not naturally such as it was made by art. For instance, if one states the proposition

A statue is not a natural thing

1110 one should understand through this the proposition that

No natural thing is naturally a statue

1115 since no thing is made a statue through nature, but is made a statue only through art. Likewise, water is not naturally a bath, but water through art is made a bath. Still, this notwithstanding, the only thing that is a bath or exists in the bath is something natural. For one water differs from another water only in its having heat or being mixed with herbs or being in some specific place, none of which imply anything in that water other than a thing that is natural. So if water gets put in a certain

⁶¹ That is, by running through the different kinds of qualities, as set out in Aristotle's *Categories* ch. 8. (We are ourselves in the middle of a larger inductive argument, showing that the form of an artifact cannot fall into any of the categories of accident.)

⁶² See, e.g., Ockham's (untranslated) commentary on the *Categories*, chs. 12-13. Or see his (translated) *Summa logicae* I.49-54.

⁶³ The editor cites *Physics* II.1, 193a12-21.

⁶⁴ *Physics* I.7, 190a25-26.

⁶⁵ Ockham is using *res* throughout this paragraph where I use 'thing.'

place and then later gets made made hot by nature, the whole would be natural and would be a bath, and yet would be distinguished in no respect from another that was made a bath through art. Some baths are in this way called natural and some are called artificial. Although they may in some way be distinct, still if they were distinct only with respect to their extrinsic agent – namely, in that one is made by nature and the other is made a bath only with the concurrence of art and will – one would truly be called a natural bath and the other an artificial bath. This is to say that the one water is made a bath naturally and the other is made a bath artificially. Hence it should be said that the proposition *Artifacts are distinct from natural things*

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1125 should be understood as this proposition:

These are made such as occur through nature or naturally, and the others are made such artificially and not naturally.

Now one might say that the Philosopher, in *Physics* II [192b12-20], says that artifacts do not possess in their own right a principle of motion, whereas natural things do possess in their own right a principle of motion. The reply is that according to the Philosopher artifacts do have in themselves a principle of motion, but not through art, because through art there is no *res* acquired anew that is a principle of motion. In contrast, natural things possess a principle through nature and not without nature.

To the second it should be said that the Philosopher takes ‘composed’ broadly for everything that is something presupposed in some transformation, which through the transformation is made such as it was not before – whether or not multiple distinct *res* come together there. This is what Aristotle says in *Physics* I [190b5-10], that some things are generated by transformation, some by rearrangement, and others by subtraction – where it is not necessary for anything to be added, but only subtracted, and from the very fact that the parts are subtracted in the proper way, a thing is said to be such as it was not before, not because of some *res* added, but subtracted.

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1140 To the third it should be said that the Philosopher does not mean to deny unconditionally that the statue is bronze. Rather he means to say that this holds accidentally, and that the bronze is not the statue naturally but only through art.

Now you might say that these natural things are transformed toward artificial forms, but that the transformation does not occur without any acquisition or loss, inasmuch as every motion is towards some endpoint subjectively inhering in the thing transformed. I reply that this is not necessary, and that often it suffices that it be locally moved to a place containing and giving place to the thing transformed. So it is not necessary, when natural things are made artificial, that some artificial *res* be acquired anew. Often, it suffices just that they be moved locally. Therefore it should be said in this way that one sort of artificial thing is truly a natural thing, and another is natural *things* and not *a* natural thing – including a house, a city, a bed, and the like.