# Matter and Being from a Scotistic point of view: a bypass to the psycho-physical problem?

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## Abstract

The aim of this paper is to apply the metaphysics of John Duns Scotus in constructing a new conception of matter which does not stand in opposition to the mental realm, but is rather composed of both physical and mental elements. The paper is divided into four parts. Section one addresses Scotus' claim that matter is intelligible and actual in itself. Section two aims to show that matter can be seen as a deprived thinking being. Section three analyzes Scotus' conception of place. The final section brings together the conclusions of the three preceding parts to confront the Cartesian psycho-physical problem anew and to suggest a viable solution.

What is *Matter* and what are its functions? These are questions that have been asked since the dawn of philosophy, and as with the dawn of day, both the darkness and nascent light are grasped together. The aim of this paper is to apply the metaphysics of John Duns Scotus towards the project of constructing a conception of matter which does not stand in opposition to the mental realm, but rather contains both physical and mental elements.[1] Like other physical issues, Scotus' conception of matter is rarely discussed. This is no accident, because as Antonie Vos remarks, "for Duns Scotus, physics was not a dominating interest as semantics and logic were." (Vos, 362)[2] And where Scotus does consider beings of reality, they are most often considered from a metaphysical standpoint. It is important to note that it is not the aim of the study to present Scotus' conception of matter but rather to produce a new one that elaborates Scotus' thought.

The seminal passages in which Scotus discusses matter include his treatment of individuation, his account of the Eucharist and his conception of place. We will pay particular attention to Scotus' account of the manner in which angels occupy a place, given their status as immaterial thinking beings. Whereas the generally excellent study of Richard Cross analyzes matter as a feature of Scotus' treatment of the physical categories, this study will approach matter primarily from a metaphysical standpoint insofar as matter is a *being*. There is a common view, supported by Scotus himself, that man can know matter only

in a limited way, by way of analogy to form.[3] In distinction to this view, we will argue that considering matter from the standpoint of being allows us to gain greater understanding of matter than one might initially suppose possible.

It is important to emphasize that this article is by nature a speculative rather than historical endeavor. The task that the author takes upon himself is not solely to present Scotus' conception of matter as expressed in his writings, but to use his doctrines as a platform to construct a concept of matter that suggests the possibility of bypassing the vexed psychophysical problem.

## Part I

1. *Preliminary remarks on Matter*

As mentioned, the concept of matter boasts a long history. Without opening the floodgates of a rigorously historical consideration of matter - important work which others have performed - we will begin rather by drawing a fundamental distinction between the Greek and Christian conceptions of matter: According to the Greeks matter is simply *there* eternally, whereas according to Christianity matter was created by God. This difference does not mean that medieval Christian thinkers held an utterly different conception of matter, but rather that they modified the philosophical conception to suit their theological needs. As such they kept the Greeks' analysis of matter as that which remains after the *thing* ceases to be, and which is responsible for all processes of becoming and change, i.e. as that being of potency which makes it possible for things to become actual.[4] Scotus, summarizing Aristotle's arguments for the existence of matter, explains that when anything is transformed from one thing into another, matter "remain[s] the same under each of the opposites." (*Lect*. 2.12.11 [19:72])[5] Averroes adds that it is the change of material things which makes matter known, just as a transformation in place makes place known.[6] Scotus further explains that while matter in itself is known to God, our intellect is unable to "comprehend neither most perfect nor least perfect things in the totality of their true being." While our mind comes to know the 'most perfect things' through their capacity to produce effects, diminished beings (*entia deminuta*) become known only by way of analogy to other more perfect things. Scotus explains that our conception of matter is composed "out of the forms, which are of other principles of operation" than matter. Through these forms we attain analogical knowledge of matter "as receptive to the received," (*Lect.* 2.12.79 [19:101]) so that only matter in itself is unintelligible for us. We come to know matter rather "through its disposition or capacity to receive form." The being which receives, i.e. matter,

is distinguished from that which is received, the form; that which receives maintains its identity, while that which is received changes.[7]

2. *Matter as intelligible in Itself*

We now turn to examine Scotus' metaphysical account of matter. Whereas the Greeks presupposed matter as a *being there*, which is absolutely undifferentiated and unpenetrated, Scotus, as a Christian thinker, contends that although we do not know matter substantially *pro statu isto*, the act of its creation makes it necessary that matter be knowable to God, and therefore knowable in itself. In *Reportatio* I-A, d. 36, Scotus directly addresses those who claim that matter is unknowable and thus unintelligible. According to them, matter is only known through the form and thus the idea of matter "will simply be the idea of form." (*Rep*. 1.36.88 [2:410])[8] Scotus responds that matter is something which is a being, and thus cannot come into existence of itself; it follows that God must hold an idea of matter, which he subsequently wills into being. For if matter is not a being in itself, and thus knowable, the creation of matter would be impossible, implying that matter existed prior to the act of creation.

In a prior argument, Scotus makes the following claim: in God there is a distinction between intelligibles within the divine mind which serve as a principle of production, and which will come into existence at some point in time, and other intelligibles which will never come into existence. The former are called *exemplars* or *ideas* whereas the latter are called c*oncepts*.[9] Assuming this division, Scotus presents the view of "other" philosophers who argued that things which will never come into being do not entail any idea in the divine mind, since they "do not correspond to any specific difference of being." As a result, they argued that matter cannot correspond to an idea in the divine mind since matter "does not exist on its own, nor it can be known in itself, and therefore no other idea corresponds to it apart from the idea of the composite." (*Rep*. 1.36.88, n. 98) Scotus answers that prior to the act of the divine will there is no difference between a practical idea and a speculative concept since in such a state there is no difference between something which is meant to become and something which is not. For if prior to the act of the will something is distinguished from another with respect to its future existence, then the will is deprived of choosing to act, either to bring or not to bring something into being.[10] It follows that the idea of matter in the divine mind, like other ideas, is indifferent to future existence, and consequently that the idea of matter is really distinguished from all other ideas within the divine mind. Scotus concludes that if God wished, he could create matter existing without form, for "just as man, as he exists in the extramental world, has his own proper essence, so also he has his own proper existence. The same is also true of

matter. Just as it would have its own proper essence, so also it would have its own proper existence."[11] This claim is based not upon positive knowledge regarding matter or the soul, for no one has witnessed them separately, but rather upon the fact that "[m]atter is essentially prior to form, because the former is the foundation of the latter, from which the latter is drawn out; therefore for matter to exist, or to be able to exist by itself, does not involve a contradiction." (*Rep*. 4.11.85)[12] And since according to Scotus, God can bring anything into existence which does not contain a contradiction, it follows that it is possible for matter to exist without a form.

We may draw the following conclusions from what has been said so far. 1. Though we do not know the nature of matter in itself, we know that matter as a principle that carries changes, is required as a transcendental condition for the creation of a changeable physical world insofar as it is changeable physically.[13] 2. Since the act of bringing into being presupposes the idea of what is brought into being (whether it is matter, man or a chair), it follows that the idea of matter in the divine mind, prior to its actual creation, is subject to whatever logic applies to any thinkable object within the divine mind. 3. Since matter can exist in itself, it follows that matter can be understood as a thing which possesses being, and is implicated in everything that can be truthfully said of the being of existence *qua* being of existence.

## 3. *Matter as an Actual Being*

Scotus' conception of matter builds on a Franciscan/Augustinian tradition and particularly Henry of Ghent. As Antonie Cote notes, Scotus' views coincide with this school in the following points:[14] 1. As opposed to Aquinas, both Henry and Scotus hold that matter is something that carries a positive quiddity. Though this does not mean that Aquinas understands matter to be nothing, granting matter some positive quiddity does however make it possible for Scotus and Henry to consider it as a being, which Aquinas cannot.[15] 2. Both Henry and Scotus think that God can cause matter to subsist without form and consequently that God holds within him an *idea* of the material.

Henry, probably responding to the view of Giles of Rome, explains that matter cannot be treated as a non-being,[16] since "it receives existence in itself insofar as it has its own proper divine idea within the divine mind." (Wippel, 263-4)[17] A three-fold structure of existence is realized in matter: 1. Existence as such (*esse simpliciter*) insofar as matter is created by God. 2. Matter as capable of receiving forms. 3. Matter as actualized by the form in the composite of real beings. Whereas the first two modes can actually exist insofar as God keeps them in existence directly, the third can exist by its own means.[18] In a later treatment, Henry distinguishes between the *being of essence* and the *being of existence*. Henry explains that, "[t]he being of essence is… a disposition of a thing in itself by which it is what it is and nothing

other than itself, related indifferently to anything else to be attributed to it." (*SQO.* 27.1, 159) The being of existence, on the other hand, is actual being that "has been acquired by the essence" and is distinguished into two kinds: diminished within the mind, i.e. concepts, and being which exists outside the mind "which is said to be the true being of the things." Extra-mental being is further divided into "*esse existentiae simpliciter*" such as matter and form, and "esse subsistentiae" "which is the being of a thing that is a supposite subsisting in itself." Thus Henry concludes that matter and form "do not have the full actuality of existence, because they exist as parts united in the whole, and a part in a whole, as such, has being in potency, not in act." Only the composite, which holds a supposite, "has being distinct and separate from anything else, and in that way it has being completely in act and the complete actuality of its existence, which is said to be the being of subsistence." (*SQO*. 27.1, 160)

While Henry distinguished initially between essential and existential beings, and only secondarily between being within the mind and that which is outside of it, Scotus anchors his primary division in the distinction between being within the mind and being outside the mind.[19] While things outside the mind are constructed as real objects, ontologically speaking, mental things in the soul do not have their own absolute being but have being only in a manner of speaking (*esse secundum quid*), i.e., "in so far as [they are] related to the soul as the foundation of that being in the soul (*esse in anima*)." (*Ord.* 1.36.36 [6:285]) Mental things do not have their own being absolutely but rather only secondarily; in other words, their actuality is based upon the thinking subject.

Whereas Henry views matter as an *esse existentiae simpliciter* that can be actualized only as a composite together with a form, and is in itself deprived of a principle of actuality, Scotus explains that this cannot be the case, for then "everything composed is composed out of something and nothing." (*Lect.* 2.12.49 [19:88]) To avoid this absurdity, matter must be considered as an actual being. A challenge now arises for Scotus to explain how matter, which exists simply in itself, can also join with form to create a composite which consists of its own unity. His answer follows Aristotle, who "distinguishes between unity of identity and between unity of the composition." (*Lect.* 2.12.61 [19:92-93])[20] In order to explain the cohesion of these two unities, Scotus maintains that matter consists of twofold potency: 1. As a term of a potency which does not have being, but has the potency to be, e.g. as the Antichrist is said to be in potency. 2. as the subject of potency to something else, i.e. as in the capacity of a subject to receive forms. The first is called by Scotus *objective potency* whereas the latter is called *subjective potency*[21] which is a "potency in a secondary sense."[22] Matter is an actual being which is "a being in potency to all acts which it is able to receive." (*Lect.* 2.12.37 [19:82])

Scotus examines Henry's distinctions between the three types of realities: opinable (*realitatem opinabilem,* capable of being thought according to *res* as reor/reris), quidditative, and of existence

(possessing *ratitudo* according to ratus/rata/ratum).[23] Scotus agrees with Henry that impossible things possess no real being[24] but only a fictitious being.[25] Following his criticism of Henry's distinction between the being of essence and of existence, Scotus maintains that Henry simply misunderstood the duality encapsulated in the dual meaning of ratified being[26] 1. as "it has of itself firm and true being". (*Ord.* 1.36.48 [6:290]) 2. as its formal content does not contain an internal repugnancy: "ex se ens ratum".

When the first sense of actually existing being is applied, then a thing such as man is not of himself "a valid being but from efficient cause" and thus "there is never a valid being unless it is existing." (*Ord.* 1.36.49 [6:290]) Honnefelder explains that in this sense of *ens ratum,* it is a ratified being only insofar as it is caused and really exists.[27] Nevertheless, when a being is understood in the second sense, the only thing determining whether something possesses *ens ratum* is whether its formal content includes an internal repugnancy or not. Scotus argues against Henry that he has simply misunderstood the latter kind of *ens ratum* as non-repugnance to being by concluding that the eternal understanding of a stone in the divine mind, for example, requires a second type of being for its subsistence.[28]

It follows that the dual structure that was found in both thinking and non-thinking beings is grounded in these two levels of *ens ratum*. The first, which might be called the *objective* sense of *ens ratum*, is taken according to its reality and is a product of causation or creation. The second sense, which might be called the *subjective* sense of *ens ratum*, is taken according to its whatness, which is not caused or created by an external agent but rather follows by necessity insofar as the being contains no internal contradiction. Matter in itself is not an *ens ratum*, but rather an *ens ratum* qualified to suit material things. Matter, when deprived of actualization, is deprived only in regard to material forms but not insofar (1) as it meets the firmness that is required of an *ens ratum qua ens ratum;* (2) as it grounds the process of generation and corruption. It thus follows that the privation of form does not entail an inner contradiction, nor does it prevent matter from remaining open to future actualization. The particular privation, which contains no contradiction, is all that is required to claim that God could create matter separately from form.

## 4. *The Problem of Actualized Material Form*

Nevertheless, since a composite thing is composed of matter and form, and since Scotus argued earlier that "everything composed is composed out of something and nothing," (*Lect.* 2.12.49 [19:88]) it follows not only that matter is an absolute thing that can exist separately, but also that the substantial form of material things can exist separately. This is a perplexing outcome, for while one can visualize, in a way, how matter could exist separately from form, it is not clear what it means that material forms can

exist without matter. One of the arguments for the separate existence of matter was that God must have a distinct idea of matter in his mind, since otherwise the creation of matter would not be possible. Similarly, one could argue that God must have a distinct idea of substantial material form in his mind, for otherwise no substantial material forms could be actualized in material composites. Scotus' argument regarding the separability of matter from form, claims that matter is *really* distinct from form, i.e. that form is also *really* distinct from matter:[29] "not only that matter is, but that it really differs from the form, because the opposite is not changed in the opposite." (*Lect.* 2.12.53 [19:90])[30] This claim that form and matter are really distinct is of great importance, and according to Richard Cross it was intended by Scotus to counter the position of Richard of Middleton who held that "a species of substance is just matter existing in a particular mode, such that a different mode of existing is a sufficient condition for sortal difference." (Cross, *1998*, 37) Cross explains that Scotus does not accept the view that an arrangement of matter can explain sortal difference. Putting it differently, if what characterizes prime matter is its indifference to generation and corruption, then it follows that although it can harbor forms, they cannot be reduced to it.[31] This claim for a real distinction between matter and form does not, however, entirely suffice to ground the possibility that matter can be created separately from form. Scotus is aware of this problem and says: "I say that matter is less dependent on bodily form than material form is on matter, since it is prior by origin—even though form is more perfect. And hence there is no likeness." (*Rep.* 2.12.2.12 [23:20])[32] It seems however that this same argument deprives the forms of the possibility of existing separately, since it implies that material forms are dependent upon matter, i.e. whereas matter is an absolute being which is not dependent upon another being, substantial material forms are relative beings which are dependent upon matter.[33] The brief argument presented by Scotus against this claim, which unfortunately he never elaborated, states that if forms were relative beings, then substantial change would be less perfect than accidental change. And since Scotus holds that this is not the case, it follows that substantial material forms cannot be relative beings. It is then surprising to find Scotus saying, just after presenting the argument of the priority of origination of matter to the substantial material forms that

> since form is not the formal cause of matter... nor matter the material cause of form, but of the composite; and since each is an absolute being, I concede that both of them can exist without the other, and neither is this corporeal form of the immaterial, because though it is in a separate state, in itself it is not averse to being perfected by matter. (*Rep.* 2.12.2.12)

It is thus not clear how Scotus brings together 1. the argument for the non-dependency of matter, based upon priority of origination, and 2. The claim that substantial material forms are not relative beings and are independent of matter as well. Cross clearly expresses his frustration by saying that "[w]hether or not the view that the forms of material substance are individuals can be successfully defended is not clear

to me." (Cross, 1998, 41) This is indeed what one may call a severe problem, for it seems that the two claims are grounded in different and irreconcilable arguments.

**Part II**

Before we precede further it is important to note that while the previous discussion aimed to extend the Aristotelian conception of prime matter, by claiming it is intelligible (section 2) and that it represents an actual being that can be actualized without form (section 3), a different approach will be undertaken in the following section. This approach exploits the ontological aspect of matter as a qualified *ens ratum* and so, rather than continuing the bottom up line of expanding the Aristotelian conception of matter, a top down examination is undertaken, where the top is assumed by God and the bottom by matter. This approach is unorthodox and will be justified primarily by its results. It is important that on the one hand that such a reading does not contradict our reading and reflections on Aristotelian matter, and on the other hand, it is equally important that it supplies us with new vocabulary to address matter and its problems in a way that was not available assuming the purely Aristotelian concept. Thus the reader is asked to temporarily suspend his or her judgment in order to appreciate the explicative power of this unorthodox reading.

## 5. *Thinking the Problem through the Divine Mind*

The two conditions of substantial material forms seem to contradict one another: (1) that there is a dependency of the substantial material forms upon matter, and (2) that this dependency does not imply that material forms are relative beings. In order to grapple with this conundrum, let us turn to Scotus' discussion of the manner in which God thinks his ideas, or as Scotus refers to them, his 'secondary objects of intellection'. In what follows, we append the notion of 'matter' in brackets to an analysis of divine thinking developed in another context.[34] Our aim is to exemplify how Scotus' model of divine thought can be applied to matter as well, thereby suggesting an answer to the problem of how material forms can be actualized independently of matter. The following analysis offers a different conceptual framework which might seem abstruse to unfamiliar readers. The frustrated reader may skip to the conclusions at the end of this section.

After discussing God's [matter's] primary object of intellection, i.e., the divine essence [the material essence],[35] Scotus asks whether there are other things or objects in the divine [material] understanding.[36] He maintains that there are such secondary objects, though while the divine intellect [matter] is moved by its primary object, it is not moved by such secondary objects since they are finite and the finite cannot alter the infinite [matter remains indifferent to its forms].[37] Scotus explains that secondary objects, which are incapable of moving the intellect, can relate to the intellect as things "terminating an act of a potency." (*Rep*. 1.36.1.11 [2:383]) Such termination can occur in two ways: Either (1) as its proper notion, as when the sensible terminates the sensual act; or (2) when "it is included in the notion of another object that terminates the act of that potency primarily." As an example of the second case, Scotus suggests an object of the common sense which stands in a secondary relation to the sensual act.[38] Scotus further argues that the first way by which an object terminates an act of potency is inapplicable to the [divine] intellect, for such an object "is necessarily required for that act", and according to Scotus, nothing which is created and finite can be required by an infinite act [a maxim which applies to the human "potentially" infinite intellect and to matter as well].[39] Scotus therefore endorses the second explanation according to which created finite intelligibles terminate the divine intellectual act "but only secondarily, qua included in the [primary] object that terminates [it] primarily" (*Rep*. 1.36.1.29 [2:388]) i.e., the divine essence [so that secondary relations, i.e. determination, can apply to matter such as shape or volume]. Termination by secondary objects is not necessary for the first act of intellection but rather follows it and depends upon it. This means that termination "is not related to the act of divine intellection as measure to what is measured by it, but the other way around."[40]

Scotus maintains that there can be no doubt that there are distinct relations of reasons in the divine mind,[41] the question is whether they are necessary in order for God [matter] to have distinct knowledge of his objects [in order for matter to receive the forms]. At first blush, Scotus seems to recognize the need for such relations, even preferring a view that "places these ideal relations in the essence qua object of knowledge… not [as it is] in itself, but as known."[42] This view holds that the divine essence can function as a principle of distinctiveness since "the relations are present insofar as God grasps Himself as imitable." (*Rep* 1.36.1.38 [2:391]) Nevertheless, after seeming to endorse this solution to the problem, Scotus goes on to reject the need for relations altogether: "if that by which an external object is known… were limited to that object of cognition, the latter could be known through it distinctly without any conceptual relation." (*Rep*. 1.36.1.49 [2:395]) Scotus means that these relations are simply not necessary for God to have knowledge of creatures – and thus the examination of the various opinions

regarding the problem becomes unnecessary. Against all these opinions Scotus argues as follows: Presume that God indeed requires relations of reasons in order to know his objects. Since these relations are knowable to God, Scotus asks by what means they are known to God? He answers, either through themselves, or through other principles or relations, or through the divine essence. If they are known through themselves, then the divine intellect would be moved by something other than itself, which is impossible [i.e. that the reception of forms by matter involves a real relation which will cause change in matter]. If by other relations, then the causal chain will continue *ad infinitum*. And if through the divine essence, then these relations are not really required in the first place [similar to the view of Richard of Middleton who held that forms are but permutations of matter].[43] Scotus provides an account of the production of secondary objects by describing four "instants" characterizing the divine mind:

> God in the first instant understands his own essence under merely absolute reason; in the second instant he produces a stone into intelligible being and understands it, so that there is a relation in the understood stone to the divine intellection, but there is not yet any relation in the divine intellection to the stone, … in the third instant… the divine intellect can compare its own intellection to any other intelligible to which we can compare it, and then by comparing itself to the intellected stone, it can cause in itself a relation of reason; in the fourth instant the relation that was caused in the third instant can be quasi-reflected, and then that relation of reason will be known. Thus no relation of reason therefore is necessary for understanding a stone. (*Ord.* 1.35.32 [6:258])[44]

The first moment of beatific intellection seems comprehensible [which is equivalent to the existence of matter in itself without any form whereby it "thinks" its essence].[45] The problem arises with the subsequent moments. If secondary objects are understood in the second moment, what need is there to compare them to the divine essence as understood? In the prologue, Scotus describes a similar process and explains that while "in the second moment of nature the quiddities contain virtually proper truths, in the third moment these virtual and contained truths are known to God." (*Ord.* 1.Prol.200 [1:135]) As is evident, Scotus distinguishes between the knowing of the quiddities, which occurs in the second moment, and the knowing of their truths, which are contained only virtually in the second moment [i.e. in the second moment the forms are potentially within matter while in the fourth moments the forms are actualized]. Whereas the third moment marks a reflective act, the second moment naturally and unreflectedly "produces a stone in understood being, … [as a] term." (*Ord.* 1.35.49 [6:266]) As we have seen, Scotus explains that the secondary object can relate to the intellect as a thing "terminating an

act of a potency," according to the second type, since it "is included in the notion of another object that terminates the act of that potency primarily." [i.e. that the second moment explains the dependency of substantial material forms on matter. This dependency does not however imply real containment, but "it is [only] included in the notion of another object that [in its sum] terminates the act of that potency primarily". (*Rep*. 1.36.1.12 [2:383-84]) The example of an object of the common sense sheds light on this point. While the eye perceives only color, for instance, by terminating the color the common sense perceives the shape of the boundaries of that color. These shapes are not real things nor are they parts of the color perceived, but rather they are produced from color as terminated and ordered in a specific arrangement. This explains why Scotus speaks of production and understanding, which appear to constitute two distinct moments, as a single moment. Whereas shapes are perceived simultaneously with the perception of color, the understanding of the truth of these shapes, e.g., as a triangle with all its properties, requires a different act of knowing according to the measurement of truth. So whereas in the second moment the shape of the thing is perceived in the thing and so absolutely, in the third and fourth moments, the truth of the thing is perceived in relation to the measurement of truth. Just as the common sense produces[46] common terms through the primary sensible according to its ratio, or also the production of the secondary objects is achieved "under the reason of the absolute, possessing being through A [i.e. the understood/perceived divine essence/matter]." (*Ord.* 1.35.49 [6:266]) Just like shape, which is merely derivative and is perceived together with the color, so also the secondary objects, while being only terms of the understood divine essence, are perceived together with the understanding of the divine essence [the act of matter conceiving the material essence]. These secondary known "objects have being in a qualified sense, namely objective being," (*Ord.* 1.36.1.47 [6:291]) and are what Scotus calls diminished beings. They are not cancelled beings, but rather beings in a certain respect, just as an accident has being in a certain respect through its substance.[47] The primary object [the divine essence in this case but can be applied to man or matter as well], which acts as a "moving reason" (ut ratio movens) (*Ord.* 1.36.41 [6:287]) and which moves the intellect itself [or matter], is that in which the secondary objects are perceived. It acts as a mirror which lends to the secondary objects a virtual being through reflection.

The preceding discussion of divine thought which we have reproduced above and applied to the problem of matter has demonstrated three things: 1. The relationship between the divine act of thinking and its secondary object has structural similarities to the relation between the act of matter "thinking" its

essence and its secondary object, i.e. substantial material forms. 2. Although divine ideas are dependent upon the divine act of thinking whereby God thinks himself, they are produced only virtually, like everyday objects such as shape. In a similar way, substantial material forms are only virtually contained by matter. 3. The third and fourth moments, during which the divine mind relates and reflects the divine ideas, are distinguished from the second moment insofar as it explicates and actualizes what lies within it potentially, i.e. it actualizes these forms as considered forms. Thus it is possible to say that the actualization of a substantial material form does not necessarily require matter to be actualized (although it is not repugnant to it) and that a pure actualization by the divine mind can actualize form perpetually, as opposed to actual material things, which are characterized by generation and corruption.

## 6. *Matter, Memory and Mind*

It therefore seems that there is much structural similarity between the divine mind and matter (and the human mind as well). In the following, I propose that Scotus' analysis of divine thinking under the Augustinian model of *memory, intelligence* and *will,* is applicable to the relation between matter and form, and presents us with interesting insights. Scotus explains three ways to understand the memory:

> Memory, or the intellect functioning as memory, can be taken in three ways: in one way as conserving the species of the past things as past. … In another way as conserving the species representing the objects in themselves, whether they really exist or not. … A third way is insofar as [the memory] has some principle whereby it elicits actual knowledge, which, however, does not stay there without a second act. (*Rep*. 1.3.4.109 [1:215])[48]

Let us now compare the human and divine minds against matter to determine whether and how Scotus' account of memory can be applied to matter. The first type of memory, which is in accord with the common understanding of memory, functions as the conserver of past events as they have occurred. In this sense matter does indeed conserve the past insofar as it enables past events to be written/received into it. It is important to note that the past written into matter is accidental to it, and matter itself does not act as an agent but only as a receptacle of the past. The act of storing the past in matter requires either an agent or an accidental causal act that leave their mark in it. Moreover, it is clear that different compositions of matter and form are more or less suited to preserve past events and thus that the form is responsible for the degree of perfection of conservation, though it is matter which makes such conservation possible at all.

The second type of memory maintains the species or forms as standing alone and for themselves. This kind of memory is not a memory of things that have happened in reality, but rather what I have called a transcendental remembering. This transcendental remembering served to explain how one can know things that one never witnessed, for example "I know I was born, or that the world was created, I don't remember either, for I recall no act of mine that had this or that as its object." (*Ord.* 1.45.3 [4-5])[49] Such truths cannot be deduced *a posteriori*, nor can they reside within us simply as innate. If they could, we would be able to perceive them within us, which would condition them temporally; but the situation requires a different kind of remembering which makes it possible for us to "remember" necessary truths which we never observed before. Applying this to our present discussion, we can say that the capacity of matter to receive any material form is equivalent to recalling such a form from its transcendental memory. Both these types of memory are about conserving, either transcendentally (as is the case with material forms which are contained in memories that are indifferent to existence), or conserving as "is required in order to be present as past."

As to the third type of memory, which elicits actual knowledge, i.e. extracts memories out of either the first or the second type of memories: In a recent study[50] it is shown that the act of remembering contains a mutual relation towards its primary object of remembering, the self, and a non-mutual relation to the objects remembered. This non-mutuality grounds the possibility of the thinking subject acting freely towards its secondary objects, i.e. not out of necessity. It was shown that such an extraction requires an act of intuitive cognition which intuits the presence of the remembering subject along with that which is remembered. In the case of thinking beings, intuitive cognition unites the two conserving types of memories into an act of recollection, and through it thinking beings intuit their own selves as that which accompanies the act of recollection. Matter, on the contrary, is deprived of such active and free power and is thus incapable of extracting anything or anyone from itself. Matter is passive and only allows external casual acts to actualize it by means of recollections which "use" it while remaining external to it. Since matter is deprived of activity, it follows that it is also deprived of the ability to act freely in respect to "remembered" forms, and thus is totally subordinated to the realm of natural necessity. Due to matter's total passivity, the recollection is not its recollection; it does not hold a genitive relation with respect to the form in question, nor does it belong to it. Matter could be said to behave like a servant that receives messages, but out of indifference simply does not read their contents. Matter is an *It*. For that reason, matter is capable only of what Scotus calls an imperfect memory, which refers to a potential act of memory, whereas thinking beings are capable of perfect acts of memory, which bring the act of remembering, in its fullness, into act.

Matter is thus a deprived thinking being which is capable of conserving past events as well as possessing the capacity to receive all material forms. With respect to the four movements of divine thought, matter can be said to be deprived of the third and fourth moments described above as taking place in thinking beings, i.e. relating and reflecting. As a result, the active power whereby matter thinks its essence does not allow it to recall conserved memories. Thus while the active power of thinking beings, also called *active potency*, makes it possible for them to expand themselves beyond themselves, matter's active power is capable only of "thinking" itself, it is a merely *passive potency*. This act of *thinking itself* is a genitive act that cannot be transmitted, it is *incommunicable*. It cannot be transmitted, not due to some non-intelligibility, but as its constitutive property.[51]

It thus becomes clear why Scotus does not consider the ideas of matter and form to be of the same kind, for they belong to different type of intelligible beings. Form is *thinkable being* whereas matter belongs, though deprived, to *thinking beings*. Incommunicability is common to all thinking beings insofar as their constitution is such that they think only themselves; no thinking being can think the thinking act of another as its own. As a result, it turns out that the unknowability of matter is not a result of the unintelligibility of matter, but rather is common to all thinking beings, even though matter is the most deprived type of thinking being. Divine intellect, human intellect and matter are similar insofar as they possess the capacity to actualize ideas. While the divine mind is infinite, the human mind and matter are finite. Whereas the divine and human minds are active and free, and so can actualize every potential idea, matter is only active in regard to its essence and subordinated to external actualizations, either through causal effects (from natural agents) or through creation (God). In any event, the unknowability of matter becomes equivalent to the unknowability of any other person, whether human or divine, and results from their incommunicability.

**Part III**

Though we are all post-Cartesians, the idea that material things, humans and God are all in a sense the same should not surprise us, for they are all substantial beings. Unlike modern man who continuously struggles to bridge between the mental and physical realms, the scholastics did not see an unbridgeable gap. This does not mean that they neglected the problem. Rather they treated the immateriality of the mental as not utterly different in kind from the material realm.[52] A sign of this is evident in the enormous effort, especially after the epoch ending condemnation of 1277, to explain how angels and other immaterial thinking beings occupy place. This debate, which became a common source of ridicule many

centuries later, holds great importance for those of us who are still battling to understand how to bridge between *res cogitans* and *res extensa*.

If angels, which are immaterial creatures, occupy place as Scotus claims, the different manner in which they occupy place is due to the fact that they are immaterial. Consequently, since human beings are spiritual-material beings, it is the aim of the following section to examine whether one can use Scotus' analysis of matter and place in order to confront Descartes' psycho-physical gap, which we will attempt in the final part.

## 7. *Preliminary remarks on Place*

Like the notion of matter, the notion of place carries with it long philosophical and theological heritage.[53] Pierre Duhem explains that, according to Scotus, place expresses the "relation between two terms, the contained body and the containing body." (Duhem, 183) Following Aristotle's account, Scotus defines place as "the outermost containing boundary of the contained, that is, place is the immediate container of the corporeal."[54] (Lang, 1983, 246) Lang explains that Averroes' interpretation of Aristotle suggested a strong relation between the place and the body that could not be considered apart. This, according to Cross, is due to the proximity between the extension of the body and the space that the body occupies, which might lead us to consider them identical. However, he goes on to argue that they belong to different categories for "the extension of a body pertains to the category of *quantity*, whereas the relation of the body to the space it occupies pertains to the category of *place*." (Cross, 1998, 116) This categorical difference represents the relation between the containing thing or body which lodges, *locare*, the place, and that which is lodged, *locari*, the contained body. That which is lodged by place is designated by Scotus as *ubi*. Place is thus grounded by the containing body, whereas *ubi* is grounded by the contained body. In addition to this distinction, Scotus also uses *positio*, which refers to the order of the parts of the contained body in relation to the parts of the containing body or place.[55] *Positio* is responsible for Scotus' claim that extension "entails an order of parts in a whole, such that one part exists 'outside' other parts." (Cross, 1998, 116)

## 8. *Breaking with Aristotelian Place*

Scotus formulates five relationships within Aristotle's conception of place: 1. to be in place of actuality, i.e. that the place is really distinct from the contained body. 2. to be in a determined place

because of equality of the bodies, i.e. equality of the surface size. 3. that the parts of the contained body correspond to the parts of the containing body. 4. to be in a place in determinate manner as excluded from another. 5. to be in place naturally or violently.[56] As Suarez-Nani notes, whereas the first four relations treat the body as a quantum, only the fifth relates to it as a natural entity.[57] Adopting this distinction between a body taken as a quantum and a body taken naturally, Scotus lays the groundwork for a break with the Aristotelian conception of place.[58] According to Aristotelian physics, body requires place, while place is independent of body. The primacy of sublunar place to body grounds the absolute immobility of place and the fixity of its directions, e.g. up and down. It also underpins the distinction between natural and violent acts of physical bodies, as when a stone falls naturally downward, or flies violently upwards when it is thrown.[59] Scotus explains that when a body shifts from one place to another, the two places are always of the same size and shape, and place thus remains incorruptible insofar as a body always occupies the same dimensions. Place, as the container, remains the same not in actuality, but only mathematically according to its dimensions. The absolute character of place is thus separated from its natural character, which is contingent. Up and down are therefore only products of the contingent and relative actuality of bodies and not properties of absolute place. Place is "incorruptible by equivalence (*secundum aequivalentiam*), but is not incorruptible accidentally (*per accidens*)." (Lang, 253-54)[60] Whereas the Aristotelian conception of place holds directionality to be an essential property of place, Scotus severs place from its directionality and thus distinguishes between place taken in itself, and place as taken according to the contingent actuality of the objects. By laying directionality aside, Scotus is able to distinguish between the thing as it could be in any possible world, and the thing as it exists in this or that specific physical setting. Accordingly, he is able to determine when things act naturally, as when things fall down, and when they act violently, as when an external force acts against natural inclination, e.g. a stone is thrown upward. It is important to note that this distinction does not imply that Scotus holds that bodies do not have places, but rather that their specific places are by nature contingent. As a result, the immobility and incorruptibility of place is no longer tied to the containing cosmos, for according to Scotus, place is immobile and incorruptible only dimensionally. However, when place is taken according to its actuality, then it comes to exist every time a body is occupying it and ceases to exist when it is no longer occupied.[61] Bodies, according to Scotus' view, are thus considered according to the aspects which apply to them absolutely, i.e. their dimensionality, as well as that which applies to them contingently, i.e. their specific places and relations to other bodies, including motion, from which up and down are derived. Moreover, being at motion or rest is no longer considered an internal property of thing, but one of its relative features. For this reason, Scotus explains that there is no contradiction in saying that a thing is both moving and at rest, for these terms only express relations.[62] Scotus' conception of place, a

conception no longer conditioned absolutely by the outer spheres [63], allows him to claim for the first time that a body can be considered without having a place, i.e. as not being contained by other bodies:

> Nevertheless, the opposite seems to be true according to the Catholics, for God could make a stone, not to exist in any other locating body, nor existing separately from every other body, because he could make it outside of the universe [and thus not contained by the outer spheres]; and in both ways it would be 'not in place', and yet it would be the same regarded absolutely in itself. (*Ord*. 2.2.1-2.231 [7:269])[64]

9. *Angelic Place*

Scotus' discussion of place is motivated by theological considerations, particularly the need to explain how angels can occupy place. To this end, Scotus needs to show: 1. That immaterial things can occupy place. 2. That immaterial angels, as thinking beings, meet the conditions of occupying a place immaterially. Scotus deals with the first issue by distinguishing the absolute and the accidental elements of place and particularly by addressing that which grounds the accidental occupancy of this or that place:

> Then, through nothing absolute in another, it must necessarily be in a place, but [this is] only necessity according to passive potency, by which it could be in a place; and by positing place in an actual existence, and positing its presence in relation to any locating of a body. (*Ord*. 2.2.1-2.231 [7:269])[65]

That which grounds the actual taking place is a passive potency that can assume a specific place by becoming an actual thing. As mentioned, matter is a passive potency. This means that matter is that element of material things which grounds their occupying a specific place. However, it also means that it is not matter as such which grounds the taking of place, but rather matter insofar as it is a passive being. Therefore, any passive being, whether material or not, "preserves the integrity of physics as a science by serving as a principle of location for all body." And this is exactly the principle Scotus needs in order to explain how angels, who are immaterial beings, can occupy place.[66] The second issue remains however, i.e. how angels meet the conditions of occupying a place immaterially. Without dwelling much on this point, Scotus raises the following seemingly absurdity: since the placement of the angels is a result of their act of thinking, it consequently follows that more than one angel can occupy the same place – a conclusion that contradicts Aristotle who "has proved the impossibility of two bodies being in the same place at the same time." (*Quodl*., 10.37 [246-47]) Scotus offers no direct indication how such a thing might be possible, but states laconically that:

> [T]his is neither incongruous nor impossible, for there is no apparent contradiction involved. For oneness of place is not formally unity of body. Indeed, the body has its own intrinsic unity to which unity of place is incidental. (*Quodl*., 10.47 [249-50])

It was shown that it is not matter as such which grounds the taking of place of material things, but rather matter insofar as it is a passive potency (we see by implication that the act of assuming place is not necessarily material). It was argued that matter is a passive potency lacking the third and fourth moments of thinking, i.e. relating and reflecting. Thus it is only active in regard to its material essence and requires external actualization, either through causal effects (from natural agents) or through creation (God). The four-fold act of thinking can be transformed into a *thinking-locating* act through the distinction between the two kinds of relations within the act of remembering. To reiterate, the act of remembering, which is a thinking act, contains two kinds of relations within it: a mutual relation towards its primary object of remembering, the self, and a non-mutual relation to the objects remembered. While matter, by "thinking" its own essence, establishes the mutual relation, it is incapable of establishing the non-mutual relation that grounds the possibility of the thinking subject acting freely towards its secondary objects, and thus matter is determined solely externally by causal effects, i.e. involuntarily. So while the "essential" place is determined internally by the material being, its actual place is determined accidentally through external *locating relations*. Mental beings, in addition to the mutual relation whereby they think their own essence, are capable of relating and reflecting and thus can locate themselves in a non-mutual relation. Thus one can conclude that the subject's act of thinking "follows" and "surrounds" the mental lodging of all objects of thought (whether within or without the mind) and is that which locates them as contained objects. This also explains why Scotus finds no contradiction in the fact that many angels can be located at the same point simultaneously, since this location is determined only in a secondary manner, just as when many minds think simultaneously of the same thing. So, whereas the act of placement by thought occupies place in a shareable manner, so that a place can be occupied by many mental acts, the act of placement by matter is jealous of its place and does not allow other material things to exist co-extensively with it.

Scotus' claim that many angels can occupy the same place, since it implies no contradiction, also grounds the possibility of asserting that physical and mental place can exist co-extensively with regard to the same thing, though not in the same way. As was seen above, Scotus' distinction between absolute place and accidental (actual) place corresponds to the dual conceptions of *ens ratum*, i.e. to *res* insofar as its formal content contains no internal repugnancy, and *res* insofar as the thing is caused and really in existence. Just as *res* in the first sense is considered absolutely and independently of any particular existing thing, so the intellectual act of self-placement is not dependent upon particular and contingent places, but can occupy different places according to the objects of thought it wills. Similarly, just as *res*

that is taken according to its actuality is determined contingently and is known *a posteriori*, so also material acts of placement are grounded on the actual existence of a being which is contingent and is known and placed only in *a posteriori* manner.

Thus, when a human being considers a thing in his mind, whether he grasps it immediately or recalls it, his act of thinking contains the grasped or recalled thing. It is clear, however, that the thing grasped is considered absolutely and apart from its reality. This does not mean that the mind does not consider its object as *this* thing, since the imagination does present a thing individuated sufficiently to consider it as an individual thing, distinguishable from other things. The thing is nevertheless considered apart from reality insofar as the physical environment acting on the specific thing is suspended; it takes a place *secundum quid*.

The human being is however a material being composed of matter, material substantial form and soul. Just as real things are conceived through the material changes that act on the human senses, so too the human being is capable of acting by causing effects through his body. In distinction to man, the angels are immaterial and not limited by material bodies. According to Scotus, whereas material bodies necessarily occupy place, angels, though there is no contradiction entailed by their occupying place, yet stand in no necessary relation to place. The manner in which angels assume place entails many complications, e.g. how they act and so forth. This question and others are of importance, both intellectually and for understanding the historical developments of philosophy. With respect to this study, however, what is important is the fact that what grounds the angels' ability to be in a place is their passive being and the circumstance that passive beings (intellectual or material) are not repugnant to each other. Other questions, such as how the assumption of place by an angel can be translated into a capacity to effect its environment, would require their own study.

**Part IV**

10. *Matter, Extension and Place*

In *Reportatio* IV-A Scotus makes the following claim:

> [M]atter is not in a place dimensionally but [rather] it is quantity which is the reason why something exists dimensionally in a place; therefore the reason why that which is generated exists dimensionally where that which is corrupted was previously, is not matter but quantity. (*Rep*. 4.11.45-6)

Scotus holds that matter has two kinds of "where". One is definite and belongs to matter by virtue of its own proper essence "insofar as it is a certain substance," whereas the second type, the dimensional, "belongs to matter by virtue of quantity, which is founded in matter and through which [matter] receives dimensional extension." Scotus then explains that it is the first, definite kind of "where", which makes it possible for matter to "receive its dimensional 'where' when a new quantity arrives, because matter founds quantity."

Thus, on the one hand, matter has its own definite "where", while on the other hand there it has a "dimensional" where, which is the explicated where of matter actualized by receiving quantity or form. The reception of quantity might mislead us into thinking that something is added to matter. Cross explains that Scotus introduces the notions of condensation and rarefaction which are types of quantitative change that corresponds to a change of extension without involving a change in the amount of substance. Thus it is not a change in density which results in the change of extension but rather a change in extension that explains the change in density.[67]

This, according to Cross, approaches closely to the post-Newtonian concept of mass.[68] In fact, adds Cross, Scotus was not the first to employ such a conception and was probably influenced by Giles of Rome's conception of *quantitas materiae*[69] which was used to explain "what remains constant over the processes of condensation and rarefaction." Giles and Scotus, he continues, have similar views, though for Giles *mass* belongs to the category of quantity,[70] while for Scotus it belongs to the category of substance.[71] According to this view, substance, i.e. the matter out of which things are composed, possess a potential for extension, like a balloon that grows and shrinks while undergoing no substantial change. Cross summarizes: "the mass of a substance is essential to it, such that a change in mass will result in a change in the *identity* of a substance." (Cross 1998, 166-69)[72] Departing from this conception of substantive mass, we can now see how matter can receive quantity so that the reception does not modify the substance: "Therefore, matter, [remaining] in the same definitive 'where,' receives a new form and quantity, through which it acquires a new dimensional 'where'—nor could matter naturally arise elsewhere dimensionally unless it existed elsewhere definitely." (*Rep*. 4.11.46) The capacity to receive form and quantity while remaining substantially the same explains how matter grounds the possibility of assuming place dimensionally while maintaining identity through all generation and corruption.[73]

## 11. *Between the Physical and the Mental Places*

One could claim with good reason that since all we perceive are mental objects which occupy mental places, it is not clear why we need to suggest that there is in fact a physical or extra-mental world as well.

In order to prove that such an extra-mental world exists independently of our mind, all we need to do is to show that we are contained by something which is not a mental representation, i.e. something that transcends the containing of our act of thinking. This is a tricky problem, for it seems that everything that we can speak about is already represented or manifested by our mind. Against this solipsistic claim, it was long ago answered that no such position can explain the simple fact that we are not in absolute control of what happens to us.

Transposing this argument into Scotus' terminology of containing and contained being, the solipsists hold that everything is contained within their mind which alone determines location, whereas the anti-solipsist argument explains that the fact that things happen to us beyond our control follows from the fact the we ourselves are contained in a containing, and that when the container changes, we too are affected by it. But why is it that we are not affected directly by mental containers? The straight-forward answer is that the act of thinking is "autistic" since every subject must hold his thought to be his own, for otherwise it would entail a contradiction which would also violate his autonomy. The only way to explain the fact that we are not in complete control of what happens to us, is by maintaining that we are affected in an extra-mental way. However, it is still hard to "see" this container as something which transcends the mental, for whenever we see or hear, it is not the physical that we see but the mental. [74]

In order to better understand the manner in which the extra-mental world acts on us, I propose that instead of examining the higher sensual faculties, such as sight and hearing, we turn to the sense of touch. Touch serves as a good candidate for three reasons. Firstly, whereas the other senses have their own specific organs, touch has no exclusive organ or location but rather is co-extensive with the boundaries of the body,[75] while the body itself confronts that which contains it. Secondly, touch is not simply passive, but rather accompanies the body as it acts.[76] The third is the strong relation between the sense of touch and the phenomenon of pain, especially when it is experienced under extreme conditions, for instance during torture and other similar cases, in which pain can be said to be grasped intuitively, perhaps even prior to our intuition of our own selves.[77]

The key to our problem lies in the fact that although touch touches constantly at the limits of the body, our experience of touch is specific and is mostly concerned with what we notice. I notice the touch of the keyboard that I press at this moment, or the chair I am pressing down upon and which in turn presses me. But unless I think about it, most of the time I do not notice the chair underneath me or the air that surrounds me. As a fact of experience, one feels things when one interacts with things, whether actively, as when I perform a keystroke, or passively, as when something presses me, for instance when I am pushed from behind (we leave aside the so-called 'phantom problem'). When no change in pressure occurs, one does not experience touch. This is true whether the subject is completely isolated in space or

simply remains at rest without change or movement. The dependence of touch on changes in pressure does not imply that forces are not acting on the body at all times. The surface of the body, like the surface of a balloon, is a meeting place and border region for the adversarial forces pressing from within and without the body, which are held by the surface of the body in a sort of equilibrium. So long as equilibrium between the forces pressing outward from the body and those pressing down upon it is maintained, no sense is measured. As a result, the sense of touch operates not by touching that which is outside of the body, but rather only by representing changes in the equilibrium between the body and its container. For this reason, touch accompanies both the acts of the container upon the body, i.e. passive acts, and acts of the body upon the container, active acts.

Scotus' conception of substantive mass holds that a change in extension causes a substantive quantitative change of condensation and rarefaction. This framework can be used to explain how the body is affected quantitatively without any quantitative change to the substance itself, i.e. its mass remains constant and no quantity of any sort needs to be added to it. The framework can also serve to explain how the world is able to cause an internal change in a body without an extrinsic quantitative addition or subtraction from the body, i.e. without infusion. The world regularly causes intensive quantitative changes in the body that can be measured internally; body temperature serves as a mere illustration.[78] Touch then can be seen as a mental measuring-representation of the change in condensation and rarefaction, which can originate either internally or externally.

In any event, the act of measuring, i.e. the reflection upon the intensive changes of the body, though it measures expansion, presupposes an active substance (performing the measuring act) which cannot be reduced simply to material substance.[79] When no changes of extension occur, then that which contains a body is not seen, and the eyes of the soul cannot see the thing as it stands in itself.[80] The container is sensed only when that which contains the body forcefully changes, or when the contained body forcefully changes in relation to the container. Nevertheless it is not seen in itself absolutely, but rather through representations of the differentials (e.g. sensations of touch).[81] It follows then that such sensuous representations presuppose an absolute container which is not perceived mentally, but grounds changes of condensation and rarefication. It also follows that such a container, which causally acts in an extra-mental way on the body, is only seen by the mind in its mental effects.

This account of the faculty of touch does not intend to explain the exact mechanism by which it operates, but only to point to the fact that touch, as a mental representation of changes of spatial extent, well answers our need to postulate an extra-mental world that affects the mental world. Moreover, our explanation supplies us with an interesting model for explicating the interaction between the world and the mind. We have argued that the sense of touch cannot be a representation of the extra-mental, for in

this case the thing represented would not be extra-mental but mental. It is rather a representation of the differentials of the internal intensive quantity of the body, which though they are caused by changes in the extension of the body, yet do not involve any infusion of the extra mental into the mental. This kind of causality is free of all infusion, both from the extra-mental into the mental and from the mental to the extra-mental. It can also suggest how the mind acts on physical reality. For if the basic representations provided by the senses are essentially differentials of intensive quantity, then any mental act, whether representations of sense or concepts of extra-mental object, and of whatever complexity or level of abstraction, can be reduced to simple representations of differentials of intensive quantities.

When the mind grasps this or that apple, it can be seen how the mental act is translated into a set of simple representations of differentials of intensive quantities which are then integrated by the body, in this or that way, into changes of condensation and rarefaction manifested as extensional change of the body.[82] Unfortunately this integration must remain beyond our mind, for otherwise the physical would become mental and we would once again find ourselves trapped in the solipsistic contradiction. We admit that the model here presented is in some respects simplistic. Our intension has only been to suggest that full conceptual array discussed in this paper presents us with a viable and important way of addressing the perennial psycho-physical problem.

## Abbreviations

John Duns Scotus:

*Lect. = Lectura: Prologue, I-III*. Opera Omnia. edited by Commissio Scotistica. Vol. 17-21: Città del Vaticano: Typis Polyglottis Vaticanis, 17-21: 1966-2004.

*Ord. = Ordinatio, Prologue, I-IV*. Opera Omnia. edited by Commissio Scotistica. Vol. 1-13: Città del Vaticano: Typis Polyglottis Vaticanis, 1-14: 1950-2013.

*Quodl. = God and Creatures : The Quodlibetal Questions* trans. Allan B Wolter and Felix Alluntis (Princeton University Press, 1975)*;*

*Quaest. Metaphys. = Questions on the Metaphysics of Aristotle by John Duns Scotus, Bk. I-IX, Vol. 1-2*. Translated by Girard J Etzkorn and Allan B Wolter. Text Series 19. St. Bonaventure, N.Y: Franciscan Institute Publications, 1997, 1998.

*Rep*. 1 = *Reportatio* I-A, *Prologue, D. 1-48: Latin Text and English Translation*. Translated by Allan B. Wolter and O. V. Bychkov. Vol. 1-2, St. Bonaventure, NY: Franciscan Institute, 2004, 2008.

*Rep*. 2 = Reportata Parisiensa, Liber secundus, dist. XII – XLIV; Liber tertius, dist. I – XXXV; Liber quartus, dist. I – VI. Vol 23, Vivès Edition. Paris, 1891-95.

*Rep*. 4 = from O. V. Bychkov forthcoming Reportatio IV-A, vat. lat. 883.

Henry of Ghent:

*SQO = Summa Quaestiones Ordinare*; Gandavo, Henrici de. *Summa (Quaestiones Ordinariae), Art. XXXI-XXXIV*. Ancient and Medieval Philosophy, Series 2: Henrici De Gandavo Opera Omnia. edited by R Macken: Leuven University Press, 1991. *«Summa», the Questions on God's Unity and Simplicity (Articles 25-30). Translated by Roland J Teske. Dallas Medieval Texts and Translations. Vol. 25: Peeters Publishers, 2006.*

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[1] In the interest of making the discussion accessible to the reader, quoted material is given in translation for the most part. For the sake of terminological uniformity, quotations are presented either according to the Wolter translation

(and partners) or my own (without reference). Wolter's translations are the following: John Duns Scotus, *God and Creatures : The Quodlibetal Questions* trans. Allan B Wolter and Felix Alluntis (Princeton, N.J.: Princeton University Press, 1975); *Philosophical Writings: A Selection*, trans. Allan B. Wolter, 2nd ed. (Indianapolis Hackett, 1987); *Questions on the Metaphysics of Aristotle by John Duns Scotus, Bk. I-Ix, Vol. 1-2*, trans. Girard J Etzkorn and Allan B Wolter, Text Series 19 (St. Bonaventure, N.Y: Franciscan Institute Publications, 1997, 1998); *Reportatio I-a, Prologue, D. 1-48: Latin Text and English Translation*, trans. Allan B. Wolter and O. V. Bychkov, vol. 1-2 (St. Bonaventure, NY: Franciscan Institute, 2004, 2008).

[2] Antonie Vos, *The Philosophy of John Duns Scotus* (Edinburgh: Edinburgh University Press, 2006), 362.

[3] *Lect.* 2.12.79 [19:101-2]: "is that possible for matter to be known absolutely, without analogy to the form? I say that it is… for us it cannot be known except by analogy to the form, because of our defective intellect. ... Matter, however, does not operate on the senses; and therefore, passes further out of the forms, which are of other principles of operation...". See also *Rep*. 2.12.1.23.

[4] This is of course a very general and mixed conception of matter, as it appears in the thought of Plato and Aristotle. Since this paper is not intended as a deeper investigation into the Greek conception, a more accurate description can be found in Ernan McMullin and Joseph Bobik, *The Concept of Matter in Greek and Medieval Philosophy*, vol. 46 (Notre Dame, IN: University of Notre Dame Press, 1965). Richard Sorabji, *Matter, Space and Motion: Theories in Antiquity and Their Sequel* (Ithaca, N.Y.: Cornell University Press, 1988); Michael Sullivan, "The Debate over Spiritual Matter in the Late Thirteenth Century: Gonsalvus Hispanus and the Franciscan Tradition from Bonaventure to Scotus" (Dissertation, The Catholic University of America, 2011), 1-36. For a survey of early modern conception of matter and particularly the Scotistic impact, see Roger Ariew, "Descartes and His Critics on Matter and Form: Atomism and Individuation," in *Matter and Form in Early Modern Science and Philosophy*, ed. Gideon Manning, History of Science and Medicine Library, Scientific and Learned Cultures and Their Institutions (Leiden ; Boston: Brill, 2012).

[5] See also ibid. nn. 17-8 (19:74).

[6] Ibid, n. 21, n. 29.

[7] *Rep* I-A, vol 2, d. 36, n. 107-8, 141.

[8] *Rep* I-A, d. 36, n. 88 [2:410]: "no idea in God corresponds to matter, because according to the Philosopher, Bk. I of the Physics, matter cannot be an object of knowledge or understanding except indirectly through form. Now the idea of something is formed [only] in the manner in which it is known; however, matter cannot be known except indirectly through form; therefore, the idea that corresponds to it will simply be the idea of form. At the same time, God can know parts of a composite separately from its form: namely, [he can know] matter insofar as it is part of a composite; therefore, [he can know it] without a corresponding idea."

[9] Ibid, n. 97 (412-3): "Insofar as it is a principle of production and generation of things is called the principle or exemplar and pertains to practical knowledge. However, insofar as it is a principle of cognition of a thing, it is properly called a concept (or notion) and pertains to speculative knowledge. Now the latter is aimed at all the things that God can know, even though they may not exist at any point in time, or even at everything that can be known by him under its proper notion. At the same time, the idea in God that functions as the exemplar serves as a practical principle of all those things that come to exist under some temporal aspect,-and in this sense it does not apply to all that *can* come into existence through God s agency, but [only] to the things that are meant to come into being at a certain point in time."

[10] Ibid, n. 100-1.

[11] *Opus Oxoniense*, 2.12.1 [Vives 12:557]. Translation in Allan B Wolter, "The Ockhamist Critique," in *The Concept of Matter in Greek and Medieval Philosophy*, ed. Ernan McMullin (Notre Dame, IN: University of Notre Dame Press, 1963), 133. This distinction is lacking from the Vatican edition.

[12] I wish to thank Oleg Bychkov for allowing me to use his translation of the distinction that will appear in a forthcoming translation of *Reportatio* IV-A (vat. lat. 883).

[13] See Richard Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision* (Oxford : New York: Clarendon Oxford Press, 1998), 257-63.

[14] Antoine Cote, "Henri De Gand, Quodlibet I, Question 10. Introduction, Traduction Et Notes," *Science et Esprit* 55, no. 2 (2003).

[15] For Aquinas's conception of matter see Matthew Alexander Kent, "Prime Matter According to St. Thomas Aquinas" (Dissertation, Fordham University, 2006); Christopher Hughes, "Matter and Actuality in Aquinas," *Revue Internationale de Philosophie* 52, no. 204 (1998); Joseph Bobik, *Aquinas on Matter and Form and the Elements* (Notre Dame, IN: University of Notre Dame Press, 1998).

[16] Henrici de Gandavo, *Quodlibet I*, Ancient and Medieval Philosophy, Series 2: Henrici De Gandavo Opera Omnia (Leuven University Press, 1979), q. 10, 63.

[17] JF Wippel, *The Metaphysical Thought of Godfrey of Fontaines: A Study in Late Thirteenth-Century Philosophy* (CUA Press, 1999), 263-4.

[18] Gandavo, *Quodlibet I*, q. 10, 68. Scotus presents this view in *Lect.* 2.12.45 [19:86]. See also Wippel, 364.

[19] *Lect.* 1.36.26 [17:468-9]

[20] Scotus is famous for his treatment of the different kinds of unities, particularly in relation to individuation and his notion of common nature. For further reading see Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision*, 7-9; "Divisibility, Communicability, and Predicability in Duns Scotus's Theories of the Common Nature," *Medieval Philosophy and Theology* 11, no. 1 (2003); Allan B Wolter, *The Transcendentals and Their Function in the Metaphysics of Duns Scotus* (St. Bonaventure, N.Y.: The Franciscan Institute, 1946), 101-11; Jorge JE Gracia, "Individuality and the Individuating Entity in Scotus's Ordinatio: An Ontological Characterization," in *John Duns Scotus-Metaphysics and Ethics*, ed. Ludger Honnefelder and Rega Wood, Studien Und Texte Zur Geistesgeschichte Des Mittelalters (New York: Brill, 1996); Peter King, "Duns Scotus on the Common Nature and the Individual Differentia," *Philosophical Topics* 20, no. 2 (2010).

[21] Ibid, n. 30 and 62; *Rep*. IV, d. 11, n. 86 and the discussion of Potency in *QM* 9.1; for further reading see Ansgar Santogrossi, "Duns Scotus on Potency Opposed to Act in Questions on the Metaphysics, Ix," *American Catholic Philosophical Quarterly* 67, no. 1 (2008).

[22] William O Duba, "Aristotelian Traditions in Franciscan Thought: Matter and Potency According to Scotus and Auriol" (paper presented at the The Origins European Scholarship: The Cyprus Millennium International Conference, 2005), 151.

[23] *Ord*. 1.3.310 [3:188-89], summarizing Henry's position in *SQO*. 21.4, solution.

[24] *Ord*. 1.3.313 [3:190].

[25] *Ord*. 1.3.311 [3:189].

[26] See Jean-françois Courtine, "Res, Ens," in *Dictionary of Untranslatables: A Philosophical Lexicon*, ed. Barbara Cassin, et al. (Princeton: Princeton University Press, 2014), 494-504. Further discussion on Scotus' criticism and absorption of Henry's ontology, see Steven P Marrone, *The Light of Thy Countenance: Science and Knowledge of God in the Thirteenth Century, 2 Vols*, Studies in the History of Christian Traditions (Brill, 2001), 460-80.

[27] *Scientia Transcendens*, p.49.

[28] *Ord.* 1.36.53 [6:292]

[29] For concise summary on real and formal distinction, see Richard Cross, *Duns Scotus*, Great Medieval Thinkers (New York: Oxford University Press, 1999), 149.

[30] See also *Ord.* 2.3.187 [7:483].

[31] See also *Lect.* 2.12.56.

[32] Translation in (Cross, 1998, 38).

[33] *Lect.* 2.12.54.

[34] See Liran Shia Gordon, "On the Possibility of Naturalistic and Evident Cognition: Examination and Structural Comparison of St. Thomas Aquinas and John Duns Scotus" (Dissertation, The Hebrew University of Jerusalem, 2014), ch. 4.

[35] *Rep*. 1.35, question 2.

[36] *Rep*. 1.36, question 1.

[37] *Rep.* 1.35.2.53 [2:366], 1.35.2. 90 [378-79], 1.36.1.10-11 [2:383].

[38] *Rep.* 1.36.1.12 [2:383-83].
[39] *Rep.* 1.36.1.15 [2:384-85].
[40] *Rep*. 1.36.1.16 [2:385].
[41] *Rep*. 1.36.1. 32 [2:391].
[42] *Rep*. 1.36.1.45 [2:393].
[43] *Rep.* 1.36.1.50, 56 [2:395, 398]. See also Noone, 369 Timothy B Noone, "Scotus on Divine Ideas: Reportatio Paris. I–a, D. 36," *Medioevo* 24 (1998): 369.
[44] See also *Rep* 1.36.1.60-66 [2:399-403].
[45] *Ord.* 1.35.27 [6:256]
[46] Scotus distinguishes between creation and production and concludes that "to be produced is not to be created, because something is not created into being without ado, but is produced into being in a certain respect." *Ord.* 2.1.1.82-4 [7:43-44]
[47] *Ord.* 1.35.32-35, 44, 54 [6:283-5, 288, 292-3].
[48] Identical to *Ord.* 1.3, Appendice A [3:364-65].
[49] Translation from Wolter and Adams 1993, 213-14.
[50] Gordon, 2014, ch. 3.
[51] The notion of *incommunicability* functions as that which constitutes the uniqueness of the persons and is deeply related to the notion of *haecceity* of things (qualified differently in regard to created and uncreated beings). For further reading on this extremely important issue see *Rep* I-A, d. 5, n.109-10; *Rep* I-A, d. 26, n. 44-71, n. 104-5. *Ord* I, d. 26, *interpolation* of n. 50. See also Richard Cross, *Duns Scotus on God*, Ashgate Studies in the History of Philosophical Theology (Aldershot, Hants, England ; Burlington, VT: Ashgate Publishing, 2005), Part II, particularly Ch. 12 & 13; Stephen A. Hipp, "The Doctrine of Personal Subsistence in John Duns Scotus," in *John Duns Scotus, Philosopher. Proceedings of the Quadruple Congress*, ed. O. V. Bychkov and Mary Beth Ingham, Archa Verbi. Subsidia 3 (St. Bonaventure, NY : Münster Franciscan Institute Publications : Aschendorff Verlag, 2010).
[52] For more on the understanding of immateriality and its relation to materiality see Stephen Priest, "Duns Scotus on the Immaterial," *The Philosophical Quarterly* 48, no. 192 (1998); Sheldon M Cohen, "St. Thomas Aquinas on the Immaterial Reception of Sensible Forms," *The Philosophical Review* 91, no. 2 (1982); Miles Burnyeat, "Aquinas on ''Spiritual Change'' in Perception," in *Ancient and Medieval Theories of Intentionality*, ed. Dominik Perler, Studien Und Texte Zur Geistesgeschichte Des Mittelalters (2001).
[53] See Sorabji, *Matter, Space and Motion: Theories in Antiquity and Their Sequel*. For the reception of the Jewish-Arabic theo-philosophical conception place by the Latins see Yossef Schwartz, "Divine Space and the Space of the Divine: On the Scholastic Rejection of Arab Cosmology," in *Représentations Et Conceptions De L'espace Dans La Culture Medieval*, ed. Tiziana Suarez-Nani and Martin Rohde, Scrinium Friburgense (Berlin/Boston: Walter de Gruyter, 2011); "Celestial Motion, Immaterial Causality and the Latin Encounter with Arabic Aristotelian Cosmology," in *Albertus Magnus Und Der Ursprung Der Universitätsidee*, ed. Ludger Honnefelder (Berlin: Berlin University Press, 2011). A more concise version appears in Liran Shia Gordon, "On Truth, the Truth of Existence, and the Existence of Truth: A Dialogue with the Thought of Duns Scotus," *Philosophy & Theology* 27, no. 2 (2015): 407-09.
[54] Helen S Lang, "Bodies and Angels: The Occupants of Place for Aristotle and Duns Scotus," *Viator* 14, no. 1 (1983): 246. See *Ord*. II, d. 2, n. 219.
[55] Duhem, 183-84) Pierre Duhem, *Medieval Cosmology: Theories of Infinity, Place, Time, Void, and the Plurality of Worlds*, trans. Roger Ariew (Chicago: University of Chicago Press, 1987), 183-4. See also *Quodl*. 11.28 Cross, *Physics*, 194.
[56] *Ord*. 2.2.2.1-2.216 [7:253]; *Lect*. 2.2.2.191 [18:161]. See also Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision*, 194-95; Tiziana Suarez-Nani, "Angels, Space, and Place: The Location of Separate Substances According to John Duns Scotus," in *Angels in Medieval Philosophical Inquiry: Their Function and Significance*, ed. Isabel Iribarren and Martin Lenz, Studies in Medieval Philosophy (Aldershot, England ;

Burlington, VT: Ashgate, 2008), 99; Olivier Boulnois, "Du Lieu Cosmique à L'espace Continu? La Représentation De L'espace Selon Duns Scot Et Les Condamnations De 1277," in *Raum Und Raumvorstellungen Im Mittelalter*, ed. Jan A. Aertsen and Andreas Speer, Miscellanea Mediaevalia (Berlin ; New York: de Gruyter, 1998), 320.

[57] Suarez-Nani, "Angels, Space, and Place: The Location of Separate Substances According to John Duns Scotus," 99-100.

[58] This break can be seen as a continuation and radicalization of Giles' criticism of the organic Judeo-Arabic conception of the spheres as animated. Schwartz explains that the tenth article of Giles' *De erorres philosophorum*, "is dedicated to the false conception of the celestial spheres as animated living entities, being analogous to the human body-mind system. Against such an assumption the author quotes as Catholic authority Damascenus, claiming that the heavens are inanimate and insensible." It can be argued, with some caution, that any such breaking of the organic unity of the cosmos opens the door for Scotus to break with the essentiality of the cosmological notion of place. See Schwartz, "Celestial Motion, Immaterial Causality and the Latin Encounter with Arabic Aristotelian Cosmology," 292.

[59] Lang, "Bodies and Angels: The Occupants of Place for Aristotle and Duns Scotus," 249.

[60] See also Duhem, *Medieval Cosmology: Theories of Infinity, Place, Time, Void, and the Plurality of Worlds*, 186.

[61] *Ord*. 2.2.1-2.229 [7:258-59].

[62] *Quodl*., 10.42 [248]: "Take the first case, viz., that the same thing that was moving in one place was at rest in the other. There is no contradiction here any more than there is for it to be both here and there. For local motion and rest are posterior by nature to ubiety itself and hence can be varied according to variation in what is prior." This suggests that Scotus distinguishes between the thing as it is in itself which is determined internally and the thing in relation to others which is determined contingently, as a phenomenon.

[63] Duhem, *Medieval Cosmology: Theories of Infinity, Place, Time, Void, and the Plurality of Worlds*, 187.: "The distinction between the fact of lodging and the fact of being lodged, between place and the ubi, is the foundation of the explanation of the movement of the final celestial sphere. The final celestial sphere is not contained by any body. It is not in a place; it does not have a ubi."

[64] See also *Quodl*., 11.12 [260]. See also Adams discussion of the difference between Categorical and Quantitative positions. Marilyn McCord Adams, "Bodies in Their Places: Multiple Location According to John Duns Scotus," in *Johannes Duns Scotus 1308-2008: Investigations into His Philosophy*, ed. Ludger Honnefelder, et al., Proceedings of »the Quadruple Congress« on John Duns Scotus (Münster Aschendorff Verlag, 2010); *Some Later Medieval Theories of the Eucharist: Thomas Aquinas, Gilles of Rome, Duns Scotus, and William Ockham* (Oxford ; New York: Oxford University Press, 2010), 116-8.

[65] See also *Quodl*., 11.10 [260].

[66] Lang, "Bodies and Angels: The Occupants of Place for Aristotle and Duns Scotus," 259-60.

[67] Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision*, 159-60. A similar account of condensation and rarefication is given by Ockham, see André Goddu, *The Physics of William of Ockham*, vol. 16, Studien Und Texte Zur Geistesgeschichte Des Mittelalters (Leiden: Brill, 1984), 101-6.

[68] See *Lect.* 1.17.210 [17:248]. In their translation of *Rep*. I-A, Wolter and Bychkov translate *quantitate molis* as "quantity of mass".

[69] For further reading see Max Jammer, *Concepts of Mass in Classical and Modern Physics* (Cambridge: Harvard University Press, 1961), 37-48. Jammer explains that Giles was deeply influenced by Averroes' distinction between determinate indeterminate dimensions, according to which "Determinate dimensionality is an accident, capable of being increased or decreased; indeterminate dimensionality is a form, essential to matter." This distinction, he continues, alludes, probably for the first time, "to the possibility of conceiving the essence of matter in its dynamic behavior." (38-40).

[70] Cross explains there that the relation between matter and quantity is similar to that of essence and existence. For further discussion on the relation between matter and quantity in Giles's thought and its relation to the distinction between essence and existence see Richard Cross, *The Metaphysics of the Incarnation: Thomas Aquinas to Duns*

*Scotus* (Oxford University Press, 2003), 91-5. Also see Adams, *Some Later Medieval Theories of the Eucharist: Thomas Aquinas, Gilles of Rome, Duns Scotus, and William Ockham*, 142.

[71] In order to distinguish between the corporeal substance and the intellective soul. Also, this treatment of mass under the category of substance allows the corporality of the substance to transcend the accidentality which accompanies the category of quantity. See *Rep*. 1.17.2.174-75 [1:510-11]: "because in an extended substance [the existence of] parts [of the substance] side by side with other parts of the substance is not the same as its quantity. Otherwise the corporeal substance would be as simple quantitatively as the intellective soul. Hence, I assume presently, namely that a part of substance is something different from [simply] another part of the quantity. Moreover, it is impossible that quantity be the causative principle of substance in [that] second part, because it is not an active form. And in this way each part of the substance is naturally prior to each part of the quantity." Also *Lect.* 1.17.219 [251-52].

[72] See *Lect.* 1.17.219, 230, 240 [17:251-52, 254, 258]; *Ord* 2.2.3.4.114, 116 [7:447-48].

[73] *Rep*. 4.11.46.

[74] Descartes, replying to Arnauld's objection that Descartes's soul inhabits the body like "a sailor in a ship", explains that this is not the case for it suffers "hunger, thirst, etc." which "differ phenomenologically from the clear perceptions that a pure intellect would have of the body." This is to suggest that Descartes was aware of the need to explain "external" causes. However, the solipsist could argue that although such perceptions are different from pure intellectual perceptions they remain perceptions, i.e. mental representations. See Tad M Schmaltz, *Descartes on Causation* (New York: Oxford University Press, 2008), 140-2.

[75] Body is, as Ward explains, not a substance but is "composed of many different kinds of composite substances, corresponding to different integral parts". Scotus' pluralism with respect to composite substances is a complex issue that goes beyond the scope of this current study. For further reading see Thomas M Ward, "Animals, Animal Parts, and Hylomorphism: John Duns Scotus's Pluralism About Substantial Form," *Journal of the History of Philosophy* 50, no. 4 (2012); Cross, *The Physics of Duns Scotus: The Scientific Context of a Theological Vision*, 47-76.

[76] This view is very similar to the view of Augustine, according to whom "sensing is moving the body, where the emphasis could fall on the body's movement (physical) or on the moving agent (mental)." Peter King, "Why Isn't the Mind-Body Problem Medieval?," in *Forming the Mind: Essays on the Internal Senses and the Mind/Body Problem from Avicenna to the Medical Enlightenment*, ed. Henrik Lagerlund, Studies in the History of Philosophy of Mind (Netherlands: Springer, 2007), 203. See also *Quodl*., 9.28-30 [226-27]: "[F]or what is the subject of vision is not the soul itself, but the organ composed of soul and a definite part of the body. It is not the soul, nor any part thereof, nor the form of the chemical compounds that are in a definite part of the body, but it is the form of the organ as a whole which is the proximate ground for receiving the vision, like humanity is the form of man as a whole." These passages from the Quodlibet, which aim to explain the immateriality of the soul and thus the possibility of the soul existing without matter, also state that the soul cannot sense without the body. This, Scotus explains, applies equally to the angels and can serve as the basis of an explanation of how angels can act in the world without sensing the world through a body. For further reading on the sense of touch see Scotus' *De Anima*, qq.1-3; Cynthia Freeland, "Aristotle on the Sense of Touch," in *Essays on Aristotle's De Anima*, ed. Martha C Nussbaum and Amélie Oksenberg Rorty (Oxford: Oxford University Press, 1995).

[77] It is interesting to note that whenever Scotus needs to address the question of how we know that things are contingent, he always paraphrases Avicenna who "teaches in his Metaphysica that such people, who deny what is manifest to the senses, must be exposed to the fire, for to be burnt and not to be burnt are the same for such a man." *Lect.* 1.39.40 [17:491]; another similar example that matches the torturing example: "And against those who deny this one should proceed with torments and with fire and the like things, and they should be beaten until they confess that it is possible for them not to be tormented, and thus admit that they are tortured contingently and not necessarily. Avicenna suggested to proceed in this way against those who deny a first principle: for such, according to him, would have to be flogged until they recognize that it is not the same thing to be tortured as not to be tortured, burned and not to be burned. - If therefore one cannot prove contingency a priori, such less can one prove something contingent from [its] outcome, or contingently." *Rep*. 1.39-40.30 [2:473]. Without exactly spelling it out, Scotus

understood that there is something about pain, especially extreme pain, which is grasped intuitively and which makes it evident to the mind that reality is contingent. It could be said that according to Scotus both the self and the contingency of things are equally grasped intuitively and through a reflection; the self which accompanies all objects, and the contingency of external things through a reflection on pain. What is interesting is that while the self is grasped intuitively as internal and thus is fixed and stable, external things are grasped as containing the body and thus not fixed by the necessity of the self. Just as the self is not present directly to the mind but rather accompanies it (and thus is not known *a priori* but is transcendentally known *a posteriori* through the encounter with secondary objects), so it can be said that although the contingency of the world is not presented to the mind directly, it accompanies it in a similar manner. Scotus' treatment of pain, specifically with regard to the question whether and how the soul, separated from the body after death, suffers from physical/intentional fire, is treated in Graham McAleer, "Duns Scotus and Giles of Rome on Whether Sensations Are Intentional," in *John Duns Scotus, Philosopher. Proceedings of the Quadruple Congress*, ed. O. V. Bychkov and Mary Beth Ingham, Archa Verbi. Subsidia 3 (St. Bonaventure, NY : Münster Franciscan Institute Publications : Aschendorff Verlag, 2010). However it seems fair to conclude, particularly since this study is based upon Scotus' very early work on *De Anima*, that this issue requires further elaboration.

[78] Replying to a possible objection that quantity is added and subtracted constantly to the body through food and other bodily activities, one may draw an additional distinction between quantity, which belongs to the body organically, like any of its cells, and quantity that is not part of the body and thus is not united intrinsically to the body, like processed food, dead cells or anything that is contained within the body which is not part of it. In this respect, one can say that the mass of the body does not need to remain constant. What is important is not the quantitative element but rather the unity of the quantitative element. Such an explanation puts more emphasize on the organic unity of the body and its sensitivity to what is not part of its unity.

[79] This is equivalent to relating and reflecting, i.e. the third and fourth moments within the divine act of intellection, which are constituted not upon real relations but rather on relations of reason, which exclude rocks for example.

[80] Descartes was well aware of the fact that there is no need for real resemblance between the "mind" and the sensual: "then why could nature not also have established a certain sign which would make us have the sensation of light, even if this sign has nothing in itself similar to the sensation." Schmaltz, *Descartes on Causation*, 156. Also Broughton: "brain movements are the occasions of sense-ideas". Janet Broughton, "Adequate Causes and Natural Change in Descartes' Philosophy," in *Human Nature and Natural Knowledge*, ed. B. Donagan, A. Perovich, and M. Wedin, Boston Studies in the Philosophy and History of Science (Dordrecht ; Boston: Springer, 1985), 119. It is important to note that in contrast to Descartes's view, this study suggests that sensation should not be taken as "external" to the mind but rather as a reflective act upon differentials, i.e. they are internal and are already mental representations. Thus the "translation" problem should not be formulated as exiting between the mind and the senses but rather between the mental, of which sensation is a part, and the extra-mental, which cannot be represented in itself.

[81] Hence both sensations and intellections are internal representations. As King explains, Scotus holds that there is no real distinction between the sensitive and intellective soul and therefore sensual and intellective representations are not really distinct: "not all medieval philosophers accepted the real distinction between the sensitive and intellective souls. Ockham did, but Scotus, for example, did not. He tells us in *Op. Ox.* 4 d.44 q.1 n.4 that 'the sensitive soul and the vegetative soul are, in humans, the same as the intellective soul.' Now if the sensitive and intellective souls are not really distinct, they must really be the same, that is, they are metaphysically the same thing (res)." King, "Why Isn't the Mind-Body Problem Medieval?," 196. In fact, holding together the sensitive and intellective souls seems to originate from Augustine himself, as King quotes him on page 201: "The soul itself, which by its presence rules and governs the body, can feel pain and yet not pass away... If we consider the matter more carefully, pain, which is said to belong to the body, is more pertinent to the soul. For feeling pain is a feature of the soul, not the body, even when the reason for its pain exists in the body." More on the passions of the soul see Ian Drummond, "John Duns Scotus on the Passions of the Will," in *Emotion and Cognitive Life in Medieval and*

*Early Modern Philosophy* ed. Martin Pickavé and Lisa Shapiro (Oxford: Oxford University Press, 2012); Simo Knuuttila, *Emotions in Ancient and Medieval Philosophy* (Oxford: Clarendon Press, 2004), Monograph, 256-74.

[82] Descartes understood that the relation of the heaviness of the body, which "contains both corporeal and mentalistic elements", can somehow act as a bridge to the soul. However, he explains that the "cognitive" element of heaviness is insofar as it carries "bodies toward the center of the earth as if it contained some cognizance [cognitio] of this center within it." This cognitive awareness which carries the body toward the center of the earth locates it in the physical realm. Thus it follows that the coextension of the soul and the coextension of heaviness or weight are located on different sides of the pineal gland. Against this, it would be claimed that such a conception is insensible to the distinction between place taken absolutely and contingently, according to which the inclination to the center of the earth is tantamount to the contingent setting of up and down which are *a posteriori* determinations. In contrast, the model that is presented in this study is based upon differentiation and integration of condensations that are translated into extension in a non-mysterious manner. And thus the differentials of the condensation and rarefication are already mental representations which are posed on the same side with the mind. See Marleen Rozemond, *Descartes's Dualism* (Cambridge, MA: Harvard University Press, 1998), 118-9; ibid., 108; Schmaltz, *Descartes on Causation*, 167-8. Garber's solution to the problem, according to which "mind-body interaction is the paradigm for all causal explanation, it is that in terms of which all other causal interaction must be understood," comes very close to the idea of the commonality of matter, human beings and God that has been presented in this paper. However it seems to me that Garber's conviction that "[m]ind-body interaction must be basic and intelligible on its own terms since if it were not, then no other kind of causal explanation would be intelligible at all," lacks the metaphysical grounding that it requires. Daniel Garber, "Understanding Interaction: What Descartes Should Have Told Elisabeth," *The Southern Journal of Philosophy* 21 (1983): 29.