THESIS

CARTESIUS VINDICATUS: A REASSESSMENT OF CARTESIAN EUCHARISTIC PHYSICS

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ABSTRACT

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The far-reaching metaphysical innovations of Rene Descartes' *Meditations* garnered significant criticism from contemporary 17th century philosophers and theologians. This paper will address one particular line of debate frequently raised by these critics: namely, whether the novel Cartesian worldview could still permit an orthodox Catholic explanation of Eucharistic physics. I shall argue that many aspects of Descartes' Eucharistic work can be vindicated in light of 20th century Neo-Scholastic metaphysics. In particular, we show that Neo-Scholasticism's philosophy of sensible qualities and its reassessment of hylemorphism offer the means by which one might interpret at least a significant portion of Cartesian physics in a way conformable to official Catholic doctrine.

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Vetera novis augere et perficere.
— Leo XIII Pecci in *Aeterni patris*

CHAPTER 1 – Contextualizing Descartes' Work

Section 1: The Issue and an Outline of Topics

A. Descartes' *Meditations*, Their Reception, and Statement of Thesis

Few would deny the pivotal role which Rene Descartes' 1641 *Meditations on First Philosophy* has acquired in the history of philosophy and, more particularly, in the fields of epistemology, metaphysics, and even natural theology. Though the long-held belief that his *Meditations* constituted an absolute methodological break from the Peripatetic-Scholasticism[1] widely taught in Descartes' day has been somewhat tempered by the historical research of Etienne Gilson, Roger Ariew, and Marjorie Grene, Descartes' explicit rejection of the "doctrine of the schools" played a more significant and thoroughgoing role in the development of original, truly "modern" thought than ever did any earlier attempts to shrug off Aristotle's influence.[2]

The Cartesian philosophical watershed came with its critics. Descartes' primarily Scholastic contemporaries provided the philosopher with ample material to respond to. Besides numerous points brought up in the context of some extensive private correspondence, several figures produced more professional objections to the *Meditations*, having had the opportunity to read the work and respond to it prior to its publication. These *Objections* were then appended to the main work, whereafter they merited Descartes' *Replies* in which certain notions only earlier hinted at or implied in the body of the *Meditationes* now received greater treatment and additionally some wholly new materials warranted mention for the first time.

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[1] Though more frequently referred to as simply "Scholasticism," in order to emphasize its roots in Aristotelian thought, proponents of the school sometimes prefix the denomination in this manner, as in the very title of de Maria 1892: *Philosophia Peripatetico-Scholastica*.

[2] It ought to be noted, however, that Descartes was by no means the only "innovator" of his time, on which point, see Garber 2015.

One such topic only raised outside the main body of the *Meditations* is that of the Eucharist[3], and specifically the treatment it receives in Catholic theology.[4] Several important philosophical elements are at play in Descartes' discussion of Eucharistic matters but chief among these are considerations of physics[5] and sensation. Because of the significant role that specifically Scholastic philosophy had played in undergirding the method and vocabulary of Catholic theology for some centuries before Descartes, his departure from the former (at least in the mind of his objectors) was bound to entail difficulties in maintaining orthodox appearances within the latter. While it is certainly not the case that one must "do" Scholastic philosophy in order to "do" Catholic theology,[6] Descartes' departure from the Church's common and "perennial" philosophical language meant that the proficiency with which his new philosophy could treat something like the Eucharist warranted investigation. Since various Eucharistic dogmata had received canonical form in terms of "substance" and "accidents," for example, Descartes' reformulation of the first of these concepts and rejection of the second meant that the typical doctrinal formulae would require reinterpretation or else recasting in order for Catholic orthodoxy to be maintained within the Cartesian system.

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[3] Defined and described below, in section 2, part B of this chapter.

[4] Descartes himself professed Catholicism and, "piously" so, according to Jaspers 1981, 240.

[5] As in our title, this term should be understood in the original Aristotelian or Scholastic sense, and not in the sense of the contemporary empirical science. "Physics" and "cosmology" both refer to the branch of philosophy which is concerned with "mobile" or "changeable" being, and is the "rational study of the world through ultimate causes" (di Napoli 1963, vol. 1, 185). This is the same sense of the term used in the title of Armogathe 2019.

[6] Before the reintroduction of Aristotle's works to Western Europe, an eclectic philosophy of Stoic-Neoplatonism stood in for "Christian philosophy"; around the middle of the 20th century, phenomenology (especially in the work of Dietrich von Hildebrand and St. John Paul II Wojtyła) and even Heideggerian fundamental-ontology (Karl Rahner, Benedict XVI Ratzinger) began to take on more important roles in the philosophical voice of the Catholic Church.

We intend to argue that, while in Descartes' own day (and perhaps also for rather long afterwards) the philosophical tools then available to Scholasticism were incapable of admitting the feasibility of Descartes' Eucharistic theory,[7] from the standpoint of an "updated" Neo-Scholasticism, embellished by the scientific advancements of the last centuries without, however, abandoning the same overall or general Peripatetic-Scholastic framework of old, the essential elements of Descartes' novel manner of explaining the doctrinal point under consideration seems broadly capable of being understood in a fully orthodox sense. Though Descartes explicitly rejects the Scholastic framework of his day, the *Neo*-Scholastic framework differs in just significantly enough as to comfortably admit the salient points of Descartes' specifically Eucharistic work, even if some discrepancies admittedly remain.

While the examination and reassessment of Descartes' physics of the Eucharist specifically in light of certain Neo-Scholastic contributions is – we believe – original to our own work, there has been some other important, recent literature on the topic which we would like at least to gesture to at this point. We refer above all else to Armogathe's 1977 *Theologia Cartesiana: L'explication physique de l'Eucharistie chez Descartes et dom Desgabets*, as well as some articles of his on the topic (Armogathe 2005, 2019). More recently, Alexandrescu has contributed an important article (2007) and some of the most important names in Cartesian studies also take up the theme in articles or book chapters, among whom number most prominently Ariew (2011) and Schmaltz (2019).

B. Outline of the Work

In the remainder of this chapter, after briefly indicating only the most essential matters pertaining to the theology of the Eucharist, we shall develop those points in an exposition of the

[7] In much the same way that the philosophy of that time found itself incapable of "handling" heliocentrism, or, we can imagine, it would have found itself similarly unable to admit something like contemporary gravitational theory.

standard Scholastic explanation of those elements in parallel philosophical and theological contexts (section 2).

Chapter 2 will constitute our main analyses of Descartes' work and his contemporaries' evaluation thereof. There, we shall first more thoroughly explain and justify our method (section 1) before moving on to describe precisely what it is in Descartes' account that motivates the objections of his contemporaries (section 2). We shall then provide an overview of Descartes' own responses to said objections (section 3) and consider why these responses may have failed to convince the objectors (section 4).

In Chapter 3, with the benefit of several centuries of philosophical and scientific development, we shall consider whether a framework like that offered by a more contemporary Neo-Scholasticism might possess the conceptual apparatus to permit an orthodox interpretation of Descartes' Eucharistic physics (section 1). Finally, we will point out new directions for research implied or broached by our work here (section 2) and conclude with our overall assessment of Descartes' own Eucharistic work (section 3).

Section 2: The Standard Scholastic Explanation of the Eucharist

For our present purposes, it would be best to first offer an account of the philosophical terminology in use below. Since the reintroduction of Aristotelian thought to Western Europe in the 13th century and its popularization thereafter, the philosophical verbiage deemed[8] most fit to express the beliefs and opinions of Catholic[9] theology was by and large that of Aristotle, especially as interpreted by the major medieval Arabic philosophers of the preceding centuries. As such, we will here take up the most important terms and concepts of which we will make

[8] By common use, and not in any official capacity.

[9] At this time, of course, the vast majority of Christians in Western Europe were Catholic, since the Protestant Reformation would not occur for another three centuries and the influence of the various Orthodox traditions was largely limited to Eastern Europe.

protracted use in the following pages. Accordingly, we will first discuss the philosophical components of the major Catholic Eucharistic doctrines and then the theological elements that build upon and assume the former.

A. Philosophical Components

The most foundational concept to which we shall have to turn again and again is that of *substance*. It is one that finds its roots in Aristotle's *Metaphysics*, but we may find more rigorous definitions among later Scholastics, usually given in a twofold formula: "substance is a being whose quiddity[10] is to not exist in another thing… it is a being that obtains through itself, or exists in and through itself."[11] A substance, then is said to be a "subject of inhesion" insofar as it receives into itself some form[12] depending upon the subject, whether in its being or its operation, but is not itself received into another subject in this manner. In this way, for example, we call Peter a subject with respect to his act of cognition when we predicate of him the (operational) form of "intelligence." In the proposition "Peter is intelligent," Peter is the subject in whom the form of intelligence inheres. But Peter cannot be so predicated of another subject as to inhere in that subject. If we say "that man is Peter," then Peter is merely the subject of denomination, and

[10] Literally, "whatness," or that in which something's very essence consists.

[11] *Philosophiae Scholasticae Summa* vol. I, 728. The three philosophical and four theological volumes of this series, coauthored by several Jesuits of the 20th century, represent a cohesive summary of a specifically Suarezian brand of Neo-Scholasticism. Given the depth and comprehensiveness of the work, "the BAC volumes" (so called after their publisher, *Biblioteca de Autores Cristianos*) attained a quasi-canonical status among Neo-Scholastics for many decades, even prompting the theological luminary Karl Rahner to comment that one could only "begin to become a theologian" after first mastering the "best summary of [Scholasticism] available," represented by this series. For this reason, throughout our present work, we will frequently turn to its definitions and explanations as a sort of exemplar or model of rigorous Neo-Scholasticism. Conventional citation follows the pattern: PSS or STS (for its theological portion, the *Sacrae Theologiae Summa*), followed by volume number in Roman numeral, and finally page number. We shall follow this format below.

[12] A technical term that will be explained on the following page.

not of inhesion. We merely identify the two terms of reference ("that man" and "Peter") without implying that Peter, taken on his own, is some form perfecting or actualizing the subject "that man." Peter is, therefore, a substance.

Conversely, the Scholastic tradition calls "a being depending upon a subject of inhesion for its existence"[13] an *accident*. More concretely, accidents are those things that we *do* predicate of subjects, such as qualities, quantities, location, position, and things of that sort. Accidents perfect or modify substances and can serve to individualize subjects of the same variety. In this way, we know two horses apart by comparing their color, height, or gait, for example. "Bucephalus is in Persepolis" and "Rocinante is pallid" are two propositions in which accidents are predicated of substances. Additionally, we call those *real* accidents which are "external to the beings of their subjects and connected to them in a way other than compositional inherence," or in other words, those which can "come and go while the… subjects remain the same." A quality like color would be universally acknowledged among Scholastics as being a real accident in this sense, whereas "there was a dispute among" Scholastics for example, "over whether quantity is a real accident or something that cannot be distinguished in reality from substance and its integral parts."[14]

When a substance is corporeal, existing in three physical dimensions, it is composed of *matter* and *form*.[15] These originally Aristotelian concepts refer to the "passive" and "active" principles of physical substances. Matter is the undifferentiated, receptive, and determined principle that, when conjoined and together with form (the specifying, active, and determining

[13] PSS I 764

[14] Schmaltz 2020, 35

[15] Incorporeal beings, such as geometrical figures or angels, are pure form, with no matter entering into their definition.

principle), makes up a complete bodily substance. It is form that causes matter to be "actually" rather than merely "potentially" a thing, somewhat like in the way that only shaping ("forming") a lump of clay into a particular shape causes a mass of clay to take on the specific appearance of a jar or pot. For our present purposes, it is essential to point out that the form corresponding to and actualizing the human body is referred to as the *soul* of the body.[16]

Although of less importance for most of our present investigations, we wish to mention the concept of *mode* because of Descartes' significant reinvention of the notion. A mode, then, is "an entity or reality, distinct from its subject, whose entire being consists in ultimately determining the fulfillment of some function, or in bringing about some determination without which, at least in the individual, that very thing could exist absolutely."[17] A mode, then, is by no means necessary for the thing in which it exists, but if it is present, "it is inseparable from the thing modified even by divine power, for it is a contradiction in terms for an actual and ultimate determination to not be determining in act, and similarly for the actually determining factor to be without an actually determined thing." For example, *union* is the mode by which a soul is said to exist in (or inform) the human body. Since body and soul can exist separately (for the Scholastics), this mode is by no means absolutely and always necessary. But when the body and soul *are* united, "union" as such cannot be said to exist separate from the body-soul composite, nor can we think or speak of the body-soul composite without at least implicit reference to the notion of their union.

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[16] This term may evoke images of an otherworldly Homeric or Dantean shade, but these images should be put aside: the form that is a human soul is no more some intangible entity residing inside the body than is the form of a stone some sort of "rock ghost." PSS II 268-274

[17] PSS I 784

Finally, the notion of *quantity* will prove of great importance in later pages. By definition, it is the "absolutely extensive accident of a subject."[18] Although an entire subfield of Scholastic literature found its root in debating precisely which factor could be looked upon as the chief or primary formal effect of quantity, we might at least point out the various effects of quantity without bothering to determine any logical priority among them: measurability, divisibility, impenetrability, entitative extension, actual local extension, actual non-local extension, and aptitudinal extension. To illustrate this type of accident, we may simply mention in passing the continuous quantity represented by the extension obtaining between the foot and head of a man, the contiguously discrete variety of a horse and its rider, and the distantly discrete variety of two men on opposite sides of a room.

B. Theological Components

Coming now to the theological portion of this section, we must sufficiently introduce the concept of the Eucharist as to adequately undergird the discussions below. "The Holy Eucharist," says the *Baltimore Catechism*, "is a sacrament and a sacrifice. In the Holy Eucharist, under the appearances of bread and wine, the Lord Jesus is contained, offered, and received" within the context of a Catholic religious service known as the Mass. "A sacrament," in Catholic tradition, "is an outward sign instituted by Christ to give grace," and "Christ instituted the Holy Eucharist at the Last Supper, the night before He died." Insofar as the Eucharist is a sacrifice, it is "the offering of a victim by a priest to God alone, and the destruction of it in some way to acknowledge that He is the creator of all things."[19] Catholic priests carry out this sacrifice when they "exercise their power to change bread and wine into the body and blood of by repeating at

[18] PSS II 58

[19] *The New St. Joseph Baltimore Catechism No. 2*, 144, 162, 169.

the Consecration of the Mass the words of Christ: 'This is My body… this is My blood.'" The individual elements of these definitions will become clearer as we proceed below, so we only briefly introduce them now.

The centuries-long speculative theological development of certain veins of biblical and Patristic[20] testimony on the Eucharist culminated in some of the clearest statements of Catholic teachings thereupon, drawn up within the context of the Ecumenical Council of Trent,[21] held intermittently between 1545 and 1563, largely in response to the then-recent Protestant Reformation. In a series of four brief but clear statements or "canons" of something like the theological essentials of Catholic Eucharistic doctrine, the thirteenth session of this council was tasked with delineating the bare minima for any orthodox philosophical or theological consideration of the subject. For the sake of reference, we here cite the first three of a total of eleven canons in full. The remaining canons deal with tangential matters of minimal philosophical importance. Because the full import and nuance of each statement will be more easily discernible as we explain their implications, we will wait to comment upon each statement until they are situated in their theological context.

> **Canon 1:** If anyone denies that in the sacrament of the most Holy Eucharist are contained truly, really and substantially the body and blood together with the soul and divinity of our Lord Jesus Christ, and consequently the whole Christ, but says that He is in it only as in a sign, or figure or force, let him be anathema.
>
> **Canon 2:** If anyone says that in the sacred and, holy sacrament of the Eucharist the

[20] In Catholic and Orthodox theological contexts, "Patristic" refers to the major Christian authors (collectively, the "Church Fathers") of the first few centuries, whose works are frequently cited for their depth, originality, and testament to early Christian beliefs and practices.

[21] The Latin-based adjectival form of which, "Tridentine," occurs in our section title.

substance of the bread and wine remains conjointly with the body and blood of our Lord Jesus Christ, and denies that wonderful and singular change of the whole substance of the bread into the body and the whole substance of the wine into the blood, the appearances only of bread and wine remaining, which change the Catholic Church most aptly calls transubstantiation, let him be anathema.

Canon 3: If anyone denies that in the venerable sacrament of the Eucharist the whole Christ is contained under each form and under every part of each form when separated, let him be anathema.[22]

The principal points to be gleaned from these statements can be brought under the following three headings: A) the fact of the real presence, B) transubstantiation, and C) the mode of the real presence.

i. The Fact of the Real Presence

The most central and foundational Eucharistic belief, the bare statement of the belief in what is termed the "real presence," is conveniently summed up in the first of the above canons. Various authors[23] will admit that, much like knowledge *of* the Trinity, knowledge *of* the real presence is not attainable by the exercise of reason alone (although once the fact has been established, the latter just as well as the former, can be reasoned *about*). Revelation of the *fact* is said to find its roots in the Christian Bible and in Sacred Tradition.[24]

[22] Denzinger 397

[23] For example, de Aldama in STS IV 283.

[24] A technical term referring to theological facts that are considered indubitably true but which are not explicitly contained in any biblical text and are instead attested to by the consensus found among the Church Fathers or in the authoritative clarifications issued by official ecclesiastical councils.

As the above canon relates, what is actually present in the consecrated Eucharist is supposed to be the body, blood, soul, and divinity of Jesus Christ. Most strictly (said to occur *vi verborum*, or "in virtue of the words [uttered]"), the bread is converted into Christ's body and the wine is changed into His blood, but by concomitance ("*vi concomitantiae*"), the blood is also present along with the body and vice versa. Since the Eucharist is identical in substance to the body of Christ as it now exists (i.e., resurrected and in Heaven or "glorified," and therefore *living*), Christ's soul is also said to be present, and along with it, necessarily His divinity.

To say that the "whole Christ" (*totum Christum*) is said to be contained in the Eucharist is simply to state that "all the elements which constitute Christ, now raised from the dead" are present.[25] This phrase might be read then as a sort of summary of the preceding points about presence *vi verborum*, *vi concomitantiae*, and however else.

ii. Transubstantiation

a. The Fact of Transubstantiation

The word used by Catholic theologians to describe the change of bread into wine into the body and blood of Christ, "transubstantiation," fittingly describes the change that takes place according to the terminology common to Scholastic philosophy. The *whole substance* of the bread and wine are said to be converted into Christ's body and blood, respectively, such that no substance of bread or substance of wine remain after the consecration together with the body and blood. While transubstantiation in the context of the Eucharist is meant to be miraculous, a comparison may at least be drawn to an ordinary case nearly akin to transubstantiation: the parts of the food that one consumes and absorbs in nutrition, while perhaps not altering at an atomic or subatomic level, make a change in substantial identity insofar as, say, the atoms constituting a

[25] STS IV 283

molecule of fructose in an apple slice are assimilated into the body of the one eating so that the same atoms formerly identified as part of an apple are now part of a person, being now informed by the form proper to a human being, i.e., a rational soul.

Since the ultimate purpose of the present work is to, as it were, exonerate Descartes' theological work by showing that his proposed alternative explanation of transubstantiation may after all be acceptable within a Scholastic, Catholic context, we might now point out just a few other important historical attempts in order to showcase common, potential theological pitfalls. The theory of 18th century philosopher and theologian Antonio Rosmini-Serbati, according to which the bread and wine are thought to be converted insofar as they receive Christ's sentient principle, vivified by His life (by analogy with how the matter of ordinary food "receives" our own sentient principle and is therefore assimilated into our own substance), together with a number of other Rosminian propositions, was outright condemned via a Decree of the Holy Office in 1887.[26] The rationale given for the condemnation is, of course, what interests us most: it was thought[27] that the entirety of the doctrine of transubstantiation was not adequately retained in Rosmini's theory, given that "the conversion of the whole substance of bread and wine" seemed insufficiently expressed by the new formulation. Finally, we might mention Joseph Bayma's more recent attempt to explain transubstantiation in a theory whereby the *substances* of

[26] Denzinger 643

[27] It would be far too tangential for our present purposes to fully analyze the theological or philosophical weight behind a 2001 decree by the Congregation for the Doctrine of the Faith (signed by future Pope Benedict XVI, then Cardinal Joseph Ratzinger) which considered "the motives for doctrinal and prudential concern" behind the 19th century decree "now… superseded." It will suffice to simply point this out in order to reiterate an important principle in play throughout the present work: *philosophical* motivations behind the rejection (or outright condemnation) of some position or proposition have often admitted of a certain evolution through Church history as scientific, anthropological, or some other form of academic advancements have been allowed to develop and then be integrated into a broader Scholastic philosophico-theological framework.

bread and wine are said to pass away during consecration, while their *natures* are retained in the fully new Eucharistic substance. This explanation, too, was received unfavorably: in 1875, the Holy Office decreed that such an explanation "cannot be tolerated."[28] Although such an account may be interpreted as upholding the necessary phrasing of the Tridentine canons, in reality the metaphysical facts expressed imply that bread and wine continue to exist in the Eucharist, which is contrary to Catholic doctrine.[29]

These examples, besides several others we could have cited, illustrate one of the more common difficulties in original Eucharistic theology: various attempts to explain transubstantiation often run the risk of insufficiently accounting for one or another element involved in the change. Descartes' contemporaries bring against his account objections similar to those we have just seen, but it is our task to not only attempt to defend his theory against this opposition, but also to show that the philosopher's own responses to 17th century objectors may have been sufficient as a whole.

b. The Eucharistic Species

When it comes to treating the Eucharistic species[30] themselves, there are three major points that nearly always enter into discussion: the objective reality of the species, the fact that the species remain the same before and after consecration, and the absence of any subject of inhesion.

The first of these points will become especially relevant when we examine more closely both some objections brought against Descartes' theory and the Neo-Scholastic treatment of

[28] Denzinger 621f.

[29] STS IV 294

[30] This is a technical term roughly equivalent to "appearances." The *species* of bread would conceptually include the shape, size, color, and taste of the bread that is present before and after consecration of the Eucharist.

perception. To say that the species exist objectively is simply to point out that they really exist in their own right and that they are not mere appearances or something only subjectively placed into our senses by God or some other being. This is to say that there is some real referent in the Eucharistic reality itself which corresponds to our perception of the species, although the precise nature of this referent need not be of the naive realist variety, as we will see below.

Furthermore, the very being or entity of these species remains identical before, during, and after consecration. One cannot, therefore, say that, while the effects produced in our perception of the species might be the same, the actual identity or character of the species after consecration is not identical in number to that before. The red color of the wine before consecration, for example, is numerically the same quality of redness that is seen afterward in the consecrated Eucharist.

Finally, it is the common position of most theologians that the species under discussion remain in existence without any subject in which they inhere. Since, in our earlier discussion of substance and accident we stated that it is of the nature of an accident to inhere in a substance, it can only be considered a miraculous effect of transubstantiation that an accident continues to exist after its subject ceases to do so.[31] What *precisely* the species or accidents are in essence and *how* they are able to exist without a subject "does not pertain to the doctrine of the Church"[32] – that is, Catholic theologians are required to attest to the *fact* of the matter, though they are not required to explain something like the mechanism by which God works such a miracle. As we will see below, Descartes does not view the existence of species without a subject as an essential

[31] We do not ever naturally see it occur that, for example, the redness, crispness, and roundness of an apple continue to persist after that which is an apple as such somehow ceases to be.

[32] STS IV 297

doctrine for which his philosophy must account and because of this, he permits himself some license in his proposed explanation of transubstantiation.

c. The Nature of Transubstantiation

Although there are certain physical parallels to transubstantiation in the natural order (as mentioned above), it differs more fundamentally from these insofar as any near analogues consist in formal conversions, whereby the material subject undergoing change remains throughout the process while the form present in the material subject changes. Here, however, we are not dealing with only a formal conversion but with a substantial conversion, so that the material subject also does not remain after conversion, but instead the entirety of the substance is altered.

A number of theories describing the process of conversion and its component elements have been put forth, some more problematic than others. Without detailing the individual theories (annihilation, reproduction, adduction, the constitution of Christ under the species, simple conversion, etc.), we might simply point out that when issue is taken with any of these views in particular, a theologian nearly always objects on the ground that the theory under discussion does not sufficiently establish the *conversion* of substance into substance — which is to say that it is not always clear whether a theory merely expresses the necessary facts in words or also in substance. Whereas, for example, de Aldama accepts Suárez's theory of reproduction precisely because it safeguards substantial conversion,[33] de Aldama's contemporary Filograssi rejects it precisely since "it does *not* safeguard the conversion."[34] That these more standardly treated theories are open to wide differences in interpretation, even centuries after their initial formulation, leads us to believe that Descartes' theory might also warrant reexamination

[33] STS IV 302

[34] Filograssi 225

alongside these former explanations, in the sense that this point of theological speculation is still very much "open for discussion."

iii. The Special Mode of the Real Presence

The final essential thesis of the standard Scholastic formulation of Eucharistic theology might be put as follows: "The whole Christ is present in the Eucharist under either species and under whichever of their parts, whether in fact separate or before their separation."[35] Each relevant term should be understood in the same sense as in previous propositions, i.e., "the whole Christ" refers to Christ's body, blood, soul and divinity; "presence under species" may occur either *vi verborum* or *vi concomitantiae*; importantly for considerations that will arise below, the "parts" spoken of here may be understood in 1) a more ordinary sense, whereby a piece of the species of bread (after it is broken) or a portion of the total volume of the species of wine (if not consumed, for example, all at once) is a *formal* part, as well as 2) insofar as the merely *designable* or *potential* parts of the entire species (i.e., those that could be outlined or separated from the whole quantity) are equally parts in the sense relevant here.

The special mode of presence here, referred to as *sacramental presence*, is where perhaps the greatest number of philosophical difficulties arise in the context of Eucharistic doctrine. Without digressing upon these points of debate, we may say that what is nearly unanimously agreed upon, however, with the exception of Durandus and the nominalists,[36] is that the body of Christ present in the Eucharist retains its own particular *quantity*. Only quantity, though, is retained in this special way and not any other category of accident, such as quality (the actual color of Christ's body, for example, does not appear in the consecrated Eucharist). Since the

[35] STS IV 307

[36] STS IV 310

quantitative extension of Christ's body is present only aptitudinally[37] in the Eucharist and not actually, any category that presupposes actual extension (as does color, for only an extended surface can have color) would not be able to be present in a natural way, and therefore the "buck stops" with quantity. Any accidents that do not presuppose extension (such as relation) might be said to accompany the substance of Christ's body in the Eucharist, but usually these are irrelevant to any philosophical discussion of the present topic.

[37] *Ibid.* That is, the quantity of Christ's body's physical extension is not *actually* present in the Eucharist, or else the piece of bread consecrated would extend itself to the dimensions of an adult human. Rather, it is said that the quantity is merely *apt* to be present. This is to say that if the species or accidents of bread were not miraculously sustained in existence without a subject of inhesion, they would disappear at the same moment the substance of bread disappears and an actual human body would appear upon the altar.

CHAPTER 2 – Descartes' Eucharistic Work

Section 1: Justification of the Method to be Followed

Since the main aim of this project is to, at least in a limited way, defend the potential orthodoxy of Descartes' Eucharistic physics,[38] certain essential elements will have to be defended and, in order to be so defended, perhaps also explained or interpreted anew; those other elements that play a less central role (either logically in relation to the whole or else in Descartes' own mind) will, of course, not require such defense, though some will receive mention at least in passing.

The defense of these more essential elements will come about by means of a sort of comparative method. We hope to show that the philosophical elements involved here, while perhaps unacceptable (or cause for serious concern) in Descartes' own time and academic context can, in light of more contemporary discoveries, theories, etc., now be taken up and reassessed in much the same fashion as have been other theories deemed untenable in the time in which they were first proposed (heliocentrism, evolution, etc.). Because our concerns have more explicitly theological implications, our rule of thumb is not (as with heliocentrism) simply a matter of scientific consensus on the physical workings of some phenomenon, but rather the ultimate ability of any relevant empirical, scientific elements taken together with certain pre-established philosophical elements to support and explicate the necessary theological conclusions. Further, since the particular theological framework at play presupposes much of the method and common conclusions of Scholastic philosophy as a whole, we are licensed in thinking that the acceptability of some novel components within the latter philosophical system

[38] This term should be understood in the specialized sense delineated previously.

entails their probable acceptability within the former framework. Specifically, it is in light of the Neo-Scholastic developments of the late 19th and early to mid-20th centuries that we wish to formulate our "re-interpretation" of Descartes' work since the scientific and philosophical developments of this period in particular warrant far-reaching and important conclusions for our total project.

In order to clarify what is meant here, and to make the rationale for the above claim more explicit, let us focus upon the chief two points which undergird it: we may identify the first assertion as positing that theological acceptability of a Neo-Scholastic claim would warrant theological acceptability within a classical Scholastic framework. This assumption can be defended in two ways: from a theoretical vantage, this ought to be the case given that all developed theological propositions[39] must be a) rooted in the same authoritative sources of Scripture and Tradition and b) guided in their development by the same body which interprets the content of those sources.[40, 41] From a practical or historical vantage, we know both a) negatively and b) positively, that Neo-Scholastic developments were largely acceptable to the church because a) no "Index-ing" or censuring to speak of occurred for the vast majority of Neo-Scholastic philosophers or theologians (and certainly none for any proposition relevant to

[39] It should be assumed that we are speaking specifically of the propositions relevant to Catholic theology.

[40] *Catechismus Catholicae Ecclesiae*, no. 80-90, pg. 30-33.

[41] We might anticipate an objection that this body (i.e., the Church and its official theological institutions such as the Dicastery for the Doctrine of the Faith) has not remained the same across the centuries by pointing out as something like proof positive of its constancy, the many accusations of Catholic stagnation in terms of its alleged lack of progress or "getting with the times." This is, of course, believed to be "a feature, not a bug" in the eyes of its theologians who, while sometimes adopting the language or expression of contemporary movements, nevertheless see their work as ultimately rooted in the mere unraveling and elaboration of what has always been implicitly present in a closed body of revealed truth (again, Scripture and Tradition). The *locus classicus* for this topic is John Henry Newman's *An Essay on the Development of Christian Doctrine* while a more recent treatment of the matter can be found in Mansini 2023.

our current project) and b) because of the high estimation, explicit appreciation, and granting of honors that they received for their work from other well-established theologians or Church dignitaries, even when they differed in opinion.[42] Therefore, since no theological proposition requires any particular philosophical expression to undergird it, provided the essence of the proposition is retained,[43] whether a certain proposition about the Eucharist be adequately expressed in Neo-Platonic, classical Scholastic, Neo-Scholastic, or even phenomenological language, there can be no serious *theological* objection. And it is quite simply the fact that classical Scholasticism and Neo-Scholasticism already share a common vocabulary with identical definitions, see themselves as founded upon the same Aristotelian-Peripatetic and Judeo-Christian principles of philosophy and theology, have historically been the chief expression (at different times) of the same ecclesiastical institution, and that the latter is merely the developed version of the former – it is for for these reasons that we can comfortably posit our original assumption that a development in theology articulated in the philosophical trappings of the 20th century version would in essence be theologically unobjectionable to the theology then current to the medieval expression of Scholasticism, even if the philosophy thereof had not yet been capable of articulating the proposition in an identical manner.

Our second main assertion proposes that if at least certain important aspects of what Descartes claims in the course of developing his Eucharistic philosophy overlap sufficiently with what the Neo-Scholastics claim about the same, we can, as it were, "salvage" those parts of Descartes' claims. This is not to say that the motive for Descartes' claims are always identical to

[42] One such example we have already seen above in footnote 11.

[43] Denzinger, 1950. The source cited here (Pius XII Pecci's 1950 *Humani Generis*) goes on: "...even in these fundamental questions, we may clother our philosophy in a more convenient and richer dress, make it more vigorous with a more effective terminology, divest it of certain scholastic aids found less useful, prudently enrich it with the fruits of progress of the human mind."

those of the Neo-Scholastics, or that his rationale is ever precisely that of the Neo-Scholastics – in much the same way, Galileo's proposition about heliocentrism was as objectively correct as that of astronomers from centuries later, even though his "proof" (stemming from considerations of the tides) was decidedly different (and ultimately, incorrect) from that offered by later scientists.[44] Nevertheless, as we will show below, although a very fine-grained view of Descartes' and the Neo-Scholastics' reasoning for their more novel claims may differ, on all relevant essentials, we believe their manner and motive of argumentation similar enough to warrant the near-equivalence relation which drives certain details of our comparative method. And if any other points of importance remain unaddressed even by these means, one can always have recourse to a sort of "entering into the mind of" a past philosopher, and by taking on their main assumptions or principles and thought patterns, imaginatively construct what they *might* say or think of some later development or theory – an inherently difficult and precarious task, but whose hazard is tempered at least by the knowledge of 1) Descartes' respect for the Church's authority and 2) his willingness to reexamine philosophical assumptions in light of newly discovered scientific findings.

Section 2: Descartes' Novel System

This section will illustrate only the most important Cartesian definitions and concepts that Descartes either modified from prior thinkers or wholly rethought in order to develop an entirely new system of philosophy. We will base this overview upon the outline provided in Descartes' *Principles* rather than that contained in his *Meditations* since the presentation of material followed in the *Principles* is generally more orderly and systematic than is the stream of consciousness present in Descartes' earlier work. Despite the *Principles* being a later work, including material possibly not yet worked out at the time of the publication of the latter, at least

[44] Palmieri 246

what we include and refer to here below does not seem to conflict with anything presented in the *Meditations.*

A. Substance, Attribute, and Mode

Descartes begins to expound the basics of his physical (or metaphysical) system in the first book of his *Principles*. The first concept he introduces that concerns us here is his notion of *substance*. Whereas, for example, we saw above that the classical Scholastic account of substance treats of the concept in both negative and positive terms of 1) not existing in another thing and 2) existing in and through itself, Descartes defines it simply in terms of *dependency:* it is "a thing which exists in such a way as to depend on no other thing for its existence."[45] Of course, the *relative* manner in which natural substances (i.e., any substance that is not God) do not depend upon any other thing for their existence, is a different manner than that in which God *absolutely* does not depend upon any other thing. Not only is this a notion that Descartes shares with the Scholastics, but it is also one that follows from his explicit stating "that the term 'substance' does not apply *univocally* to God… and to other things."[46] This basic definition of substance is indirectly refined when Descartes later clarifies that natural substances only occur in the two varieties of body and mind but, as we will see below, it importantly lacks many of the follow-up accoutrements that one might expect to find such as a clear identification of the principle of individuation.[47]

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[45] We shall make use throughout of the conventional form of citing Cottingham, Stoothoff, and Murdoch's (CSM) multi-volume translation of *The Philosophical Writings of Descartes*, wherein the volume number in Roman numeral is followed by the volume's page number; CSM I 210.

[46] *Ibid.*

[47] If one wanted to be very exact, we might also note that the notion of dependency itself leaves some things to be said: does Descartes want us to think of said dependency the Aristotelian model (whereby A depends on B just in case B can exist without A, but A cannot without B) or the Scotist model (whereby A depends on B if there is no contradiction between "B exists" and "A does not exist" but there is contradiction between the propositions "A exists" and "B does not

Significant for our purposes later, we might point out that this definition in some ways presages what we will mention later regarding Descartes' explanation of Eucharistic physics insofar as it implicitly excludes the possibility of the subsisting accidents inherent to the Scholastic account. According to the latter school of thought, the accidents of bread and wine persist without a substantial subject by independently subsisting due at least to some sort of God's concurrent action. But since Descartes' view entails that such independently subsisting things be substances, logical consistency demands that he rid his metaphysics of such quasi-reified things as real accidents[48] and reduce the identity of the persisting Eucharistic *species* to something like mere modes of a corporeal substance.

Along these lines of metaphysical simplification, Descartes' *Principles* also includes extended talk of attributes, modes, and qualities, but reconceptualized in ways only somewhat resembling their Scholastic counterparts. *Quality* is not an accident following upon the quantity of a substance, but rather any modification enabling "a substance to be designated as a substance of such and such a kind,"[49] while a mode is even more simply any affectation or modification of a substance whatsoever. The term *attribute* is apparently used in several ways: attributes may be the principal property constituting the nature and essence of a substance, or else what is "more generally" in a substance, or else anything predicated of God, or else "that which always remains unmodified" in some created thing. Of these, one particular usage of the term "attribute" could perhaps most accurately be glossed as akin to the Scholastic notion of "accident," but it is clear

exist," which because it speaks in terms of logical possibilities is able to capture cases where B necessarily causes A, which Aristotle's definition cannot)? See Scotus 77.

[48] "It is completely contradictory that there should be real accidents, since whatever is real can exist separately from any other subject; yet anything that can exist separately in this way is a substance, not an accident" (CSM II 293).

[49] CSM I 211

that Descartes' new metaphysics does not cleanly map onto the model of his predecessors. Below, we will see how at least in part his new definitions of traditional terms are at the root of some of the issues Descartes has with his philosophical interlocutors.

B. Extension

Descartes' reconfiguration of older philosophical notions includes that of extension. "Extension in length, breadth and depth constitutes the nature of corporeal substance" in the same way that thought is said to be the nature of a mind or thinking substance.[50] Descartes arrives at this idea via a sort of process of elimination, considering that even if hardness or resistance to touch, for example, did not function in the way to which we are accustomed, bodies would not thereby lose their corporeal nature; neither would they lose their nature if "weight, colour and all other such properties"[51] were altered. Those who wish to make the category of "substance" something independent and really distinct from its extension, Descartes says,[52] are merely engaged in talk about nothing or are confusing notions proper to incorporeal substance with those proper to bodies. This strict identification of the property of extension with corporeal substance is very antithetical to the Scholastic conceptualization thereof, and notably is at the root of many of Descartes' contemporaries' objections, to whose arguments we will turn in a moment.

C. Sensation

We shall say here only a brief word on Descartes' philosophy of sensation, for certain details thereof will be wholly irrelevant to our current project. Considering "heat and other

[50] *Ibid.*

[51] CSM I 224

[52] CSM I 226

qualities perceived by the senses, in so far as those qualities are in objects," Descartes remarks that the ultimate cause for the qualities sensed are certain "local motions," or else microscopic vibrations or variations in surfaces.[53] Without needing to appeal to "substantial forms and real qualities" as would his Scholastic contemporaries in their explanations of sensation, Descartes is content to conclude that the local motions described are "quite sufficient to produce all the sensations in the soul" when they impinge upon our sense organs.[54]

Section 3: Objections to Descartes

A. Arnauld's Objections

In the concluding pages of the Fourth Set of Objections to Descartes' *Meditations*, composed by Arnauld, several particularly theological concerns about the new philosophy are raised. After gesturing at how the Cartesian epistemological vision might implicate the author in difficulties relating to "the pursuit of good and evil" and the role played by propositions held by faith, Arnauld mentions his further worry that the new understanding of substance and qualities will force conclusions that diverge from the orthodox (i.e., post-Tridentine Catholic) understanding of the Eucharist.

Arnauld's argument unfolds in the following way:

a) In transubstantiation, the substances of bread and wine cease to exist but the accidents or species of bread and wine (including their "shape, extension, and mobility," besides the sensible qualities like "color, taste, and smell") remain.

b) But (according to Descartes) the latter sensible qualities are nothing in themselves, and it is instead only the certain "motions in the bodies that surround

[53] CSM I 285

[54] *Ibid.*

us" that are responsible for giving rise to the sensible impressions we then call "color, taste, smell," and the like.

c) Only those accidents or species more directly related to the quantity of a substance (shape, extension, mobility) are admitted by Descartes, then, but these are said to be unintelligible apart from the substance itself in which they inhere.

d) Further, Descartes says that the distinction obtaining between the "states" ("*affectiones*") of a substance and the substance itself is merely a formal one,[55] which seems insufficient for the separation of each element from each other, even by divine power.

e) But transubstantiation requires such a separation to transpire, insofar as even the quantity, shape, extension, and mobility or the species of bread and wine (after consecration) no longer pertain (or inhere in) the substance of bread or wine, nor do they inhere in the substance of the body and blood of Christ now present under each species, either *vi verborum* or *vi concomitantiae*.

Descartes provides responses to these objections by Arnauld, of course, and we will examine those replies in the following section. For now, it will suffice to simply point out the main ideas operative in Arnauld's thought. Arnauld (along with his contemporaries) has a certain predilection toward safeguarding the objectivity of the species or accidents constituting the species of bread and wine. This concern seems to be expressed somewhat tacitly by Arnauld's bringing up the oddity of Descartes' denial of the sensible qualities in the first place.

[55] In his *First Set of Replies*, Descartes stipulates that a formal distinction "does not differ from a modal distinction," (CSM II 85) which he defines in his *Principles* as the distinction either "between a mode… and the substance of which it is a mode" or that "between two modes of the same substance" (CSM I 213f.).

His second, more elaborated objection reveals a concern about a more "real" separation or distinction that there seemingly ought to be between even the more quantitative sort of species (shape, extension, mobility) and the substance in which they are meant to ordinarily inhere. Descartes' identification of extension with the very essence of material reality seems to really underlie this objection from a more traditional Scholastic point of view according to which (despite the widely recognized closer unity between entities of the categories quantity and substance than, say, that between those of quality and substance) the very entitative order of the elements under discussion are thought to be at least intelligible when taken alone.

B. Mesland's Objections

Because Mesland's own letters to Descartes have not come down to us, and we only have Descartes' replies to the missing letters, we cannot do much better than approximate the objections that Mesland must have raised in order to warrant the sort of responses given. With an eye to those sort of issues that a Scholastically trained philosopher would most likely find within the Cartesian reworking of Eucharistic theology, though, we can be rather confident that our reconstruction is, at least broadly, faithful to the now missing objections.

In what seems to be their exchange's first letter following Mesland's initial reading of the *Meditations*, after clarifying matters about causation, the mind's idea of God, memory, and free will (among some other more minor remarks), Descartes proceeds to discuss those things in his philosophy necessary for a fuller understanding of the Eucharist. The "outward shape" of the bread is supposed to be "at least one mode" which remains in the Eucharist after consecration, while Descartes excuses himself from having to enter into details regarding the "extension of Jesus Christ in that Sacrament."[56]

[56] CSM III 235

From the short reply that Descartes gives here, we might conclude that Mesland's question was concerned with the problem of how best to explain the quantitative extension of Christ's body, a philosophical problem also historically lacking consensus among the Scholastics.[57] The reason the question would be particularly interesting to put to Descartes, though, has to do with the new notion of physical substance offered in his philosophy. If "being extended" is so closely related to the very essence of physical substance or "body" as the "wax argument" found in the second of his *Meditations* implies,[58] as to be practically terminologically interchangeable with the latter, it would seem, for a Scholastic reading Descartes, that the presence of Christ's body would require the extension essentially identical to that body itself. Since the Eucharist obviously does not take on such extension after consecration, Mesland seeks to know what becomes of this extension and how it relates to what the Scholastics think of as the accidents of bread and wine subsisting without a subject of inherence, and what Descartes construes as a mode of the substance of bread that remains in the Sacrament.

In the next letter that Descartes sends to Mesland,[59] several new topics are raised, implying a set of possible questions or requests for clarification on Mesland's part. These we will again have to guess at based on Descartes' words. A certain clarification is made about what is meant when speaking of "surface" with respect to the Eucharist, namely, "a mode or manner of being" which can be glossed as the surface of the bread ("or [of] the body of Jesus Christ after the consecration"), the surface of the air, or the surface intermediate between the two substances, depending upon the precise relation one wishes to bring out. Such an explanation we can suppose

[57] See STS IV 310f.

[58] CSM II 20

[59] CSM III 241

to have been directed at a doubt on Mesland's part, possibly of the following sort: in the previous letter discussed above, Descartes stated that the very mode which formerly belonged to the bread, now "remains in the Blessed Sacrament." But since, according to the Scholastic mode of treating of Eucharistic physics, the species of bread do not inhere in the body of Christ as accidents, it would seem (from Mesland's point of view) that Descartes has committed himself to saying that the very same quantitative features that inhered in what was formerly bread, now inhere in the transubstantiated body of Christ. That this way of understanding things is *not* what Descartes had in mind is clarified in the reply contained in the next letter that he sends to Mesland (the basis of which reply will be examined in section 4, part B below).

Descartes then repeats his reservations about speaking on the manner in which Christ's body is said to be present in the Eucharist, but finally offers an explanation[60] "in confidence," as it were, to which he appends a request that Mesland not communicate its authorship to anyone and that he not divulge its contents to anyone at all should he judge Descartes' ideas to be contrary to the teachings of the Church. We might merely comment that the tentative explanation Descartes provides here (which we will also look at when discussing the replies given to Mesland) could imply nothing more than a certain insistence on Mesland's part for his interlocutor to formulate some way of framing the theological question in Descartes' new philosophical language, perhaps prompted perhaps by Descartes' strong claim at the end of the previous letter that his way of understanding the Eucharist, if only better understood by his critics and opponents, is actually so great as to potentially stop the detractors of the faith.

[60] CSM III 242

The next letter[61] of significance to our current discussion contains an apparent retraction of the hypothetical explanation Descartes offered. In order to prompt such a response from Descartes, Mesland's letter could surely not have been very enthusiastic about the philosophical or theological success of the more fully explicated Cartesian Eucharistic theory. The details will become more clear, once again, in the following section, but it is evident that the grounds of Mesland's objection must have been quite similar to those we saw in our survey of the most historically typical rejections of novel Eucharistic theories: while the required dogmata may be met in word, if in reality no real conversion of substance comes across in a proposed theory of transubstantiation, this ascription is ultimately mistaken and the explanation must be rejected (at least, so runs our reconstruction of Mesland's most likely objection at this point).

In the fourth and final (extant) letter to Mesland, Descartes is responding to a question that his friend uses as a sort of litmus test to determine the workability of the new theory. While the Eucharist, when ordinarily consecrated, is said to contain the body, blood, soul, and divinity of Christ just as He now exists in heaven, theologians sometimes mention the hypothetical condition that would have obtained of a soulless transubstantiated body of Christ in the (probably) counterfactual event that one of Christ's apostles had seen fit to confect the sacrament during His entombment (during which time, the Christian faith has it, Christ's soul was not united to His body).[62] Since the presence of the human soul is, for Descartes, the condition for

[61] CSM III 248

[62] While such a question may, perhaps understandably, be thought to exemplify the very worst of Scholastic hairsplitting, we would do well to remember first, that it is only because of such hairsplitting that Scholasticism could ever develop enough to tackle issues not explicitly contained or immediately implied by the Aristotelian corpus and, secondly, that for all this particular issue's possible foreignness to the modern practical mind, generally speaking, a theory's success in such speculative wanderings throughout the realm of hypotheticals and counterfactuals ought, nevertheless, to be seen as a valuable feature of the proposed explanation, just as is, perhaps, the predictive success of some formula or model in the empirical sciences.

the fact that some extended matter belongs to this or that human person, then absent the soul's information of some body, Descartes' theory seemingly lacks a way (Mesland's argument must have been) to explain how said counterfactual sacrament would nevertheless be Christ's body and blood.[63]

Section 4: Descartes' Solutions

A. Response to Arnauld

Descartes responds to Arnauld's objections in his Fourth Set of Replies. The matter that concerns us here was evidently of sufficient significance to not only warrant inclusion in the first place, alongside several other philosophical topics of great interest, but the need to provide a detailed response was clearly felt enough by Descartes for him to provide several additional pages of elaboration in the second edition (1642) of his *Meditations*.[64]

Descartes first clarifies that he does not deny the existence of real accidents, which he claims is a part of Arnauld's accusation against his work.[65] As Pasnau points out, accidents are "real only if they have their own proper existence, *in the way that substances do,*"[66] which is the standard Thomistic-Suarezian view, affirmed by de Aldama.[67] If this way of defining real accidents is to be maintained, it is difficult to see how they could be incorporated into Descartes' metaphysical taxonomy, given that no real accident could be either one of Descartes' "principal

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[63] Without delving too deeply into the topic, we may point out that this issue hinges upon the solution of the principle of individuation, which at least for non-thinking beings, is seemingly lacking in Descartes' account. For a full account of this, see Thiel 1998.

[64] i.e., at CSM II 176-178

[65] CSM II 173

[66] Pasnau, 192

[67] PSS I 764f.

attributes" (which actually constitute the nature of the substance to which they are referred and therefore would seemingly lack their own proper essence and existence) or one of the modes, qualities, or (non-primary) attributes, since (as is alluded to by Arnauld) the existence of these seems unintelligibly differentiable from the primary attribute they modify. But in any case, since Descartes himself does not ever try to locate an area within his taxonomy for real accidents to fit, we need not concern ourselves with determining a possible way of doing so when instead we can simply focus upon the positive metaphysical account that he does provide.[68]

While Descartes maintains the unintelligibility of modes apart from the substances which they modify and inhere in, he insists that this "should not be taken to imply any denial that they can be separated from a substance by the power of God,"[69] since God's power is supposed by Descartes to be such that even what is unintelligible for human minds nevertheless remains within God's absolute power to do or create. According to Descartes, God has "established the eternal truths… as their efficient and total cause," and therefore freely, and not flowing from God's essence "like rays from the sun."[70] By His absolute power, God "could change [truths] as a king changes laws," and even do that which is self-contradictory, provided that God create "a different world in which the principle of noncontradiction or propositions like '*two plus two equals four*' were necessarily false."[71]

Descartes also appeals to the notion of *surfaces* when outlining his Eucharistic theory to Arnauld. A surface, he says, "should be taken to be simply the boundary that is conceived to be

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[68] Besides this, Descartes seems to clearly distance himself from real accidents in his *Sixth Set of Replies* (CSM II 293).

[69] CSM II 173

[70] CSM III 25

[71] Nash 39

common to the individual particles and the bodies that surround them; and this boundary has absolutely no reality except a modal one."[72] In the case of the Eucharist, since the surface or boundary between the bread and the surrounding air, or else between the wine and the air (as well as the chalice in which the wine is contained), remains the same before and after consecration, Descartes identifies this surface with the *species* mentioned in the Tridentine decrees. These s*pecies* constitute what the Scholastics would refer to as the sensible qualities including the color, taste, and texture of bread or wine. But Descartes does not want to reify the qualities in this way and instead reduces their nature to the interplay of human sensitive apparatus with the surfaces of sensed bodies. That is, it is the external shape (inclusive of the gaps and motions occurring within it) of a body that produces the color we sense the body as having, and similarly for all the other qualities we perceive in it. According to this more physicalist way of describing the origins of sensible qualities, Descartes believes he offers a simpler account of the persistence of the accidents pertaining to bread and wine until after consecration: since the modal surfaces remain exactly the same, and it is merely the identity of the substance that alters during transubstantiation, there is no need to posit quasi-reified accidents as continuing to exist, subsisting apparently by divine power since no natural substance underlies them.

We add here only one last point: Descartes adds to the ongoing list of the merits of his position one akin to an appeal to parsimony or simplicity. Whereas, he contends, on the old view the preservation of accidents after transubstantiation can only be ascribed to a miracle outside the normal workings of cosmological order, since Descartes makes these accidents out to be nothing other than the results of the physical configuration of particles, absent change to this

[72] CSM II 174

configuration (regardless of the new essential identity taken on in transubstantiation), it is only natural that these accidents would be preserved. We have here, then, a claim quite typical of Descartes' self-evaluation: generally speaking, the simpler and more physico-mechanical an explanation can be, the better.

B. Response to Mesland

As we mentioned above, Meslands' own letters to Descartes have not come down to us, and their content instead must be guessed at on the basis of the replies. The extant letters coming from Descartes himself, though, clarify many points of his philosophy as it pertains to the Eucharist.

What would have presumably constituted Mesland's first set of questions to Descartes on the subject of the Eucharist receives a response in the latter's letter of May 2, 1644.[73] A brief but significant statement that "at least one mode which belongs to bread remains in the Blessed Sacrament" is followed by a more disappointing evasion on Descartes' part. He applies Trent's phrasing regarding the wonderful nature of the Sacrament to the particular point of how the extension of Christ's body is supposed to be present in the host after consecration. At this point, Descartes simply denies that he is responsible for providing anything like a complete explanation of this difficult theological matter.

But in the next letter of significance,[74] after clarifying several points about his notion of surfaces, Descartes apparently gives in to Mesland's request to provide the desired explanation and lays out a tentative but seemingly well-thought-out theory. The point of departure of Descartes' hypothesis is a resolution of an inherent ambiguity in the term "body": in one sense,

[73] CSM III 231-236

[74] CSM III 241-244

any extended, three-dimensional or physical, material thing is referred to as a "body"; in another sense, as when speaking of the "body" of a man, something like "the physical aggregate of matter which is commonly considered to belong to one human person" is meant to precisely get at the meaning of the term. Whereas Descartes is comfortable admitting that bodies which are bodies *only* in the first sense (i.e., exclusive of the latter sense) might be conceivably admitted to no longer be the "numerically the same" after the addition or subtraction of matter, those material substances that are bodies in the second sense he acknowledges as at least intuitively the same (in number) across time. He reasons that they therefore must derive this perpetual identity from some principle, which he ultimately identifies as the human soul. Of course this is not far from the manner in which Aristotle reasons to the notion of "substance," as that which persists unchanged through accidental changes, underlying said accidents. Descartes, however, given his refashioning of the usage of the term "substance" will only ever identify the human soul as such a sort of "underlier" or "constant" through accidental change, contending that physical substances may be thought of as distinct after undergoing any sort of addition, subtraction, alteration, etc. If any "chunks of extended stuff" are altered in a way affecting their extension, for example, they "cease to be the same individual."[75]

Once Descartes has reasoned to this special status of the soul, he turns to the body corresponding to some given soul. "Provided," he says, "that a body is united with the same rational soul, we always take it as the body of the same man."[76] Next, Descartes draws on the analogy of natural transubstantiation: when the particles of digested food, once they are

[75] Rozemond, 250

[76] CSM III 243

incorporated into the human body, are informed by the rational soul proper to the rest of the body, they are then no longer properly "food substance" but rather parts of the substance of man.

All these explanations having been given, Descartes finally draws out his theory for Mesland: perhaps the transubstantiation of the Eucharist is best explained as the mere information of the material substances of bread and wine by the soul of Christ. In this way, Descartes thinks, the requisite identity of the Eucharist is maintained, whole and entire before and after the breaking of the host, in every individual host, and even across different instantiations of the Eucharist (i.e., in one or another celebration of the Mass).

Significantly, in a subsequent letter to Mesland,[77] Descartes seems to altogether retract his proposed explanation, asking his correspondent to "simply destroy" his attempt since "it is not worth keeping." Since, again, we do not have Mesland's own letter of reply, we can only guess at what would have been said to lead Descartes to such a definitive change of mind. The explanation offered by Descartes dangerously tends toward a theological understanding of the Eucharist more akin[78] to the impanationism or consubstantiation[79] of Calvinism or Lutheranism. While it seems unlikely Descartes wanted to seriously and forthrightly prefer a wholly Protestant Eucharistic account, his move away from certain Scholastic details almost force him in that direction. Since there is no true substantial form of bread or wine preceding the information of the bread particles with Christ's soul, it appears that transubstantiation merely means for

[77] CSM III 248

[78] Though his proposed view is certainly not *identical* to these theological theories.

[79] These are two Protestant views of the Eucharist opposed to the Catholic notion of transubstantiation. According to the former, the substance of Christ's body is "locally enclosed" together with the substance of bread which does not cease to exist after consecration. The latter view also affirms that the substance of bread remains, but differs in that it holds that Christ's body is obtained only "in a supernatural, incomprehensible manner" and not under the actual species of bread. Treier and Elwell, under the entry "Impanation."

Descartes the addition of one of the few substantial forms his philosophy does allow for (namely, the human soul) to matter previously lacking any "over-and-above" form, rather than a change of some collection of matter's identity via the passing-away of one form simultaneously with the appearance of a new form. In other words, Descartes' Eucharistic vocabulary is more akin to a process of addition than of alteration.

One last noteworthy exchange between Mesland and Descartes involves discussion of a favorite Scholastic counterfactual: if one were to have consecrated the Eucharist at the time of Christ's entombment but prior to the resurrection, given that His Body at that time would have not been ensouled, the Eucharist would then have lacked Christ's soul as well and transubstantiation would only convert bread and wine into His dead body and blood. Mesland must have turned this process of thought against Descartes by objecting that since the latter reduces the work of transubstantiation to the information of matter with Christ's soul, under the stated conditions, the sole principle on which Descartes relies is lost and the miracle is no longer explicable. In Descartes' extant response, he cites the "dispositions" of the body of Christ "to receive his soul" as sufficient for transubstantiation to take place. In other words, some unspecified features or attributes of Christ's body are meant to particularly "fit" or be apt to receive His and only His soul, somewhat like the way in which a mass of carbon is only "fit" to become either a diamond or charcoal if the details of the material structure permit. Though it is not our task here to attempt to fully judge the potential validity of this explanation, we can quickly proffer a rough negative assessment. For one thing, this does not seem to actually explain anything. If a given mass of matter is disposed to receive one soul without actually being informed by it, would it not be equally disposed to receive another like it in kind?[80] And

[80] This sort of objection could be evaded by a more traditional Scholastic account in at least two ways: 1) by positing that the substantial form of bread, for example, is replaced by the substantial form(s) proper to the specifically dead body of Christ, and 2) by appealing to something like a

secondly, the reader is left wondering in what precisely these "dispositions" consist: since an un-ensouled body is numerically distinct before and after any material change, how might a dead body retain its identity across time once even the slightest degree of corruption has set in? And if the body (i.e., aggregate of matter only approximating the body of the living Christ) is numerically distinct after any amount of time, how could it bear the requisite dispositions to be ensouled by one and the same soul of Christ? But most importantly, even if the supposed disposition relation were to hold, would not Descartes' conception of the Eucharistic conversion still be roundly different from the traditional view? That is, since he only has recourse to ensoulment for his explanation, whether actual or dispositional, how could Descartes explain the conversion of identically configured matter from bread to an un-ensouled body? If one consecrates the host prior to the Resurrection, then the matter of bread becomes the matter of a dead body, but only certain dispositions of the latter to its appropriate soul guarantee it its identity, and yet those dispositions are supposedly identical to those had when it was bread (after all, this fact was Descartes' claim to simplicity and the obviation of a need to appeal to a miracle, as we saw above at the end of part A).

Section 5: Why Contemporaries Found These Solutions Inadequate

A. General Issues

Descartes' attempts to respond to his critics, however, regardless of whether they were ultimately satisfactory to Arnauld and Mesland themselves, would not satisfy all of his philosophically or theologically-minded contemporaries. The major thinkers of his day (at least on the Continent) were predominantly Scholastic to some degree or other, and thus under the

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fuller Scotist or Suarezian account of existence and essence, and appealing to either the uniqueness of a person's (and therefore of the person's body's) haecceity, or else of their absolutely unique essence, inclusive of their proper body. All these relevant concepts are lacking in Descartes' framework and therefore presumably unavailable to his explanations.

influence of the fashions of thought appropriate to the school. Descartes' new system as a whole, therefore, was objectionable for the more general reason of its implicit rejection of the traditional system and consequently of the revered philosophical authorities of the perennial philosophy. To minimize the importance of Aristotelian vocabulary and categories of thought was to do more than simply shrug off a supposedly outdated conception of nature. Envisioning a philosophy able to be grasped by all introspective persons irrespective of their engagement with old authorities, the anti-Aristotelian (or at least non-Aristotelian) current in Descartes' work burned the proverbial bridge linking strict philosophical thought to Christian theology. The main lines of argumentation of Boethius, Augustine, Aquinas, Scotus, and Ockham all fell victim to the overthrow of their Greek master and with them went nearly all the intellectual progress in theology since the end of the Patristic era. Together with his rejection of much of the traditional philosophical vocabulary, Descartes' frequently unfulfilled promises to expand or better explain the more sparsely articulated portions of his work and his proclivity for appealing to the reader's expected ability to see things precisely as he does, if only they would think sufficiently carefully — these many habits of Descartes' mode of writing could understandably leave his readers dissatisfied with the "hand-waviness" of his treatment of important issues.

Another quite general reason for the resistance to Descartes' work can be found in its incoherence with the worldview then in vogue. Put another way, the older metaphysical system of Peripatetic-Scholasticism at least meshed in well-known and predictable ways with the cosmological (and cosmogonic) theories professed by the majority of natural scientists and theologians of Descartes' day: geocentrism and its Ptolemaic accoutrements and the notion of four essentially distinct elements are just two scientific assumptions that would have to be jettisoned by the novel Cartesian system. Descartes' radically distinct vision, then, couldn't

easily be adopted without seemingly starting over anew in all the sciences (human and divine) – which of course was more or less Descartes' intention.

B. Particular Issues

Aside from these more general objections to Descartes' philosophy, occasioned primarily by more holistic and systematic considerations, there were a number of specific reasons why the Scholastics of his day could not find Descartes' proposed solutions adequate on either philosophical or theological grounds. Because each of these topics will be more fully dealt with in related contexts below, we shall only briefly introduce them here.

i. Qualities in Sensation

Of course "idealism" was not a category or concept available to Descartes' age, but given that the affirmation of realism with respect to the empirical world was standard fare for the Peripatetic-Scholastic worldview of his contemporaries, it is clear that any denial of its central tenets would have seemed problematic at best, regardless of how one might term such a set of ideas. With respect to the purely philosophical: the Cartesian program's entailment of anything approximating the irreality of qualities of bodies in the world would seem to constitute a rupture between a reliable and ultimately correct mapping of sensations presented to the mind and the real world occurrences picked up by our senses. If an apple is not red in itself, for example, but only in our mind, then our senses are not depicting the world as it really is; and since all knowledge begins with the senses, the destruction of vast bodies of knowledge follows closely upon the denial of real quality actually inherent in things themselves. And it is not difficult to see that theological matters quickly take center stage if, instead of being concerned with the redness of apples, we start to speak of the objectivity of the species of bread and wine undergoing transubstantiation.

ii. Identity and Individuation

Another significant point of contention between Descartes and the Scholastics of his age has to do with the identity of substances, or the individuation thereof. To put it simply, whether Descartes might have been able to elaborate an answer should he have ever felt compelled to answer the question directly, the only thing approximating a principle of individuation that he ever offered seems to have been the human mind or soul as capable of distinguishing this human body from that by virtue of union with said soul. But without anything like a consistent theory of matter and form, such an appeal might even seem *ad hoc*, and Descartes seems unable to account for the intuitive unity belonging to certain inorganic objects that hylemorphism might be able to offer.

iii. Hylemorphism

And to expand upon this last note, hylemorphism further is seen by Descartes' contemporaries as perhaps the only way to account for 1) the persistence of a substance through change — whereas Descartes happily concedes that a substance is no longer identical to itself despite even slight quantitative alterations — and 2) the mind-body interaction: whereas Descartes holds that two substances of entirely different orders must communicate between themselves, Scholasticism is better explained as contending that one complete substance communicates within itself, as the integral parts of material body and formal soul are by themselves only incomplete substances.[81] However Descartes' work might progress in other

[81] To evade a potentially lengthy digression, we shall only indicate the ongoing interpretive debates about Descartes' alleged dualism or trialism. In Nolan 2015, the interpretive landscape is divided between those who read Descartes' account of the mind-body relation as fundamentally dualist, and those who interpret him as trialist, according to which some new element is recognized, over and above body and mind alone. Nolan delineates several versions of this trialism, the weakest of which merely claims that sensations and passions constitute a special notion "distinct from the notions of thought and extension," and the strongest of which claims that "the *union* of mind and body constitutes a third type of substance with its own distinctive attribute and corresponding modes."

directions, certain questions like these prove insurmountable objections for many other philosophers of his day.

CHAPTER 3 – Neo-Scholasticism and Descartes

Section 1: Why Neo-Scholasticism Might Permits Descartes' Solutions

A. General Characterization of Neo-Scholasticism

We now shift our attention to the reception of Cartesianism generally, and to a confrontation with the issues brought up in Descartes' Eucharistic philosophy — here, however, not by Descartes' Scholastic contemporaries, but by the late 19th and early 20th century successors to that tradition, during the heyday of what is often called "Neo-Scholasticism," in order to differentiate it from the Scholasticism of the medieval period and from its largely Spanish revival during the 16th and 17th centuries. A general description of this "school" is in order, so that the following lines of thought might be better contextualized and motivated.

As was true during the entirety of the history of the "perennial philosophy," the Neo-Scholastic school of thought by no means involved unanimity of opinion or approach, though its practitioners retained enough agreement on shared vocabulary and a basic Aristotelian foundation as to warrant the generic appellation. That being said, an interesting attempt was made toward greater intellectual uniformity on the fundamental points of metaphysics via the publication of the "24 Thomistic Theses" in 1914 by the Sacred Congregation of Studies. This summary of normative Thomistic essentials was intended to guide Catholic teachers of philosophy as a sort of "safe and approved" list of Scholastic theses. While private disagreement was tolerated, and allowances made for other academic traditions within their own order (such as

for the largely Scotistic Franciscans or the Suarezian Jesuits[82]), these propositions were still to be taught in ecclesiastical schools and seminaries.[83]

The often-denigrated "manual tradition" was a certain concrete expression of this trend. Rather than learning the Aristotelian-Peripatetic foundation of Scholasticism directly from Aristotle, explanatory commentaries upon his works, and other key authors (Boethius, Averroes, etc.), seminarians were most frequently taught each of the main philosophical disciplines (logic, epistemology, ontology, theodicy, ethics, etc.) from textbooks of philosophy, containing a large set of more or less probable theses, each the conclusion of a demonstrative syllogism, accompanied by refutations of the philosophies whose conclusions would contradict the Scholastic propositions. Notably, this manual or textbook tradition prompted the counter-tendency of going back to Aquinas (or whatever other author) himself, so as to bypass the possible biases or interpretive elements unwarrantedly grafted onto St. Thomas' own work by some manual's author, under the guise of representing a more current Thomism. This *ressourcement* involved not only significant scholarly historical work on medieval figures, but also fresh interpretations of Augustine and other authors whose words were sometimes twisted by even Aquinas to fit a predetermined philosophical conclusion.[84]

In keeping with the tradition of engaging in purely scientific work alongside philosophical or theological, a number of Neo-Scholastic authors pursued empirical studies that

[82] By way of example, a review of the 24 Theses has led at least one author to conclude that Suarez' thought is best interpreted as conflicting with all but one of these Thomistic theses (Getino 1917).

[83] Denzinger 720

[84] To cite one such instance: rather than hold either Boethius or his manuscript to be mistaken, a reading of "*inseparabilis*" where critical editions prefer "*separabilis"* in Boethius' *De Trinitate* prompts Aquinas to take pains to explain how it is that theology is supposed to be "inseparable" from matter when it is precisely Boethius' point that theology's wholly immaterial aspect distinguishes it from mathematics or natural philosophy (Aquinas 7).

frequently complemented their other academic work. The significant strides taken in the sciences during the early 20th century, above all else in physics, meant that philosophical cosmology and psychology (in the Scholastic sense of the literal "study of the soul") especially required that stock be taken of what may have grown outdated in the philosophical apparatus and what the empirical scientists may have been too hastily trying to conclude.[85] Decreasing skepticism about some formerly contentious topics such as evolution or recognition of the potential benefits of psychoanalytic treatment, for example, also did much to fuel the advancement of Neo-Scholastic work in parallel philosophical fields. These general notions are well illustrated by Teilhard de Chardin's work in evolutionary anthropology,[86] that of Nicola Pende in endocrinology and biotypology,[87] and the parallel crystallization of these and other authors' empirical work in a Neo-Scholastic, philosophical anthropology/psychology such as that of Joseph Donceel.[88]

In the purely philosophical realm, too, at least sometime after the initial decades of hyper-conservatism about Thomistic orthodoxy, many resonances were discovered between non-Scholastic authors and the new Neo-Scholastic work. A greater friendliness toward Descartes' methodical skepticism arose, for example, as a way to more solidly ground the realist epistemology of the School via a critical realism. Or else Kant's Copernican shift even found a home among practitioners of the so-called transcendental method (Marechal, Rahner, Lotz, Lonergan, etc.) who agreed that conditions of epistemic possibility were to be found in the

[85] Do, for example, quantum fluctuations really evince instances of absolutely uncaused creation, and should the principle of sufficient reason be abandoned, or is the cause simply not yet known or perhaps even altogether epistemically unavailable to human observers? cf. Szpak 2008.

[86] See de Chardin, 1952

[87] Pende 1955

[88] Donceel 1961

reason, but also concluded the intellect's innate dynamism toward truth safeguarded the cognoscibility of the so-called noumenal and the existence of God.[89] Along this same vein, Heynickx and Symons point out that the Neo-Scholastic "reaction to the phenomenological study of the human faculties of experience was oftentimes a welcoming and supportive one."[90]

Within this academic context, several particular new theories arose that will be useful to us in elaborating the elements of a Eucharistic theology that may be, in certain particulars, much closer to Descartes' interpretation of the relevant phenomena, and this in sufficiently significant ways as to perhaps even vindicate some of his then-novel ideas and defend his theories from both immediate and later orthodox Scholastic objections.

B. Interpretationism

We have previously mentioned (in chapter 2, section 3, part A and in section 5, part B) one of the more prevalent objections to Descartes' physics and, consequently, to his Eucharistic theory: the objectivity of the species (or accidents) remaining in the consecrated host and wine seem not to be retained if the reality of qualities is "lessened," i.e., if real accidental forms are not identified with the color, odor, etc. of bread and wine and if instead these qualities are accounted for by mere surface configurations or the motion of particles. The senses seem, then, to not be picking out real features that inhere in substances but only relating physical states or events to psychological experiences that do not, in fact, actually resemble the substance being sensed.

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[89] Interestingly, Hegel remains probably the sole major philosopher who almost universally never received a positive appraisal within Scholasticism, his thought usually being summarily dismissed even by those with a deep understanding of Kant, the Neo-Kantians, and even of contemporary phenomenology and existentialism.

[90] Heynickx and Symon, 11

With the scientific progress made in the nineteenth and early twentieth centuries in the physiology and psychology of sensation as well as subatomic physics, the traditional Scholastic description of sensible qualities as accidental forms became less and less tenable. There was then, as in Descartes' day, significant resistance to abandoning the older understanding in favor of the novel scientific theories. But a willingness to accommodate the discoveries found its place within Neo-Scholasticism where the position of *interpretationism* was carved out, in opposition to the older *perceptionism* (which itself admitted of some variety).

Geny offers a clear summary that delineates the broad characteristics of the two main views:

> "[Integral perceptionism] closely adheres to common sense; [interpretationism] corrects common sense by means of scientific observation: namely, it affirms that from physics and psycho-physiology it is demonstrated that those things which immediately affect our senses are, at least in part, very rapid motions of particles constituting bodies, which because of their own nature as well as the nature of our organs, produce in us modifications to which the sensitive faculties react through their sensations of color, sound, etc.: our senses, therefore, perceive sensible qualities through some *interpretation* of them; what results from this interpretation we call formal color, sound, etc."[91]

If the position of interpretationism is ultimately tenable within an Aristotelian-Scholastic philosophy of nature, then the objectivity objection to Descartes' revised physics seems to

[91] Geny 196f.

dissolve. Should some equally (or even more) plausible explanation of the sensible qualities be offered by interpretationism, and should it accord any better with the empirical facts as well, then it would also seem a viable alternative way of undergirding the physical principles at play in Eucharistic theology. This does not, of course, mean that we are proposing Descartes' philosophy of sensation to have been a sort of proto-interpretationism, but only that the ultimate grounds of this view and his work are similar enough and in sufficiently relevant ways that we might be led to believe in the overall feasibility of Descartes' physics within a still orthodox Scholastic sacramentality.

We might begin by pointing out that, on the basis of either of the two major theories under discussion, the judgments by which the immediate[92] data of sensation are affirmed, are said to be judgments with real and positive epistemological value. That is, both theories contend that for *per se* sensibles (immediate objects of our senses, e.g., color or heat, as opposed to *per accidens* sensibles, such as when we say we see that it is cold) "the judgments by which we affirm a real, quantitative, spatial and temporal, extended body, ornate with qualities, are objectively true."[93] Divergence in opinion among the Scholastics begins when we turn our attention to the distinction between *per se* proper sensibles and *per se* common sensibles. By the former are meant those sensible qualities proper to a specific sense (such as color is proper to sight, or heat is proper to touch), while common sensibles refer to things like extension or shape

[92] Regarding this immediacy, Alejandro clarifies: "As far as the theory goes, we must distinguish between *psychological* and *critical [or, epistemological] immediacy*. We are not speaking of *psychological immediacy*, the solution of which depends upon the determination of questions in psychology regarding the nature of sensation…We are speaking of *the critical order*, and in this order we call that *immediate* which is made conscious *without any conscious medium*" (211).

[93] *Ibid.*

which are sensible through various senses, none of which though has one of these sensibles as its proper and adequate object. All mainstream (i.e., realist) Scholastics will admit the objective *and* formal existence of the *per se* common sensibles, which is to say that extensions and shape really exist outside one's mind and the reality of the sensible in question exists in the object itself. The extension of some rock that I can both see and feel really occurs outside of my mind and really occurs in the rock's substance. Various opinions arise, however, as to where the formal reality of a proper sensible truly lies. Some will locate it in the medium touching the perceiving organ (Suarez, Urraburu, Gredt, Geny, for example, propose this opinion), while those who espouse full-blown interpretationism, contend that the qualities under discussion merely *fundamentally* or *virtually* exist in the sensed objects (this is the opinion of Balmes, Mercier, Gründer, Tongiorgi, Palmieri, Naber, Fröbes, and others).[94] In these terms, an interpretationist will say that the ultimate reason we refer to an apple as red lies in the apple itself, but that the formal quality of "redness" is actually situated within our sensing mind. Needless to say, within mainstream Scholasticism, at least the objectivity of proper sensibles is never called into question: firstly, the sensed object is perceived *qua* exterior; secondly, at least for the higher senses of hearing and sight, that which is perceived is apprehended as something independent of subjective modifications, whereas the sensation of heat, for example, consists in a modification of one's self in some slight way; third, in comparing some mental image of a colored object with the sensation experienced of the actually seen object, the two sorts of acts clearly differ in significant ways.

Though we will not here take up any of these points in great detail, since our main concern is only to show *that* the new view of sensation and qualities garnered an important following within the halls of Scholastic thought, we ought to at least mention some basic

[94] Alejandro 213

motivations for the move from the traditional view, even if these exact considerations had not occurred to Descartes, in whom nevertheless, we find important resonances to the Neo-Scholastic literature on this topic. The fact that the sensation of an object sometimes persists even afterward in the absence of the object (in which case the object itself cannot in any way be formally exciting the organ of sensation), such as when the bright color of a wall one has stared at for sufficiently long is still present to the mind after closing one's eyes, implies the existence of qualitative formalities within the sensory organ, brain, mind, or at any rate, somewhere within the sensitive individual themself. Or else when sensations are provoked by inadequate objects, as when pressing on one's closed eye seems to produce light, or when one can "taste" an object that they smell – such considerations also imply that the quality in question exists more properly within the subject than the external object in some merely remote way giving rise to the sensation. Though a number of these phenomena may have been recognized even in the medieval period of Scholasticism, the first uniform, cohesive, and "bottom up" explanation of them within Scholasticism seems to occur within the Neo-Scholastic context of which we've been speaking.

Our aim in the foregoing has not been to establish the overall truth of the views or theories of interpretationism as against those of perceptionism. We ourselves incline, nevertheless, toward interpretationism, precisely due to the weight of the empirical support it garners from physics, physiology, and other relevant scientific fields. As long as, though, we can deny anything "heterodox" or "quasi-idealistic" inherent to this newer theory, we can take it as a point of departure or foundation for our more central argument that Descartes' physical theories argue nothing essentially incompatible with the directions taken by certain figures of

Neo-Scholasticism, which of course remains a reliable expression of the philosophical elements at play in Catholic theology of the Eucharist.

Descartes' reduction of the qualitative features of bodies to the quantitative structures underlying them (the configuration of a material surface, the speed at which particles move relative to other corporeal motions, etc.) should not, we contend, be thought of as inimical to the philosophical minima required by Eucharistic theology. We have already (section 2 of this chapter) sufficiently discussed the novel account of physics offered by Descartes, and therefore need not delve again into the details of the operation of sensation according to that framework. We can instead, simply in a more explicit way, tie together the various elements we have been discussing in order to show how a Cartesian account of the Eucharist, in its most important elements, overlaps with those parts of an interpretationist account of sensation such that *on this matter*, no philosophical obstacles remain that would preclude the theological orthodoxy of Descartes' suggestions.

Since Descartes does not want to make of "qualities" anything *real* or entitatively distinct from the substance they modify, the reality of the qualities of bread and wine supposed to be left in suspension after transubstantiation of their substances raises a concern for the theological workability of his metaphysics. For if it be supposed that they have no sort of proper existence in themselves, it seems, at least at first blush, that they ought to cease to exist when the substance so modified by the qualities also ceases to exist. But as we saw, Descartes responds that objections of this sort are based on an understanding of qualities and surfaces that do not at all bring out what is original to his philosophy. Without reiterating the details of his response, we may merely draw attention to how his view of the microscopic origins of qualities 1) reflects contemporary scientific accounts of sense objects and 2) coheres to Neo-Scholastic

interpretationist accounts which accentuate the importance of the mind in the process of sensation, allowing that no entitatively real qualities as such exist outside of it, but merely have some foundation in the sensed surface or object. And as we pointed out in an earlier section on method, we say again: if some view is determined to be philosophically tenable in both Descartes' novel view and also some (even significantly) developed version of Scholasticism, there seems to at least be room for a permitted sort of "update" to the dependent theological explanations. So long as 1) the objectivity of the Eucharistic species are maintained in some way, and 2) the immediate relation of senses to object sensed is kept (i.e., the notion that we sense by (*quo*) species in our mind, but that our idea is still of the object itself (*quod*), and not of the reproduced form), the solution should be considered as suitable within a realistic, Peripatetic-Scholastic philosophical framework.

C. The Accidental Unity of Inorganic Bodies

Another characteristic feature of twentieth century Scholastic metaphysics was the diminished role played by hylemorphic theory. A weaker version of this break from traditional hylemorphism was epitomized by the view that inorganic bodies are entities only accidentally (and not formally) united, which is to say that no overarching form inheres in the entire subject.[95] For example, in a lump of granite, no "form of granite" would be recognized, but perhaps only forms of quartz, feldspar, and mica, coexisting alongside each other within a heterogenous mixture. The far stronger version of hylosystemism,[96] which sought to divorce the hylemorphic notion of matter-form composition from inorganic structures altogether, would say of this same case that no forms in the classical sense are to be discovered at all. Even at the level of individual

[95] PSS II 309

[96] An original theory introduced in Mitterer 1935.

atoms, no classical forms are to be found, and elementary particles interact not hylemorphically but rather hylosystemically, as the individual hylonic parts (electrons, quarks, etc.) form a hylomeric body which is "a dynamic system working as a functional unit."[97] As we did in the foregoing pages, we wish to again identify significant correlates between certain currents in neo-Scholastic metaphysics and Descartes' project in order to argue that, just as the innovation of the former camp in no way affected the overall cohesiveness of the modernized school of thought with the perennial theological demands of the Eucharistic order, so too could the latter Cartesian view be interpreted anew and, we think, be at least partially absolved of the centuries of harsh condemnations directed at its novelties.

The traditional hylemorphic view — rejected by Descartes and, much later, by many Neo-Scholastics — argues that some "overarching" form of the whole subject must be posited even in inorganic mixed bodies, regardless of whether its constituent elements remain only virtually (Aquinas, Scotus, Suarez) or formally (Albertus Magnus, Bonaventure). That is: both of these more traditional versions would suppose there to be some metaphysically robust form of wine actuating the matter contained in a glass of the liquid.[98] The former of these two groups would argue that the forms proper to water, sugar, and whatever other elements go into making up the mixture known as wine persist only virtually, which is to say that they effectively cease to exist or disappear when mixed together into the new mixture of wine, and perhaps only come back into existence if these elements could be again drawn out of the mixture. The latter group of philosophers instead contend that the forms of water, sugar, etc. remain as they were before these ingredients entered into the whole substance of wine, and that the form of wine simply exists

[97] Bittle 322

[98] PSS II 308f.

over and above or in addition to them. Both of these possible explanations of things are eschewed by Descartes who instead opines that:

> all the properties which we clearly perceive in [the universe] are reducible to its divisibility and consequent mobility in respect of its parts, and its resulting capacity to be affected in all the ways which we perceive as being derivable from the movement of its parts.[99]

On this view, the properties exhibited by wine as a whole are not, then, to be attributed to a form expressing "wineness" or "vineity," but only to the sum total of all the matter's motions, vibrations, etc.

This view, we might note, is expressed in remarkably similar language by some of those Neo-Scholastics who desired to incorporate new knowledge of atomic physics into the old system without, however, abandoning any of its most vital principles. Hellín contends that:

> the unity which results from [the] union of elements in a mixture… is not a unity *per se* [as such and through itself], but *per accidens* [only imperfectly so, and in a manner of speaking], because it is a dynamic unity through the coordination of powers [*virium*], not entitative or essential.[100]

And of course it is generally argued that since there is no true philosophical need to posit some form of the whole (all the necessary phenomena already being adequately saved), "one ought not to multiply entities without necessity."[101]

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[99] CSM I 232

[100] PSS II 309

[101] Laminne 178

Descartes' highly mechanistic picture of reality was susceptible to objections from the traditional hylemorphic camp and the typical arguments against any form of mechanism could also be rallied against the Cartesian novelties: impetus, intrinsic elastic powers, certain bodies' affinities for particular others, the sensible qualities, etc. But more particularly, one might object against Decsartes on the grounds of a need for a single, really unifying form of the mixed whole: if a *perfect* mixture (the parts of which have been joined by some transfer of energy and which are only separable by chemical means) tends to exercise certain fixed and characteristic activities, it would seem to be endowed with some finality proper to it, but if a proper finality only befits some *per se* unity, then the mixed whole would require such a type of unity, only secured (seemingly) by one unifying form proper to the nature of the mixture.[102] Or again, and most pointedly: in order to conserve the notion that transubstantiation effects the change of the substance of bread into the substance of the Body of Christ, it would stand to reason that the "substance of bread" be composed of not only the matter underlying the substantial change, but also some real form, and in this case specifically, the form of an inorganic mixture of wheat, sugar, etc. constituting bread.

Rebuttals to these points, even if crafted by twentieth century Jesuits in debate with the Dominican Thomists of the day, might nevertheless be brought into the service of some aspects of the Cartesian project. In much the same way that the traditional idea of sensible qualities had to give way to empirical realities and be recrafted accordingly, so also could, we think, impetus and other traditional "intrinsic powers" be better described by the kinetic and dynamic models proper to later physics, than they were by the theories of earlier centuries. The argument that an inorganic unity must be *per se* on account of acting for a single end could be diffused by pointing

[102] This objection, though, would perhaps carry little weight with Descartes given his assessment that "final causes [are] totally useless in physics" (CSM II 39).

out that some clear instances of bodies evidently only accidentally united (such as a clock) also act for an end, but only because of the cooperation of powers and properties of its component parts. We shall have more to say momentarily on the proposition that some real "bread-form" be involved in transubstantiation.

The particular Neo-Scholastic thesis we defend on its own virtue as well as perhaps sufficiently approximating Descartes' thought states that in an inorganic mixture, no new substantial form is produced ("for" or "informing" the whole mixture).[103] This thesis may be defended by pointing out that if some new substantial form were produced in the mixture, there would have to be some sufficient reason or proportionate cause of that fact. But if no such cause can be attested, there is at least no positive reason to conclude that such a new form has been produced. We may quickly pass over as unconvincing (if not altogether unfitting) some of the older theories which involved unwarranted appeals to God's direct action, the power of the stars, or angelic intervention as efficiently causing some new substantial form to arise in a mixture. Nor does the identification of the forms of the elements as the source of the hypothetical form of the mixture itself seem permissible. For the forms of the elements either a) gives rise to the form of the whole once they longer exist or b) while they still exist. The former possibility is patently absurd. The second involves further difficulties: it would imply that the same matter is simultaneously informed by both the forms proper to its elemental structure and the form of the whole. And finally: it also seems misguided to claim that accidental powers may be the source of the form of the whole after the corruption of the individual elements, for the simple reason that nothing accidental is alone capable of producing something substantial.

[103] PSS II 312

All the foregoing concerns us, though, only insofar as it provides a certain foundation for developing an interpretation of Descartes' Eucharistic theories. To anticipate our conclusion somewhat, we want to argue that (in sufficiently relevant ways) some aspects of Descartes' work closely enough resemble the work done by early 20th century Neo-Scholastics as to lead one to believe that from a more contemporary standpoint, the theological (if not to also say "philosophical") orthodoxy of Descartes' Eucharistic metaphysics might not need be denied.

A number of Neo-Scholastics (Baudimet, Maltha, and Selvaggi, to name a few)[104] put forward arguments contending that one need not say that exactly one form of strictly bread or wine (informing one single host or the whole contents of a chalice) passes away during transubstantiation in order that the substance of the Body or Blood of Christ becomes present in the Eucharist. The immediate motivation for such considerations runs something like: there is no way to demonstrate that precisely one "bread form" informs a single host, since either half of the host is just as much bread as the other. But "bread" also does not seem to be a natural kind of the sort as "glucose" is, with a fixed formula and structure. What precisely constitutes "bread" is some sort of mixture, with permissibly varying percentages of glucose, wheat, etc. contents. But at a certain point (which need not be strictly defined), some "objective formula" of bread must exist, and at least this would represent the absolute minimum for what could be transubstantiated. But, in much the same way as theologians would argue that the Body, say, is present equally and in the same respect in every individual host contained in the ciborium, and also in every part of each host both before and after its fraction, so too would we have to say that the Body is present equally in every minimum "objective formula" of bread, and that it is at this point or level that transubstantiation actually occurs. So if the "objective formula" of bread were repeated a

[104] Clark 37, 45, 47

thousand times in one host, there would be a thousand "breads" being transubstantiated into the Body of Christ. But since there is no issue with saying that there are simultaneous transubstantiations among a number of hosts, there should be no problem with saying there are multiple transubstantiations varying by number of "objective bread formulae" instances, either. This can acceptably be taken even further if one wants to push the argument: perhaps there is really no such thing as an objective "bread formula," in which case the molecular components of what is commonly designated bread (perhaps a mere aggregate of certain molecules, in permissibly variable proportions) are all individually converted so that there are as many transubstantiations as there are irreducible formal unities within a single host. Whether these be macromolecular, molecular, atomic, subatomic, etc. probably remains to be determined by a combination of philosophical reflection and empirical investigation – in any case, we need not solve that in order to make the above general claim.

If we now take together the two main Neo-Scholastic developments we have been developing (that elements may remain formally in a mixture with no "overarching" form of the whole, and the application of this and related basic ideas to Eucharistic theology), we can delineate the line of interpretation toward which we've been working. Of course, Descartes' new philosophy wants to retain nothing like substantial form, or at least certainly nothing like it for anything lacking a mind. In his day, such a metaphysical move was unthinkably contrary to the fundamentals of Peripatetic-Scholasticism, but for at least some Neo-Scholastics, this was a welcome direction for philosophy. At the level of organic, non-human substances, Descartes and the Neo-Scholastics may part ways, but for our purposes, inorganic mixtures like bread and wine would receive a similar treatment. The properties of the overall substance (if such a term could even be reliably used), both parties would agree, are only what they are as a result of the

properties of the smaller or discrete units combining to make up the larger whole. And even if Descartes does not want to admit anything like the modern atom or the scholastic "element,"[105] his analysis of physical bodies at least approximates what our Neo-Scholastics say in terms of properties: at some level of physical makeup, there are some irreducible properties constituting the shape or form of physical matter, the speed and direction of particles, and like physical features. And it is these features that are ultimately responsible for the way the constituted whole "behaves" or simply *is*. That is, the properties of the particles making up bread, for example, are what allow us to even identify bread as such, and when transubstantiation occurs, it is the matter underlying these properties that takes on a new reality which, by both human and divine acts, we may speak of as the Body of Christ. Once again, we find an instance where contemporary science and philosophical Scholastic thought has essentially vindicated at least some of the work done by Descartes on this matter centuries prior.

D. How These Solutions Are Cartesian (and How They Are Not)

In an earlier section (chapter 2, section 1) we already discussed at some length the purpose of our comparative method as well as its integral parts. After having now more fully explained the new material brought into our Eucharistic discussion by the Neo-Scholastics and spoken to how these ideas relate to Descartes' philosophical novelties, we now wish to make more explicit precisely wherein lie the relevant similarities and differences between the 20th century upholders of Scholasticism and Descartes, who saw himself as breaking with the Scholastic tradition in a fundamentally deeper and more radical way than had anyone else done

[105] The Cartesian elements of fire, air, and earth do not map onto the older Scholastic notion of element in that nothing but "motion, size, shape, and arrangement," i.e., nothing intrinsic, determines and distinguishes the properties or behaviors of the different Cartesian elements, but this is precisely the point that the Neo-Scholastics try to make in light of modern atomic and molecular theory (*The World*, 16ff.).

before him. That is to say, we wish to examine in what ways we can call the work of the Neo-Scholastics "Cartesian," if only in a very broad sense.

The particulars of what is and is not alike between Descartes and the contemporary Scholastics has already, for the most part, been mentioned in the preceding sections. With respect to interpretationism, we reiterate here that the most essential similarities lie in 1) placing the locus of the real action of sensation in the mind rather than in the object, such that 2) nothing like an accidental form of color need be appealed to, and 3) the reduction of this simultaneously re-active and semi-creative sensation down to the mere mechanical motions or physical structure of the object being sensed. The major difference on this point (at least as the Neo-Scholastics themselves interpret how things stand) between Descartes and the interpretationists is that the sensible perceptions that are proper *per se* are "totally subjective" for Descartes, who denies "all objectivity of the qualitative order," while the interpretationists "admit the [objective] reality of *per se* proper sensibles," contending only that these sensibles "are not immediately apprehended, and only exist in objects fundamentally or virtually."[106] To the point of how Cartesian philosophy may preempt Neo-Scholastic conclusions on the theme of the unity of inorganic bodies (or at least how the Neo-Scholastics find themselves saying things reminiscent of Descartes), we highlight the Neo-Scholastics' 1) denial of any "overarching" form of a whole, and consequently the denial of the identification of an inorganic body as some *essential* whole, and 2) the attribution of any and all properties of that whole to its component parts – two contentions that Descartes explicitly advocates in his work. We would do well, however, to mention a point by which we might distinguish the two views: the Neo-Scholastics will admit of absolutely unified,

[106] Alejandro, 212f.

essential wholes at some point of microscopic reality,[107] while Descartes denies anything akin to a real, indivisible atom.[108]

In a more general sense, we may look to the means and end of Descartes' work (as it relates especially to the Eucharist) and that of the Neo-Scholastics to determine even larger similarities in approach. For all the differences in details, the two approaches we have been comparing all this while both exhibit 1) an underlying belief in their rationality involving the working of basic principles and theses up to more complex but supposedly exact propositions, themselves connected and together constituting a systematic philosophy, 2) a leading and guiding motive that this philosophy be empirically correct – which is to say that while philosophy is still seen by Descartes and the Neo-Scholastics as more universal than the empirical sciences, philosophy is nevertheless bound to accept and seek out ways to assimilate the conclusions of the various sciences – and 3) a readiness to submit the conclusions found via 1) or 2) to the teaching authority of the Catholic Church if those matters pertain directly to faith or morals. The combination of these convictions in both systems of thought further undergirds our comparative project beyond the several important similarities highlighted in the previous paragraph.

For all these reasons, specific and general, we might somewhat loosely refer to what the Neo-Scholastics are seeking to do as "Cartesian," at least in spirit. This is not to say that they necessarily take guidance directly from Descartes' work, so much as to say that the Neo-Scholastic is animated by a philosophical spirit much like that behind Descartes' work: one friendly to empirical science, congenial to mechanistic explanation when possible and explanatorily parsimonious, nevertheless traditional in terms of religious conviction the

[107] PSS II 250

[108] CSM I 231

hierarchy of the sciences, etc. It is not, of course, at all necessary for our point that Descartes ever anticipates something that *only* the Neo-Scholastics will later say, but rather, when the Neo-Scholastics *do* make some assertion, which is known to meet the Eucharistic philosophical desiderata, then if Descartes *also* contends something quite similar, one can comfortably conclude that (within the Eucharistic frame of reference) Descartes' conclusion, too, is acceptable to that very same extent.

Section 2: General Conclusions

A. Reopening Some Questions

At this point, we may broach several important questions, the precise answers to which we may not now be able to fully provide, but for which the indications above may assist us in partially approaching. We have space here only to highlight some of the ongoing debates regarding Cartesian philosophy which have some relevance to our present concerns.

A frequent difficulty we encountered in the foregoing was Descartes' ambiguous if not altogether absent identification of the principle of individuation. No clear and universal[109] principle by which one physical body may be differentiated from another ever seems on offer. For the Scholastic reading his work, or for metaphysical realists broadly speaking, this constitutes a major flaw in an incomplete philosophical system. But one might argue that, since Descartes' concerns are wholly distinct from those of other schools of his time, such a criticism may be shoehorning in desiderata that were irrelevant to the philosopher himself. The issues to which Descartes' silence gives rise are issues that often presume aspects of a worldview that perhaps Descartes did not find necessary to his overall project. But because individuation plays

[109] One may be able to cite the soul as the factor individuating distinct human bodies; but for other, non-human entities, our claim stands.

an important implicit role in Eucharistic physics, it remains problematic for Descartes to simply wave away the objection.

Another issue cited in a variety of contexts in the contemporary literature has also been of some importance in our above discussions. The Cartesian description of the mind-body relation or interaction (most fully treated in Descartes' correspondence with Princess Elisabeth[110]) is notorious for either leaving many things unsaid or saying things in a way that disappoints our expectations. The web of problems associated with this topic are related to our own present interests only insofar as they pertain to questions about the presence of Christ's soul in the Eucharist. Since the soul alone determines the unequivocal presence of an intelligent being above that of mere animal (i.e., a human, an angel, or God), we saw above the pains to which Descartes went to ensure he could reasonably safeguard the presence of Christ's soul after consecration of the species. But because the soul's tie to the body is so precarious for him (over and above the difficulties already inherent to any philosophical discussion of the Eucharist when it comes to explaining away the extension of Christ's body), without a more thoroughgoing examination of how the relation in question might be variably explained, the details of this discussion too must be suspended in a work of the present size.

On a larger scale, in light of some of our foregoing conclusions, we may be inclined to ask: just how Scholastic was Descartes really? To what degree does he depend upon his predecessors, and how far does he move beyond them? This is the question animating much of Etienne Gilson's work in the last century, and that of Roger Ariew and Marjorie Greene in this one. While we would not want to overstress the Scholasticism of the Cartesian philosophy (Descartes makes it clear enough that he certainly *wants* to move beyond the philosophy of the

[110] CSM III, *passim*.

Schools), the terminological and conceptual dependency is striking, if understandable given the lay of the philosophical land of his time. Further investigation may reveal further dependencies, as has done some recent work exposing Suarez' influence on Descartes beyond the most basic of forms.[111] And in the course of such investigation, perhaps even more subtle attempts on Descartes' part to distance himself from his contemporaries will be uncovered. But again, while we believe it important to highlight the ongoing discussion of these and related points, we cannot dwell upon such tangential topics for very long.

B. New Directions for Scholasticism

In terms of both strict philosophy as well as philosophical theology, we argue that the above discussions can be helpful in highlighting or outlining some new directions for Scholastic thought. Peripatetic-Scholastics, Aristotelian-Thomistics, and adjacent varieties of philosophical schools may find some leads in Descartes' reworking of quality, substance, or surfaces, even if the details do not fully pan out. The fact some of these very ideas received considerable reworking in the 20th century by a number of Neo-Scholastics indicates the flexibility of at least some conceptual apparatus in the philosophy, and once that notion is established, it is only another step to take for the Scholastic historian to then reassess Descartes in this light. Perhaps most importantly, we see here an impetus to reexamine the relation between Scholastic physics and the empirical sciences as a whole, and to revive or reanimate older attempts to reconcile contemporary scientific work with the perennial metaphysical notions of Scholasticism. If the Thomists, Scotists, and Suarezians are willing and able to admit that some details of hylemorphism, for example, are not so utterly necessary to their metaphysics, and that more

[111] Though he is careful to state that he makes "no claim that Suarez' discussion of surfaces directly influenced Descartes," Schmaltz is one of a number of writers actively filling in the gaps of our understanding of the transition from one of the last great Scholastics and one of the first early modern philosophers. Schmaltz 2019, 2.

empirically derived and novel concepts (even if not of the Cartesian brand exactly) may permissibly displace older but unworkable notions, then another all-so-important step in bridging the gap between science and metaphysics may very well be made.

The philosophically inclined theologians of Catholicism, Eastern and Oriental Orthodoxy, to name just a few denominations, may very well find in these discussions points of departure for further sacramental or specifically Eucharistic investigations. While necessarily revised, the new way of thinking of the Eucharist made available through the Cartesian lens could reasonably lend itself to fruitful ecumenical dialogue with historically non-Eucharistic denominations or even provide material for spiritual meditation on the individual's participatory role in epistemically grounding the Eucharistic qualities.

Section 3: Remaining Questions and Ultimate Assessment

Of course, we ought to stress once more that we do not believe that every point of Descartes' thought can be profitably used. There certainly remain some "mismatches" if not total inadequacies as far as Descartes' (reinterpreted) view goes on matters of quantity or extension, insofar as these concepts are required for a Eucharistic theology. For example, to our mind, it simply doesn't seem possible to employ Descartes' understanding of extension as it would apply to the aptitudinal but not-yet-real extension of Christ's body in the Eucharist. Or else (putting aside the admittedly very speculative nature of the objection, and the tentativeness with which Descartes defended his first go at a theory), the Cartesian explanation of the what-if case of transubstantiation during Christ's entombment seems to fall flat. Some of Descartes' philosophy must fall into the category of "unusable for Scholasticism," even if other points may potentially find resolution after further nuance and interpretation. But of course it has not been not our intention to resolve all of these minute details so much as it has been to provide the initial steps

forward toward the rehabilitation of Descartes' theological thought as such, at least to a point where it could be taken seriously as a contender within Scholastic Eucharistic debates, side-by-side with the canonical (if at times controversial) giants of the like of de Lugo, Tongiorgi, or Franzelin.

We wish to conclude, then, by unambiguously stating our view that the Cartesian (meta)physics might very well work in a way compatible with Catholic Eucharistic theology and thus be largely orthodox (in the relevant sense), even if the exact attempt that Descartes gives as pertains to the details (i.e., his hypothesis of transubstantiation which we stated above seems more like *information* than actual *conversion* of substance) might have to be rejected for seeming far too much like impanation or consubstantiation. Therefore, we would consider Descartes' philosophical novelties usable even if not in precisely the way Descartes himself envisioned them, just as we would consider the most important aspects of Copernican astronomy to have been usable, even if the vestiges of epicycles in Copernicus' outline would have to eventually be abandoned. While we would refrain from the unqualified and wholesale contention that within Descartes's work lies a philosophy capable of underpinning an entirely orthodox Catholic Eucharistic theology, we hold that the conclusions derived from this reexamination or reopening of the Cartesian question seem to us adequate enough to vindicate certain important aspects of his Eucharistic philosophy. If at least some salient notions can be profitably rescued from what has historically been rejected in Descartes' philosophy, and incorporated into an updated Neo-Scholastic physics or metaphysics, we consider our work successful to this degree.

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