THE ONTOLOGICAL SOURCE OF LOGICAL POSSIBILITY IN CATHOLIC SECOND SCHOLASTICISM

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There was an amazing amount of attention devoted to modalities in "second" or "post-medieval" scholasticism. Modalities were approached with great sophistication from logical, epistemological, and metaphysical perspectives. I will concentrate here on presenting an overview of Catholic second scholastic discussions of the ontological basis for logical possibility. This problem was the subject of much debate among the Scholastics of the time, so much so that for the first time ever in the history of scholasticism (medieval or modern) it was granted its own distinct quæstio in the philosophical texts of the early seventeenth century.

I will first make some preliminary remarks concerning what I have called the problem of the ontological basis for logical possibility. Since the problem requires a notion of logical structure based on the so-called Porphyrian tree, I will present some background on this logical structure as well as some of the views concerning its ontology. Next I will present the three main second scholastic positions on the ontological source of logical possibility: transcendental possibility, "modal voluntarism", and finally "divine conceptualism".

1. PRELIMINARY REMARKS

The problem of discovering an ontological basis for logical possibility is to locate a reasonable type of "being" that a logically possible being possesses but an impossible one does not, and also to defend the "existence" or the

* I would like to thank Clarence Bonnen and Richard Epstein for helpful comments on this essay.

“being” of that being in a philosophically respectable manner. Logically possible beings can be divided into two broad categories. There are those that actually exist, such as the page on which these words appear, and there are those that are not actual, but are still logically possible. An example of the latter would be Thomas Aquinas’ son. Since Aquinas never (historians claim) had a son, then there never was an actual son of Aquinas. However, there is no logical rule that implies that his existence is self-contradictory. In this paper I will not be taking up the question as to what is the difference between actual and merely possible existence. I will be focusing instead on the distinction between the logically impossible and the possible, although the possible as far as I am concerned includes both actual and non-actual possibilities.

Scholastics discussed many types of possibility, such as metaphysical, physical, moral, temporal, obediential, and hypothetical possibilities. Logically prior to them all, however, is the notion of logical possibility. The main definition of a logically possible entity given by second scholastics is that the entity’s existence is consistent with, or “non-repugnant” to existing. The main test of non-repugnance to existence is self-consistency. Impossible beings always possessed some internal inconsistency. The main example or type of impossible being was the “chimera”, which was not simply a mythological beast, but a “beast” with an inconsistent group of essences; it is a human, lion, horse, etc., all at the same time, despite the fact that being human is inconsistent with being a lion.

While the notion of logical possibility presupposed a notion of consistency, this notion of consistency requires the backing of a system of relations between the terms used to describe entities. This system for scholastics was the system of Porphyrian trees of which the scholastic logician was so fond, and which I discuss more fully below. This system points out that the adjective “logical” does not quite mean the same to us as it did to scholastics. Logic for them still viewed what we might consider

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1 Knuuttila 1993, and see Knebel’s contribution to this volume.
2 Suárez 1983, 58 (DM 31, 2, 2) and Mastrius 1727, 25b. References to Suárez’ Disputationes Metaphysicae (DM) list disputation, section, and paragraph. The notion of repugnance does connote that the genera and species are engaged in a fight with each other. Sven Knebel (1971-, 879) has found that the Stoics seem to be the source of the pugilistic metaphor. Michel Foucault (1973, 24) cites some colorful texts in which species wage war on one another. For more on scholastic notions of repugnance (especially in Thomas Aquinas and Duns Scotus), see Mondadori’s contribution to this volume.
3 For introductions to the history of impossibilia, see Ashworth 1977; Biard 1985; Doyle 1995; Ebbesen 1986.
physical and metaphysical truths as logical truths, such as ‘humans are rational animals’. 4

When seeking the ontological source of possibility, the main concern for second scholastics was whether God is that source or not. Some accepted the idea that logical possibility is independent of God, a view I call (following Knuttila) “modal transcendentalism”. However, many denied this, and the two most popular candidates for a divine source of possibility were God’s Intellect (a view I call “divine conceptualism”) and God’s Power (a view I and others have denominated “modal voluntarism”). Each has its own problems, as we will see below.

I now turn to a historical presentation of second scholastic views. I wish that I could boast that I offer a thorough listing of all second scholastic views but this is hardly feasible at present. The status of second scholastic study is unfortunately so poor that there is not even a complete bibliography of second scholastic philosophy texts. 5 It is easy to discover authors unmentioned in any history of the period. Therefore, all I will offer is a preliminary sketch of views by several second scholastics on the question of the ontological source of logical possibility.

I also narrow the focus of this essay to mainly Catholic authors. Focusing on Catholic authors entails that I will be discussing authors more closely tied with the philosophical schools of the Middle Ages. These include Thomists, philosophers who base their philosophy on the works of Thomas Aquinas, Scotists who worked with the ideas of John Duns Scotus, and, finally, the few surviving Nominalists. 6 The school of Nominalism was not so coherent as that of the Thomists and Scotists because there was a wide-range of philosophical positions falling under its name, although Nominalists of the time generally viewed themselves as the intellectual heirs of medieval philosophers such as William of Ockham and John Buridan. 7 This focus on Catholic authors by no means entails that

4 I have simplified things a bit here by taking categorical propositions such as ‘humans are animals’ and ‘humans are stones’ as the primary examples. Second scholastics are aware of other types of statements which have their own complexities, such as identity statements (‘a chimera is chimera’) and statements about God. (Cf. Wells 1994, 14-15 and Knebel 1971-, 879.) I will have a few things to say about the latter, but will save the identity statements for another time.

5 Of course Risse 1998 has improved the situation greatly.

6 This too is a simplification. Thanks to the “counter”-reform of Catholicism in the sixteenth century, other orders besides Thomist Dominicans and Benedictines and Scotist Franciscans (with the “Eclectic” Jesuits falling somewhere in between) developed their own philosophical traditions. Jansen 1937 remains the only work on these other traditions.

7 Nominalists at the turn of the sixteenth century list among their predecessors William of Ockham, John of Mirecourt, Gregory of Rimini, John Buridan, Pierre d’Ailly, Marsilius of Inghen, Adam Wodeham, John Dorp, Albert of Saxony, and others. The list appears in a letter written just before the turn of the century and is reprinted in Muñoz Delgado 1964.
Protestant scholastics of the age are uninteresting or should not be studied. They are both interesting and worthy of study, but they would add too much to the length of the present essay.

2. THE LOGICAL STRUCTURE OF THE WORLD

One basic disagreement among second scholastics, especially in the early sixteenth century, had to do with the role that essences play as the sources of possibility. To understand the debate, the reader should be introduced to, or reminded of, the notion of a Porphyrian tree.

Porphyry's Tree for Substance

70-71 and in Prantl 1870, 186-87. For a consideration of late-medieval nominalism and its roots, see Hoenen's contribution to this volume.
The notion of essence is of course basic to the medieval as well as second scholastic notion of possibility and other modalities. This perspective holds that there is a structure of connected “beings” which bear the defining aspect or “nature” of individual entities. These “beings” are called “essences”. These essences are related to possibility because the defining aspects they contain determine whether statements about them express consistencies or not. Consider the statement ‘humans are stones’. According to most scholastics this statement expresses an impossibility. Humans cannot be stones. But, why not? The reason usually given for the impossibility is that the term ‘human’ stands for an essence that is related to all the other essences in such a way that it (human) is “repugnant” to being a stone.

From their first days of logical training, medieval students (at least in the later centuries of the Middle Ages) were taught that logic is based upon the ten categories of Aristotle as arranged in the branches of the “Porphyrian trees”. Porphyry, a disciple of the neo-platonist Plotinus, wrote a commentary on Aristotle’s Categories called the Isagoge. In the commentary he described the logical structure of the world which (he thought) Aristotle’s text implied. The logical structure of the world consisted of (usually) ten trees with the name of each category at the top (substance, quality, quantity, etc). The top term branched into mutually exclusive terms, which in turn branched until one reached the least general terms at the bottom. (See the figure for a version of the tree for substance.) Thus, the category “substance” branched (sometimes) into “corporeal” and “incorporeal”. The tree then follows one of these branches down, giving the underlying genus, “body” (corpus), of which “corporeal” is the specific difference (differentia) and “substance” is the genus. “Body” also branches into two specific differences: animate (living) and inanimate. Animate is the specific difference of “living body” (vivens), which branches to sensitive (i.e. able to sense) and insensitive. Sensitive bodies are called “animals”, of which there are two kinds: rational and non-rational. Rational animals are called “humans”, the general term at which most trees end, with all the individual humans at the “roots” of the tree.

At a glance the tree offers the proper Aristotelian definition of “body” as corporeal substance (genus plus specific difference). Hence it is necessary that humans are animals, because the species animal is located above the species human on the Tree – with it assumed, of course, that the structure of that Tree itself is necessary for some reason, as we see below. But, one should also note that its structure also determines what is possible and what is not. Humans are at the bottom of a branch which lies under animate (living) substance while stones are categorized under inanimate substance.
Thus, because of the structure of the tree, the statement ‘humans are stones’ entails that some animate beings are inanimate.\textsuperscript{8}

It is, however, extremely important for understanding second scholastic discussions about the metaphysics of modality to note that there were two distinct views about the role essences play in determining what modality a statement has. One view holds that the trees, essences and all, are the primary basis for the modality of statements. However, there is a rival to this perspective. Many second scholastics were of the opinion that God creates essences, and that God’s creative act is their efficient cause.\textsuperscript{9} Since the efficient cause is always supposed to result in the actual individual creature created, the creation of the essence would be contemporaneous with the creation of an actual individual. Hence, the human essence, apparently, does not come about until the creation of the first human being, allegedly Adam.\textsuperscript{10}

Created essences, of course, cannot offer a basis for logical truths that are necessary given the usual scholastic assumption that such truths are eternal as well. The solution to this problem of created essences supporting necessary truths often embraced by scholastics of the sixteenth century was that even though the essences are created, the connections between them are not. So, even though the human essence is created along with the first human, and the animal essence with the first animal, the connection between the two is eternal. Paul Socinas (d. 1494) expresses the view in this way:

I will not prove that an essence does not have an efficient cause because it is certain that humanity, stone-ness, and anything else that belongs to entities are produced by the first cause [i.e., God]. I instead prove that there is no efficient cause of the connections signified by this proposition ‘humans are rational animals’, as there is an efficient cause of the connection signified by this proposition: ‘a human is’. In fact, God, by producing a human, joins being to it.\textsuperscript{11}

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\textsuperscript{8} For a less truncated introduction to Porphyry’s trees see Hickman 1980, 22-25 and Ong 1983, 78-9. For Porphyry’s text see Porphyry 1975, 35-36, and see especially note 30 on p. 35. For a brief history of “critiques” of the trees, see Eco 1986, 57-68. There were even Cartesian versions of the trees, as, for example, in the work of Edmundus Purchotius, mentioned in Risse 1970, 126-8.

\textsuperscript{9} This rival view was first noted, I believe, by Norman Wells in his introduction to Suárez 1983, 8.

\textsuperscript{10} Domingo de Soto (1587, 34h) offers Adam as an example: “nihilominus natura humana non habuit esse actuale, nisi in creatione rerum, puta in Adam.”

\textsuperscript{11} Socinas 1588, 22a: “Et probatur, non quidem quod essentia non habeat causam effectivam, quia certum est quod humanitas, et lapideitas, et quicquid est in rebus, a prima causa est productum, sed probatur quod nulla sit causa efficiens connexionis significati huius propositionis, homo est animal racionale, sicut aliqua est causa efficiens connexionis significati huius propositionis, homo est, Deus nam producens hominem copulavit e; esse.” (Italics in translation mine.)
So, for statements such as ‘humans are animals’ the copula ‘are’ represents an uncaused connection. On the other hand, statements that presuppose and attribute actual existence to something, such as ‘a human is’, have the first cause God as the cause of their “connection” with existence. Other advocates of this view include the famous Aquinas commentator Sylvester of Ferrara (c. 1474-1528), the Salamanca Dominicans Domingo de Soto (1494-1560) and Domingo Báñez (1528-1604), and the Portuguese Jesuit Pedro da Fonseca (1548-1599).12

This view I call the “string view” since it keeps the connections between essences in eternity while making essences temporal.13 What the eternal strings of predication connect are temporal objects (the created essences), which prior to creation do not exist in any sense, although their strings seem to dangle forever. To shift the metaphor, string theorists remove the trunk of Porphyry’s tree while preserving the branches.

There was some disagreement concerning the nature of this predicative connection. Socinas and Chrysostomus Javellus (ca. 1470-ca. 1545) hold that the connection is a relation of reason, which is a type of being of reason (ens rationis). An ens rationis is a mind-dependent being. In other words, even if no humans had ever been created, there would still be a mind-dependent relation “between” humans and animals (even though there are no individuals or essences for the relation to be “between”).14

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12 For Soto, see Soto 1587, 34a: “Idcirco species humana quamvis sit perpetua quantum ad connexionem praedicatorum essentialium (quod est dicere ab aeterno est necessarium hominem esse animal rationale) nihilominus natura humana non habuit esse actuale, nisi in creatione rerum, puta in Adam, et eodem modo, nunc corruptis hominibus, corrumpenter species.” Also, p. 337b: “Homo enim et animal quatenus sunt universalia, id est, quatenus abstrahunt ab hoc et illo homine, sunt res per se incorruptibiles. Quod est dicere: Connexio extremorum essentialium est perpetue veritatis.” This connection is not a proposition, a view that “Nominalists” propose but Soto rejects as contrary to Aristotle’s authority (see Kennedy 1972, 27). For Báñez, see Báñez 1934, I, 227a-b, and Wells’ comments in Suárez 1983, 32, n. 56. For Sylvester, see Sylvester of Ferrara 1920-1930, t. XIII, 389 (= Summa contra gentiles II, cap. 52).

13 Although he does not call it the string view, Norman Wells was the first twentieth century scholar to identify the view in Suárez 1983, 11, which Wells discusses in greater detail in Wells 1994, 25-6.

14 Socinas 1588, p. 65b: “Identitas hominis cum animali non habet causam, ergo hominem esse animal non habet causam. Consequentia patet (…) Antecedens probatur. Nullum ens rationis habet causam agentem. Sed ista identitas est ens et relatio rationis. Ergo. Minor patet, quia est relatio eiusdem ad seipsum.” Cf. 233a-b: “Ista igitur propositioni, homo est animal, significat unionem sive identitatem sive complexionem animalis ad hominem, significat enim animal inesse homini (…) Haec autem identitas animals ad hominem est relatio rationis tantum, cum sit eiusdem ad ipsum, et ideo ad eam sufficit quod extrema habeat esse apprehensum ab intellectu.” For Javellus, see Javellus 1568, 752a: “Complexa necessaria significantia ens productum, ut homo est animal, si considerentur in habitudine terminorum nullam habent causam effectivam, probatur, talis habitudo est relatio rationis (…) sed relatio rationis cum sit ens rationis nullam habet causam effectivam.”
Fonseca, perhaps borrowing his terminology from Jerónimo Pardo, rejects this relation of reason view and holds instead that the connections are a “negation of diversity” with regard to essence. Thus, ‘humans are animals’ expresses the negation of an essential diversity between human and animal. These negations, Fonseca thinks, “always exist” and since they are negations, cannot have an efficient cause. Although they lack an efficient cause, such relations are dependent on God’s power, as we will see below.

In any case, the main point to bear in mind is that whether one embraces the full blown “essentialist” view that complete Porphyrian trees are the eternal basis of possibility and necessity, or the “string view” where only the connections are available eternally to support them, one still has all three options available as to the source of that framework. Thus, there are six possible views about the ontological source of modality: one can be an (A) essentialist who holds that the structure of essences is (A1) “transcendent” in the sense of being independent of God, or (A2) an essentialist who holds the essences are generated by God’s power or (A3) by God’s intellect. Alternatively, one can be (B) a string theorist who holds that (B1) the strings are transcendent, or (B2) the strings are derived from God’s power (as Fonseca believes), or (B3) derived from God’s intellect.

To complicate matters further, there were two versions of the string theory. The first held that the connections are within the Aristotelian categories, that is, they link the essences within the Porphyrian trees. I call these views “categorical” string theories. A second, minority view held that in addition to the predicative connections, there were also connections created by logical as well as modal relations. Since the logical connections were considered to be outside of the Aristotelian categories, medieval

Javellus however thinks that essences do not have efficient causes (466b) while Socinas does (231b). Javellus is not therefore a string theorist strictly speaking since for him both the essences and their connections are necessary and eternal.

15 Fonseca 1615. II. p. 322D-23B: “De inde adverte, huiusmodi identitates non esse sumendas pro indentitatibus formalibus, quae sunt relationes rationis, et posteriores ipsis connexionibus, in quibus fundantur (....) Idem identitates has fundamentales, nihil aliud esse, quam negationes quasdam diversitatis suicientor a praedicatis, exempli causa: identitatem hominis cum animali, nihil aliud esse quam negationem diversitatis ab illo secundum essentiam (....) At identitates negativae, quisbus entia dicuntur non esse diversa a suis praedicatis essentialibus et proprietatibus, semper suo modo extiterunt, nec possunt ullo modo non existere.” And at 332E: “(...) siquidem connexiones necessariae simpliciter sunt purae quaedam negationes diversitatis suicientor a praedicatis per se, ut dictum est, negationes autem purae (hoc est, quae, ut suo modo existant, non indigent existentia suicientor) non habeat causam, quae propria dicatur causa, ut apertum est.” Citations for Fonseca include the volume number, page number (a column number in this case), and a letter that is printed in the margins. Mastri attacks the view at Mastrius 1727, 26a-b.
philosophers called them "syncategorematic." Thus, I call the second view the "syncategorematic" string view.

The syncategorematic view has its roots in the Nominalism of the late Middle Ages, and as in the categorical string view, it comes out of attempts to provide some sort of ontological basis for eternal, necessary truths about contingent entities. Second scholastics were well aware of Ockham's solution to the problem. According to Ockham, statements such as 'humans are rational animals' were in fact disguised conditionals of the form: 'if humans exist, then humans are rational animals'. Or, they could be interpreted as modal propositions containing the modal term 'possible' (i.e., a de possibile proposition), such as, 'every human possibly is a rational animal'.

Ockham's view represents the first steps towards a view that logical modalities are not based on mere categorical predication, but instead on the trans- or syn-categorical relations. On this view, the syncategorematic relations provide a deeper analysis of the relations hidden within 'humans are animals'. Ockham has thus taken the first steps towards the view that the logical structure of the world is not based on Porphyrian trees, but on modern predicate logic. In other words, such a move is a move towards a notion of logical possibility more familiar to us post-Fregeans simply because it is based on a logic more familiar to us: classical first order logic instead of the Aristotelian syllogistic.

The move was not without its detractors. For example, Pedro da Fonseca, whom we have already met as an advocate of the categorical string view, devotes some effort to arguing against Ockham's view. Fonseca concludes that propositions such as 'humans are animals' are necessary simpliciter and do not require any further analysis to reveal that

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17 Ockham, as well as other logicians of the fourteenth century, were of course, struggling to find a place for sentential logic, probably first systematically studied by the Stoics, within the syllogistic structure of Aristotle's logic. We are most familiar with logics derived from Frege's work which provided a synthesis of Stoic sentential logic with the Aristotelian syllogistic. I am not suggesting that Ockham provides anything like Frege's systematic solution. What I am suggesting is that Ockham and the Nominalists have glimpsed the Fregean idea that Aristotle's categorical statements require an analysis into even simpler components, including components from sentential logic.

18 On a speculative note, I suspect that a full blown "possible worlds" ontology as the metaphysical basis for modalities requires two ideas: first, a Boolean framework for logic and second, nominalism. Possible worlds semantics start with individuals and sets along with the Boolean interpretation of basic logical operators (negation, conjunction, quantifiers) to build their models. Second scholastics, mostly heirs to medieval realism, start with essences rather than sets and individuals. The possible-worlds approach, at least in the twentieth century, has instead constructed essences out of possible worlds models, as in Lewis 1986, 50-69.
necessity. However, many second scholastics, including Suárez, advocate the analysis of necessary categorical statements into conditionals.

One of Ockham’s Nominalist heirs takes a few more steps towards the more modern view of the logical structure of the world. Among the Nominalists at the University of Paris in the early sixteenth century was the logician Jerónimo Pardo (d. ca. 1502). Pardo was the main (or perhaps only) proponent of the syncategorematic string theory.

Pardo first distinguishes absolute from relative modalities. Absolute modalities are modalities simpliciter, which denote the type of existence an entity possesses. Thus, only God is necessary absolutely because He is the only necessary being. Relative modalities are the modalities possessed by individuals in comparison with one another. Thus, in one of Pardo’s examples, a donkey and a human have a necessary, negative relation between them that makes the statement ‘a donkey is human’ necessarily false.

In Pardo’s opinion, these modal relations are just as much part of the extramental world as individuals:

For example, even after every operation of the intellect is set aside, human and donkey are different things (res diversae) .... If, therefore, they are different things, they have some division between them, and because of this diversity the intellect can understand that a human is not a donkey. Therefore, the division in reality is prior to that in the intellect.

Thus, a necessary, negative relation exists between a human and a donkey and this provides the basis in extramental reality for the impossibility of the donkey-human. Modal strings in fact appear in as many varieties as there are distinct modes. In addition, there seem to be strings for each of the

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19 Fonseca 16.5, II, 319A-320F.
20 Suárez 1885, 205 (DM 51, 12, 45). See also Mastrius 1727, 26b.
21 For a complete and careful study of Pardo’s sophisticated views on propositions, see Pérez-Iñarburua 1999, and see also Pérez-Iñarburua Forthcoming.
22 Pardo 1505, f. v(vb): “Duplex est necessitas, scilicet absoluta et simpliciter dicta; alia est necessitas relativa. Seu aliquid dicitur necessarium dupliciter, scilicet absolutum et relative. Similiter de contingentia dicendum est quod est duplex: absoluta et relativa. Et pariforma impossibilis dicenda est duplex: absoluta et relativa.”
23 Pardo 1505, f. vi(ra): “Illud enim dicitur necessarium necessitate absoluta quod non potest non existere in rerum natura.”
24 Pardo 1505, f. vi(ra): “Nam homo non solum negative et vere refertur ad asinum, sed etiam relative necessario ita quod homo est quid necessarium necessitate relativa in ordine ad asinum negative. Homo enim necessario non est asinum, licet non sit necessarium necessitate absolu:a.”
logical connectives, including negation and disjunction. Pardo thus concludes that a nominalistic ontology of particulars had to be extended to include modal and logical connections in order to provide a basis for the truth of modal statements as well as those containing logical operators.

Pardo's discussion underscores the point I made earlier: the nature of the structure supporting modal relationships is logically distinct from the question: what is the ontological source of that structure? I now turn to this latter question, and since there were basically three answers to the question of the ontological basis of possibility - namely, they are either independent of God, dependent on His power, or dependent on His Intellect - I will discuss each and in that order.

3. TRANSCENDENTAL POSSIBILITY

Simo Knuuttila has recently argued that Scotus and Ockham share the opinion that possibility is "transcendental" in the sense that it is prior to and independent of God:

In Duns Scotus' modal theory, the ontological foundation of thinkability and logical possibility is given up. The domain of logical possibility, structured by logical necessities and divided into different classes of compossible states of affairs, is taken as the a priori area of conceivability. Scotus and Ockham thought that necessary and possible truths are prior to any intellect and being, whether divine or earthly, although as such they are not actual in any sense.

Necessary truths in particular "are neither realistic nor constructivist, but are some kind of absolute preconditions of thinking." Other scholars, however, have argued that Scotus and Ockham do not claim that the modalities are independent of God.

Fortunately, we do not have to resolve the debates of medievalists on this issue. However, it is worth noting that even among second scholastics, and especially among the Scotists, there was little agreement as to what Duns Scotus originally taught concerning the source of possibility.

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26 See for an example, Pardo 1505, f. vi and see also Coombs 1995, 170.
27 For further discussion of Pardo's modal strings, see Coombs 1995, 18-24.
28 Knuuttila 1993, 148. The view was previously argued for in Alanen and Knuuttila 1988, 35.
29 Besides the works cited in Knuuttila 1993, 142, we should note that Wolter has recently renewed his argument in Wolter 1993, 106. (However, Wolter's talk of "a kind of phenomenology of divine consciousness" may indicate a closer similarity between Wolter's and Knuuttila's interpretation than one would otherwise suspect. If such a "phenomenology" discovers "transcendental preconditions" of thought, then the views are essentially the same.) As for Ockham, Adams argues that Ockham derives possibility from the divine ideas, in Adams 1987, II, 1082.
Nonetheless, there were some second scholastics who were committed to a
transcendental view of the source of possibility.

By a “transcendental view” I will mean a view which (1) claims that the
ontological ground of possibility is independent of God, and (2) holds that
this ontological ground is “not actual,” that is, this ground cannot be
described as actually existing “in any sense.”\(^{30}\) Given condition (1), such
views will hold that possibility is not derived from God’s intellect, power,
or will, but is independent of any function of God.

Condition (2) distinguishes transcendental views primarily from that
often attributed to Henry of Ghent by second scholastics. According to this
interpretation of Henry, he claimed that possibility was based on an essence
possessing an “actual” being.\(^{31}\) Most second scholastics (not least, Scotists)
were hesitant to embrace such a view because they were well aware of
Scotus’ and Ockham’s arguments against Henry’s position. In fact, this
idea that possibilities possessed some type of actual or real existence
independently of God was usually (but not always) attacked by second
scholastics as “Wyclif’s heresy”.\(^{32}\) According to second scholastics, John
Wyclif (ca. 1320-84) had claimed that creatures possessed a “real being”
eternally, and this was independent of God.\(^{33}\) Several Thomists, such as
Cajetan and Bañez, claimed that Scotus, too, held this view, but many
Scotists, as well the Jesuits Suárez and Vasquez, felt that this was at best a
mistake, and at worst, a result of the “lies of Bañez, Cajetan, and other
Thomists.”\(^{34}\) However, some second scholastics interpreted Henry as
rejecting condition (1) and held that Henry believed that possibles were

\(^{30}\) Knuuttila’s remark that “In Duns Scotus’ modal theory, the ontological foundation of
... logical possibility is given up” is perhaps too strong. On his view of Scotus’ modalities,
they are of course “beyond being” in the sense of being distinct from any kind of being
either identical to or produced by God. However, Scotus seems to be posulating a “reality”
(albeit a shadowy one) which somehow “causes” intellects (omniscient or at least rational)
to think logically and to distinguish consistencies from inconsistencies (for an approach to
this issue from another angle, see Honnefelder’s contribution to this volume, esp. §§ 1.1,
1.3). The Franciscan John Punch borrows the phrase “diminished being” from Scotus
(although perhaps not in a way Scotus intended) to describe this transcendental “being”.

\(^{31}\) Mastrius 1727, 19: “Henricus (...) tenet creaturas, sive rerum essentias secundum
statum possibilitalis (...) habere in seipsis ab aeterno esse inextricam actuale quiditativum
suae essentiae.” Cf. Suárez 1983, 37 (DM 31, sec. 2). More recently, John Wippel (1984,
179) is careful to claim that possibles for Henry may have “some reality in themselves from
eternity” but not that this is “actual”. The second scholastics were apparently interpreting
Henry’s esse essentiae in a very strong sense.

\(^{32}\) One exception was the Italian Jesuit Francesco Albertini. See Di Vona 1968, 94-101.
Albertini was active in the early seventeenth century, publishing theological works during
the teens. Punch and Mastrius both read and commented on his work.

\(^{33}\) Suárez 1983, 37 (DM 31, sec. 2), and Mastrius 1727, 19a. For more on Wyclif and his
“heresy”, see Hoenen’s contribution to this volume.

\(^{34}\) Mastrius 1727, 19b.
dependent on God because God is their exemplar cause. Indeed some second scholastics defend exemplar causality, as we will see below.

Among the Thomists of the early sixteenth century, the famous Thomas de Vio (1468-1534), best known as Cajetan, seems to hold the transcendental view. For him, essences as well as their predicative strings are independent of God. Of course, many of the Thomists of the period hold that the essences do not have an efficient cause, but it does not follow that they also hold that the essences are completely independent of every type of causality from God, including “exemplar” causality. What commits Cajetan to the view is his claim in his *Commentary on Aristotle’s Posterior Analytics* that if everything were annihilated, including God and the heavenly spheres, but not “me” (that is, a solitary intellect), then my knowledge of a nonexistent rose would still remain.\(^35\) By removing God and the rest of creation, Cajetan removes every conceivable cause of a possible rose, including God’s power and His intellect. Nonetheless, “I”, the only existing thing, would still know (to use Fonseca’s example) that a rose has an odor.\(^36\) The implication is that the framework of possibilities as represented in the Porphyrian trees would still exist even if there were no God.\(^37\)

One interesting aspect of Cajetan’s “thought experiment” in which we imagine a “possible world” where only one, non-divine entity exists, is that this entity is a rational one, capable of possessing knowledge, namely an “I”.\(^38\) Cajetan does not discuss the case where there is absolutely nothing at all. Would a rose be a rose in a completely empty world? If Cajetan’s answer is “no,” then he is very close to the type of position Knuuttila ascribes to Scotus and Ockham. The system of Porphyrian trees is thus a pattern in which any logically trained rational mind must (or at least should) think and which guarantees the logicality and consistency of

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\(^35\) Cajetan 1505, f. 14(ra): “Nihil enim minus remeranet scientia mea de trianguli passionibus et roseae, si omnia annihilarentur me solo remeranet, quam si remanet prima causa aut corpus celeste, etc. Extracea enim haec sunt a scientia tam habita. Nulla enim mutatio ex hii sequitur in ea.” String theorists are very fond of this argument, as we will see below and as documented in Wells 1994, 25-26 and 30, n. 77.

\(^36\) Cf. Fonseca 1615, II, 324D-325C, where he attacks Cajetan’s and Socinas’ views.

\(^37\) Cajetan clearly thinks that essences have no efficient cause and he never seems to reduce them to divine ideas, which would rule out any other type of cause. See Kendzierski and Wade’s remarks in Cajetan 1964, [14] and Wells in Suárez 1983, 8. It is worth noting that Knuuttila (1993, 142) quotes a similar argument in Scotus to prove his advocacy of the transcendental view; see also § 4 of Knuuttila’s contribution to this volume.

\(^38\) Although I call this Cajetan’s thought experiment, he may have borrowed it from Socinas (1588, 65b) or Capreolus (John Capreolus 1900, I, 303a) who borrows the example of the rose from Robert Grosseteste. Cf. Wells 1994, 19-22. The basic thought experiment appears in Scotus, *Ord.* I, d. 36, qu. un., n. 61, (John Duns Scotus 1950-, VI, 296) – translated in Knuuttila 1993, 142 – and *Ord.* I, d. 43, qu. un., n. 5 (ibid., VII, 353-4).
whatever world God thinks of creating, Knauttila quite properly notes that these patterns are the ways in which any omniscient mind must understand all possibilities, since omniscient beings always understand things correctly and thus know exactly what is consistent and possible, and what is not.

One other important aspect of the view is that this structure of thought requires the existence of a mind to “activate” it. If the world were completely empty with no minds at all, then such a “world” would lack modality as well. Nothing would even be possible in such a world. Or impossible, for that matter. Of course, for the scholastics such a world is posited per impossibile and strictly speaking the idea of “activating” a logical structure is much too temporal an analogy to use about a world with a necessary and eternal being “in” it. However, if I may stretch the analogy a bit further, this per impossibile thought experiment points out that even though God may “activate” the structure by thinking about it, He does not create, nor can He change, that structure. It remains independent of Him in those senses.

Among the early sixteenth-century string theorists, Socinas and Sylvester of Ferrara hold that the strings are transcendent. Socinas, after claiming that there is no efficient cause for the connection between ‘human’ and ‘animal’, equates the necessity of ‘humans are animals’ with that of ‘God is one’ since their opposites are equally impossible.[39] Socinas also produces an argument similar to Cajetan’s. If per impossibile God did not exist, it would still be true that humans are animals.[40] However, for ‘humans are animals’ to be true still requires that we posit some mind in the world in order to activate the strings. When arguing that ‘humans are animals’ has no efficient cause, Socinas says

... with the divine ideas posited, what results, necessarily is, setting aside all causality. But, when the idea of human and the idea of animal are posited, their connection results, because the idea of human necessarily represents animality.[41]


[40] Socinas 1588, 65b: ”Si per impossibile Deus non esset, et nulla causa agens, hominem esse animal esset verum, ergo hoc complexum non est a causa agent.”

[41] Socinas 1588, 22a: “Circumscripta omnia efficiens a Deo, adhuc hominem esse animal est verum, ergo si hominem esse animal sit ab aliquo efficiens, sequitur quod fiat postquam est. Consequentia patet. Antecedens probatur: illud quod resultat positis divinis ideis est necessum esse, circumscripta omni causalitate. Sed posita idea hominis et idea animalis resultant earum connexion, quia idea hominis necessario representa animalitatem.”
In this passage, the connection (which is a “relation of reason” for Socinas) “activates” as soon as God thinks of or “posits” the ideas of human and animal. Keeping in mind the passage where, if God did not exist, humans would still be animals, Socinas seems to be saying that even if there were no God, any other rational mind would still “activate” the connection as soon as it considers or “posits” the ideas of human and animal.  

Sylvester of Ferrara similarly claims that the connections between predicates are neither generated by the intellect nor by the actual entities:

Quidditative predicates belong to a nature not from the being that it has in the intellect nor from the being it has among entities, but from itself as it abstracts from all being. Even if no intellect is thinking [about it], and no human exists in reality, a human is a rational animal.  

Sylvester quickly denies that this connection between the essences “human” and “rational animal” is an “actual” predication since actual predication requires a mind to connect them.

However, there is another type of predication for Sylvester that he calls a fundamental and ad rem predication. It is a predication that is thinkable (cognoscibilis) by either a created or the divine intellect. This type of predication is not ad rem in the sense that the entity or its essence exists. Sylvester has already admitted that the individual and its essence are both created, and he has admitted that he is speaking of the nature not ex esse quod habet in rebus – not from the being it has in actual entities. This predication ad rem is prior to any intellect or real existence. It represents the essential and proper characteristics that a given entity would have if a rational mind were to think about it. Again, just as in Socinas, it is prior to the divine ideas, but “when” God has His Ideas, then the connections “result”:

In the divine mind there are eternally ideas of all natures, from which, having been posited, the connection of the substantial predicate with the subject results.

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42 Cf. Socinas 1588, 233b, where he says: “<h>ae autem identitas animalis ad hominem est relatio rationis tantum (...) et ideo ad eam sufficit, quod extrema habeant esse apprehensum ab intellectu.” Once the extremes animal and homo possess “apprehended being” by an intellect, then the logical relations come into existence. However, they are still not derived from God’s intellect, since even if there were no God, humans would be animals.

43 Sylvester of Ferrara 1920-1930, t. XIII, 389b (Summa contra gentiles II, cap. 52): “Praedicata quidditative conveniunt naturae non ex esse quod habet in intellectu, nec ex esse quod habet in rebus, sed secundum se, ut ab omni esse abstrahit. Nullo enim intellectu considerante, nec etiam homine in rerum natura existente, homo est animal rationale.” Immediately prior to this quotation, Sylvester restates the doctrine of the triplex status naturae.
Thus, the connections require some mind to bring together “human” and “rational animal” in a proper predication. But, even if there were no minds at all, whether human or divine, the connections have a quasi-existence ad rem and so have the potentiality of being thought.

One Franciscan named John Punch (ca. 1599-1672) from the great seventeenth-century revival of Scotism committed himself to the view that the ground of possibility has elements independent of God which function as the “absolute preconditions of thinking.” His fellow Scotists subsequently attacked him viciously for holding such a view.\(^{35}\)

A good Scotist, Punch rejects the claim (attributed to Henry of Ghent) that creatures have a type of actual essential being eternally.\(^{46}\) Nonetheless, creatures require some type of eternal being because God has an eternal knowledge of them, and they must possess some type of being that terminates God’s act of cognition.\(^{47}\) Thus, the possible possesses eternally a type of “diminished” being (esse quoddam diminutum). Diminished being possesses a level of reality somewhere between real (esse simpliciter reale) and mind-dependent being (ens rationis).\(^{48}\)

Punch’s diminished being shared features of both real being and mind-dependent being but could not be labeled either actual or mind-dependent. It was not actual because the actual being (esse reale simpliciter) of creatures is not eternal. The actual being of creatures is not eternal because it is brought into existence in time.\(^{49}\) Nor is diminished being mind-

\(^{35}\) Alternate versions of Punch’s name are Poncius and Pontius. Millet 1967, 1025, tells us that the varian: “Ponce” is an erroneous derivation from the latinized versions of Punch. Punch’s dates are controversial. Millet gives 1599-1661. However, Maurice Grajewski had evidence for Punch being alive in 1672 (Grajewski 1946, 63). The sorry state of Punch’s biography reveals again modern philosophy’s prejudice against second scholastics, especially those who were not “Thomists”. For a presentation of the debate between Punch and Bartholomew Mastri on the foundation of the possibilities, see Coombs 1991.

\(^{46}\) Punch 1662, 902b: “Henricus videtur dicere quod <creaturas> habuerunt esse reale ab aeterno, non tamen existentiae, sed essentiae.”

\(^{47}\) Punch 1662, 903a: “Omnes creatura habuerunt aliquid esse aeterno. Haec vix potest negari, quia intelligebantur ab aeterno a Deo, et actu terminabant cognitionem divinam; ergo habuerunt ab aeterno aliquid esse, secundum quod terminabant istam cognitionem.”

\(^{48}\) Punch 1662, 903b: “Illud esse, quod habent creaturae aeterno, est esse quoddam diminutum, quasi medium inter esse rationis et esse simpliciter reale.” The edition has ‘est’ where I have amended ‘esse’. Knuutilla (1993, 141) glosses “diminished” being as “weaker than existence”.

\(^{49}\) Punch 1662, 902b: “Creatura nullum habuerunt esse reale simpliciter ab aeterno (….) Probatur primo: omnia in tempore producta sunt quoad esse realis simpliciter, ergo non habuerunt esse reale simpliciter ab aeterno.”
dependent being, because it is not contradictory, that is, it lacks "repugnance" with existing.\textsuperscript{50}

Punch holds that the diminished, remote, fundamental being of possibles is not derived from God’s will, His omnipotence, or His intellect. The possibles possess this possibility necessarily "from themselves" and therefore, as Knuuttila puts it, any omniscient being would consider humans to be possible but chimeras as impossible.\textsuperscript{51}

Nonetheless, Punch allows a certain dependence on God for the possibles. There is a passage where he considers an objection to his view such that if God were self-repugnant, that is, inconsistent in Himself, then possible creatures would also be self-repugnant. It would follow that possible creatures have their being from God.\textsuperscript{52} In other words, if God were an impossible, then in turn the possibles would be impossible.

Punch accepts one interpretation of this objection, namely that if God were repugnant to existence, then "there would be no cause which could give being \textit{simpliciter} to a creature, and therefore it would not possess possible being." We are not, Punch maintains, to interpret this as claiming there is any "influx" whether "real or intentional" from God which "communicates possible being" to creatures.\textsuperscript{53} However, just as there would "fundamentally" not be any visible color if there were no eyes to see it, so there would be no possible creatures if there were no God.\textsuperscript{54}

Punch’s analogy of the eye and visible color invites us to imagine that the possibles are to God as the color of an object is to creaturely eyes. Thus, if there were no eyes in the world, then color would not be visible, if ‘visible’ means that there are eyes capable of seeing the color. However,

\textsuperscript{50} Punch 1662, 903b: “Neque \textit{habet esse diminutum} esse rationis, cum non habeat repugnantiam.”

\textsuperscript{51} Knuuttila 1993, 142 and 148. Cf. Punch 1662, 904b: “Deus non dat creaturae esse possibile, saltem fundamentaler, sed habit ille esse a seipso formaliter et necessario.”

\textsuperscript{52} Punch 1662, 904a: “Obicies tertio, si Deus repugnaret, repugnaret etiam creaturae possibileis, ergo creatura possibilis habeat esse a Deo.”

\textsuperscript{53} Punch 1662, 904a-b: “Respondeo distinguishing ante cedens. Ex defectu influxus utilis in esse possibili, nego; ex eo quod si Deus repugnaret, non esset aliqua causa, quae posset dare creaturae esse simpliciter, et consequenter non haberet esse possibile, concedo antece undem, et distinguo consequens, quatenus non esset possibileis, nisi Deus esset, concedo consequentiam, quatenus Deus communicaret ipsi esse possibile per influxum aliquam realem, aut intentionalem, nego consequentiam.” I think that the only way Punch can remain consistent here is if ‘esse simpliciter’ refers to actual being and ‘creatura’ in the passage refers to an actual creature. It seems to me that Punch is committed to holding that there are logically, fundamentally possible creatures possessing logical, diminished, fundamental \textit{esse} even if God does not exist. If Punch is conceding that logical, diminished, fundamental possibles would not have even logical, diminished, fundamental \textit{esse possibile}, then his view is contradictory.

\textsuperscript{54} Punch 1662, 904b: “Itaque quemadmodum nisi esset oculus, non esset color aliquis visibilis fundamentaler, et tamen oculus non dat ipsi esse visibilis sic.”
there would still be paint and light waves reflecting off that paint. Thus, Punch is suggesting that if there were no God, there would still be a framework of possibilities which would necessarily determine how entities should be created and thought about. But no actual creatures would exist concerning which one could claim that they possess a possibility to exist, nor could one claim that it was “proximately” possible for entities to exist, since that would be equivalent to saying that there exists a being who has the power to bring mere logical possibles into existence.\(^{55}\)

The main objection to the transcendental view voiced by its adversaries, is that it allows some aspect of the world, whether essences, strings, or diminished beings, to be independent of, and not caused by, God. Perhaps most disturbing to the anti-transcendental adversary was Socinian bold claim that if there were no God, then humans would still be animals. Zaccaria Pasqualigo, whom we will meet below (§ 5), simply says that the idea that possibilities could exist if there were no God is absurd.\(^{56}\)

Another of Socinian’s claims sparked much debate. Socinian claimed that Deum esse Deum was as “equally” necessary as hominem esse animal because their negations were “equally” impossible.\(^{57}\) Although Socinian was speaking of the statement ‘God is God’ and not God Himself, several second scholastics interpreted this as an attack on God’s special status as being “more” necessary than anything else. For example, Fonseca argues extensively that only God is a necessary being simpliciter (res necessaria simpliciter), and it is this very argument that leads him to modal voluntarism.\(^{58}\) Suárez attempted to make sense of God’s “greater” necessity through the idea that God alone is a necessary being “from Himself” (ex se). The Scotist Bartholomew Mastri amends this by holding that God alone is a se although all things are what they are ex se. I will return to Mastri’s truly subtle distinction below (at nn. 111-19).

Francisco Zumel attacks the transcendental string view by pointing out that the connection between human and animal in the eternal truth ‘humans are animals’ could not be or be understood without the terms ‘human’ and

\(^{55}\) Punch’s discussion perhaps borrows from the Aristotelian tradition, passed through Anselm, of “partial potentialities”, presented in Knuutila 1993, 73.

\(^{56}\) Pasqualigo 1634, 634: “Econtra vero si Deus ratione suarum Idearum non esset causa, sequeretur quod tales essentiae non dependerent a Deo, sed etiam si non esset Deus reperirentur possibilia, quod est absurdum et inconveniens.”

\(^{57}\) Socinian 1588, 65b: “Deum esse Deum <et> hominem esse animal (...) sunt equae necessaria (...) Illa sunt aequaliter impossibilita, quorum impossibilitas consurgit ex implicatione contradictionis. Sed ista sunt huiusmodi.” See also above, at and around n. 39.

\(^{58}\) Fonseca 1615, II, 315a.
‘animal’. Zumel’s answer, we will see below, is to place all truths in the divine mind.

Punch’s fellow Franciscan and Scotist Bartholomew Mastri was the main opponent to Punch’s diminished being. Mastri accused Punch of positing a contradictory position because Mastri held that actual being and mind-dependent being (ens reale et rationis) are mutually exclusive categories so that the possibility of their having anything in common was impossible.60

However, the disagreement between the two is merely verbal in that they disagree about the definition of real being (esse reale). Punch defines it as existing being, that is, existing external to any mind. Mind-dependent being (esse rationis), on the contrary, is any being in the mind that is also inconsistent or repugnant to existing. In other words, mind-dependent beings are impossibles which can be thought about in (confused) minds, but which cannot exist outside of minds. Real beings are thus actual, existing beings. For Mastri, the notion of esse reale includes possible as well as actual existence: “ens reale is that which exists, or at least is not repugnant to existing in reality, without a thinking intellect.”61 Esse rationis is “that which neither exists nor can exist except only in the thought of the intellect.”62 Thus, Mastri includes possible being in esse reale, which makes real being and mind-dependent being contradictory. For Punch, they are contraries with room for the third option of a diminished, non-actual possible being.

59 Zumel 1597, 138b: “Sed objiciet aliquis contra hoc: Connexio, quae reperitur in his propositionibus perpetuae veritatis, nec potest esse nec potest intelligi sine extremis quae continguntur. Sed ab aeterno nec erat homo, nec erat animal, ergo nec erat illa connexio.” I have not been able to determine who the alicuius is who raises this objection. Of course this alicuius might be an imaginary opponent.

60 Mastrius 1727, 21b-22a: “Primo itaque probatur hoc esse diminutum, medium inter ens reale et rationis, quod Poncius (...) tribuit creaturis ab aeterno in Scotti sententia, esse omnino chimericum et fictitium (...) <d>implieatur dari medium hoc modo inter contradictoria, sed ens reale et rationis in suis conceptibus, ac rationibus formalibus, contradicunt.”

61 Mastrius 1727, 22a: “Ens reale dicitur illud quod extat, vel saltem extare non repugnat in rerum natura nullo cogitante intellectu.” Mastri is assuming the situation in which thinking minds either do not exist or are not thinking about the objects in question at some given moment. So, Mastri means that esse reale includes beings which actually exist without being thought about (as this page presumably would) and those which could exist without being thought about, but are not actual, such as my non-existent younger brother.

62 Mastrius 1727, 22a: “Ens autem rationis dicitur illud quod nec extat, nec extare potest, nisi solam intellectus cognitionem.”
4. MODAL VOLUNTARISM

A fairly unpopular view in second scholastic circles was that possibility is derived from God's power. This view is sometimes expressed as claiming logical possibility is derived from God's omnipotence. The view was often, but probably incorrectly, attributed to the Ockhamist Gabriel Biel (c. 1425-1495). It was, however, held by the Jesuits Pedro da Fonseca and a Spanish philosopher-theologian, Hurtado de Mendoza (1592-1651).

Gabriel Biel's discussion of the question "does it belong more to God not to be able to make the impossible than that the impossible cannot be brought about by God" is cited by second scholastics to prove that he derived possibility from God's power.63 This question, taken from the Sentences of Peter Lombard, was the source of much of the discussion concerning the ontological source of possibility during the late Middle Ages.64 Biel had only to consult William of Ockham's commentary on the Sentences to discover that Ockham's predecessors, Henry of Ghent and Duns Scotus, had already taken up the question. Biel, the great defender of Ockhamism, keeps very close to Ockham's views on the question.65

Biel, as Ockham before him, held that neither one of the statements in the question is logically prior to the other. That is, 'God cannot make the impossible' is not prior to 'the impossible cannot be made by God', nor is the second prior to the first. Biel, like Ockham, noted that the statements contain the relative terms (1) 'cannot make' and (2) 'cannot be made by'. Relative terms, however, express the same idea. Thus, Biel's point is the rather safe claim that 'x cannot make y' expresses the same idea as 'y cannot be made by x'.

To further support his claim that neither statement is logically prior to the other, he points out that similar pairs of relative terms lack logical priority as well. The terms 'father' and 'son' are such relative terms, and the statement 'x is father of y' is not logically prior to 'y is the son of x'.

Biel concludes that

With the same logical priority (simul natura) one says of God that He cannot bring about the impossible as [one says] of the impossible that it cannot be brought about by God. Neither is prior to the other. ... Nor is saying of God that He can bring about the possible prior to

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63 Vasquez 1631, 509a-b; Mastrius 1727, 25a; Poinsot 1931-, III, 578b.
64 Overviews of those discussions, especially of arguments about Henry of Ghent's views, can be found in Wolter 1950, 72-83; Adams 1987, II, 1065-1083.
65 For Ockham's views, repeated almost verbatim by Biel, see William of Ockham 1979, 648-49.
[saying off] the possible that it can be brought about by God, since [these statements] have the same logical priority (simul natura).\textsuperscript{66}

These claims alone, however, do not prove that Biel, or that Ockham, believed that God's power is the foundation of possibility.\textsuperscript{67} Indeed, both Ockham and Biel conclude that God's power only extends to what can be done without contradiction.\textsuperscript{68} One would expect a voluntarist not to be so restrictive of God's power.\textsuperscript{69}

Allan Wolter pointed out long ago that the "neophyte in philosophy can scarcely avoid receiving a distorted view of Ockham's doctrines if he reads the neo-scholastic textbooks." He supported this claim by pointing out that scholastic philosophy textbooks of the nineteenth and twentieth centuries attributed modal voluntarism to Ockham even though Ockham did not hold the view.\textsuperscript{70} I would further claim that this misinterpretation already appears in second scholastic textbooks of the sixteenth and seventeenth centuries.

If the late-medieval Nominalists cannot provide us a good example of a modal voluntarist, the Jesuits fill the void. We have met Pedro da Fonseca as a categorical string theorist. However, the strings are not independent of God. In fact, Fonseca attacks Cajetan on this point. Cajetan had said that even if everything in the universe including God were annihilated except for the mind of one person, that person's knowledge of a rose would still remain. It would also be true under such a hypothesis that roses are odoriferous. Fonseca, however, disagrees, and believes that if the causes, including the ultimate cause, of an entity do not exist, then one could not even claim that the entity was a possible creature. If God, the creator of all entities, did not exist, neither would the rose be a real being, nor would it even be a rose. If there were nothing else besides me, which means my ultimate cause would not exist either, then I would not even be who I am, nor would the rose be a rose, let alone an odoriferous one.\textsuperscript{71}

\textsuperscript{66} Biel, Collectorium circa quattuor libros Sententiarum, liber I, d. 48, q. 2, art. 2 (Biel, 1973-1992, vol. I, p. 748; Biel 1501, sign. Ss iii(b-vai)): "Simul natura conventit deo non posse facere impossibile, et impossibili non posse fieri a deo, et neutrum est prius altero (...). Non prius competit deo posse facere possibile quam possibili posse fieri a deo, sed sunt simul natura."

\textsuperscript{67} In fact if one took the contrary position, it would make Biel's view consistent with Knuittila's version of Ockham's position given in Knuittila 1993, 148.

\textsuperscript{68} Both Ockham and Biel hold that God's "absolute" power is limited to what God can do without contradiction. For Ockham, see William of Ockham 1980, 586. For Biel, see I Sent., d. 17, q. 1, art. 3, quoted in Oberman 1983, 37, n. 25.

\textsuperscript{69} As one finds in the voluntarists Peter Damian (but see Knuittila 1993, 65-67) and René Descartes. Concerning the latter, see Coombs 1996 and § 4 of Knuittila's contribution to this volume.

\textsuperscript{70} Wolter 1950, 70.

\textsuperscript{71} Fonseca 1615, II, 325A-B: "Si Deus, qui est rerum omnium effector, non existeret in rerum natura, nec rosa utique esse ens reale, ac proinde, nec rosa. (...) <S>ublatis enim
Fonseca concludes that the possibility of creatures requires the existence of their ultimate efficient cause because he believes that created possibles (as opposed to God, the uncreated possible) are only properly understood as creatures. In other words, the concept of "human" necessarily contains the property of being created and thus being dependent on God. In this way, Fonseca undercuts Cajetan's original thought experiment. If *per impossibile* God did not exist, would creatures be possible, that is, entities that by definition require a God to exist? Fonseca's answer is "no", and if there were no God, there could be no creaturely "I" to think about the rose.

Fonseca rejects the view that possibles should be reduced to God's intellect, specifically to the divine ideas. For Fonseca, the divine ideas are not prior to God's creative power, nor to His practical knowledge. The ideas, as exemplars, pertain to God's creative activity, and thus they cannot "be" except insofar as they can be imitated by the divine power. Fonseca goes so far as to claim that if God did not have the power to produce creatures, then God would not be their exemplar.

Fonseca's reduction of modality to God's power possesses some difficulties with respect to his claim that the connection or string between essences does not have an efficient cause. We noted above that Fonseca's strings are "negations of diversity" and so do not have an efficient cause. However, he also claims that if there were no God, then a rose would not be odoriferous and presumably humans would not be animals. One would expect, however, the uncaused strings to preserve such predications as 'humans are animals' whether the first cause is around or not.

Fonseca's answer seems to be that among the necessary strings is the connection between "rose" and "caused entity". Thus, the reason he can deny that a rose is a rose when there is no God is because such statements are self-contradictory under the assumption of God's non-existence. The uncaused but caused rose is an uncaused but caused rose. However, such a solution only makes sense if the connection between "rose" and "caused" is somehow independent of God since the case in question is precisely that in which there is no God. To be consistent, Fonseca would probably have to note that the thought experiment simply begins with an inconsistent premise which leads to inconsistent results, and that the only reason we can

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"coeteris rebus omnibus, neque ego essem qui sum, nec rosa esset rosa, ut ostensum est, quare nec de illa ostendi posset esse odoriferam attributumque alius reale."

72 Fonseca 1615, II, 326C: "<E>ntia omnia infra Deum (...) perfecte autem ac distincte nullo modo concepi possunt, nisi quatenus pendent a Deo ut a prima causa ef(ef)<f>iciente."

73 Fonseca 1615, II, 326E-F: "<N>egandum est ideas divinas praecedere omnino ratione scientiam Dei practicam aut eius potentiam executivam. Nam, cum illa sunt exemplaria divina ac praeinde objecta ad actionem pertinentia, intelligi utique non possunt nisi quatenus imitabilis a scientia practica, potentiisque divina exequitiva (...), <S>ei Deus non haberet vim productivam creaturarum, fore etiam non esset earum exemplar (...)."
appraise such lines of reasoning as consistent or compossible is that God’s power is supporting our logical structure. However, I suspect that Fonseca has simply bitten off more than he can chew by first holding that necessary truths such as ‘humans are animals’ are necessary simpliciter but then rejecting Cajetan’s claim that if there were no God, then a rose would still be a rose.

Another Jesuit named Pedro Hurtado de Mendoza borrows many arguments from the Ockhamists to reduce modality to divine power.\textsuperscript{74} Hurtado was a theology professor at the University of Salamanca. His notorious discussion of the ontological source of possibility appears in disputation 8 of his Metaphysics, which comprised part of his \textit{Universa Philosophia}.\textsuperscript{75} Disputation 8 is “on essence and existence” and section I asks the question “what does it mean for a creature to be possible?”

Hurtado considers two examples of possible creatures, Peter and an angel. Peter is meant to be a generic human, and because Peter is subject to death, it is possible for him not to exist. Also, because he was born, he was possible, and his parents had the power to engender him before he was born. Peter thus serves as an example of an existing possible. Hurtado’s angel is a “pure” or “mere” possible that never exists. God now has the power to create an angel that He does not create, never did create, and never will create. However, since God has the power to create the angel, the angel is possible.\textsuperscript{76}

This leads to Hurtado’s main conclusion, which would make him the object of attacks by second scholastics throughout the seventeenth century. He states: “the denomination ‘possible’ is formally derived from God’s omnipotence”\textsuperscript{77} In other words, the very meaning of the term ‘possible’ is taken from God’s omnipotence. His argument for this conclusion is the following. Because I am capable of seeing color, color is visible. This holds because the seeing “in” me is the same as the being seen “in” the color and both are, Hurtado claims, derived from the same “forma”. Thus, something

\textsuperscript{74} Thus, Hurtado de Mendoza may have helped perpetuate the mistaken view that the Ockhamists were modal voluntarists.

\textsuperscript{75} Hurtado de Mendoza 1624.

\textsuperscript{76} Hurtado de Mendoza 1624, 817a: “Ratio monstrat, Petrum, exempli gratia; quia est morti obnoxius, ita nunc existere, ut potuerit non existere, et quia ortu gaudet, eum fuisse possibilem, et eius parentes antequam illum genuere, habuisse potentiam illum gignendi. Item Deus nunc habet potentiam creandi unum Angelum, quem nec creat, nec creavit, nec creabit, et eiusmodi Angelum posse a Deum creari. Itaque Angelus est creatura possibilis.”

\textsuperscript{77} Hurtado de Mendoza 1624, 827a, sec. 3: “Denominatio possibilis sumitur formaliter ab omnipotentia Dei.”
is called possible because it can be made, and one says that it can be made because God has the power to make it. 78

Hurtado next tells us that the terms ‘possible’ and ‘can be made’ belong to entities which are really (realiter) distinct from God. 79 This statement may seem strange after Hurtado has told us that the meaning of ‘possible’ is derived from omnipotence. Hurtado’s point, however, is that the expression “a possible entity” refers to some entity distinct from God’s omnipotence. It is Hurtado’s angel that is said to be possible, not God’s omnipotence, even though what it means for the angel to be possible is that it can be made by God. Hurtado says

A power that is able to physically produce something has some other object towards which it acts and does not act towards itself .... Therefore, it is capable of making something else distinct from itself that can be made because that which can be made resides in the notion of ‘something that can make’. But the omnipotence of God is something that can physically make. So, it follows that there is something that can be made that is really distinct [from God’s omnipotence]. 80

Now this entity which is really distinct from God’s omnipotence and which we say is ‘possible’ is the essence and existence of created entities. 81 Hurtado simply takes it for granted that his audience will agree that the existence of created things are among the possibles or the “make-ables” (factibles) which fall under God’s omnipotence. However, Hurtado certainly knew he was stepping onto thin ice by including the essences since, as we have noted, this was a much discussed problem of his day. His argument for including the essences in the category of possibles and “make-ables” proceeds this way. When one conceives of the existing Peter, our generic created entity, one conceives of Peter as an entity that depends on another. That is, God is both the efficient and final cause of Peter and thus Peter depends on God not only for his existence but for his purpose as well. 82 This should remind us of Fonseca’s idea that creatures

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78 Hurtado de Mendoza 1624, 827a: “Per eam rationem, qua ego sum factivus, aliquid est factibile, tum quia per eam rationem per quam sum visivus coloris, color est visibilis, quia videre in me est idem ac videri in colore, est enim ab eadem forma.”

79 Hurtado de Mendoza 1624, 827b: “Dico secundo. Haec denominatio possibilis, factibilis cadit in rem distinctam realiter a Deo.”

80 Hurtado de Mendoza 1624, 827b: “Et quidem potestias productiva physice est ad aliquod, et non ad se (...) ergo est factiva alocius factibilis ab ipsa distincti quia in ratione factivae respectit id quod potest fieri; sed omnipotentia Dei est factiva physice; ergo refulitur ad factibile, ab ipsa distinctum.”

81 Hurtado de Mendoza 1624, 828a: “Dico tertiio. Id quod denominatur possible et factibile est essentia et existence rerum creaturarum.”

82 Hurtado de Mendoza 1624, 828a: “In Petro existente nullus est conceptus, quin sit ens ab aliio, ergo nullus est conceptus non productus a Deo, et consequenter non producibilis.”
are necessarily creatures, and that their creaturely-ness is part of their essence.

Hurtado also offers this second argument: consider that there are only two types of things: those whose existence depends on another and those whose existence depends only on themselves. Now the only entity whose existence depends on itself is God. When we think about Peter, we discover that there is no part of him that is self-created or independent of everything else. Therefore, every part of Peter is created, including his essence. So, Peter's essence, as a possible, is something that can be created by God's omnipotence.\footnote{Hurtado de Mendoza 1624, 828a: "Omnes conceptus existentes in Petro sunt vera entia realia. Ens autem realis dividitur in ens a se et ens ab alio. Sed in Petro nullus est conceptus entis a se, quia esset Deus. Ergo omnis conceptus Petri est entis ab alio."}

Hurtado does respond to what he calls the "common adage" that essences are immortal and cannot possibly be produced. The argument supporting this "common adage" is as follows. Essences belong to entities necessarily, not freely. God makes everything distinct from Himself freely, and thus contingently and not necessarily. Therefore, God does not create essences.\footnote{Hurtado de Mendoza 1624, 828a: "Obiectis primo, essentias rerum esse improductibiles et immortales, existentias vero fluxas atque caducas; ergo essentiae non sunt factibiles. Antecedens est commune adagium. Item, essentiae rebus conveniunt necessario, non libere. Quidquid autem Deus ad extra producit, prodicit libere. Ergo non producit essentias."}

Hurtado answers this argument by claiming that essences in "objective being" and in potency cannot be produced and are immortal because they are "necessarily possibles" and are the objects of God's omnipotence. However, when the essences exist, they are produced and "in relation to existence, they are capable of being produced." Furthermore, it is correct both to say that God freely creates essences and that they necessarily belong to entities. Essences freely belong to entities when they exist because they come about freely from God. On the other hand, one may also say they belong necessarily to entities because if God wants to create a human, He cannot do so by giving the human the essence of a stone. He would in that case create a stone and not a human.\footnote{Hurtado de Mendoza 1624, 828a: "Respondeo: essentias in esse objectivo, et ut sunt in potentia, esse improductibles et immortales, quia necessario sunt possibles, obiunctur omnipotentiae Dei. At quando existunt, produci, et in ordine ad existentiam esse producibles. Ad probationem respondeo: adagium sic intelligi. Ad alterum dico, essentias libere fiunt a Deo. Dicuntur autem necessario convenire, quia Deus volens producere hominem, non potest illi tribuere essentiam lapidis, quia non faceret hominem, sed lapidem."}
However, Hurtado’s position is not without difficulties. He claims that “the essences and existences are not prior in reason (ratione) to the denomination from omnipotence, nor is the denomination [from omnipotence] prior to the object [denominated].” 86 If the phrase ‘in reason (ratione)’ means that the denomination of an essence as possible by omnipotence is not definitionally or logically prior to the essence so denominated, this would conflict with Hurtado’s claim that possibility is formally, and thus definitionally, derived from God’s power. For what is the status of the existence or essence of a human prior to God’s power? The best answer that can be given to this difficulty is that to call a human’s essence or existence possible is the same as saying that that human’s essence and existence has been denominated possible from omnipotence and vice versa. I suspect he is most interested in making a point about the logical priority of the two. He is echoing Gabriel Biel’s claim that they are logically equivalent, or in the language of the day: convertible. He would still have to grant a definitional priority to the denomination from God’s power since possibility is formally derived from there. In any case, this difficult passage would have to be interpreted as referring only to possible or make-able existence and essence, since the context so indicates.

In other passages, however, Hurtado backs away from accepting the idea that all statements about creatures are contingent or that God has the power to create an inconsistent state of affairs. God’s power, for example, is restricted to the extent that “God cannot remove the rational from a human because it belongs to his concept.” 87 In order to support such claims, Hurtado seems to move towards a conceptualistic string view. 88

Hurtado’s Metaphysica first appeared in 1615 about the same time Descartes was leaving the Jesuit college La Flèche for the Université de Poitiers. 89 Thus, it is not very likely that René Descartes was directly influenced by Hurtado’s work. However, the striking similarities in their views raise the possibility that these ideas were popular at Jesuit Colleges of the time. Fonseca may be a common source for this line of thinking even though he considers statements such as ‘humans are animals’ to be necessary simpliciter. Fonseca at least legitimizes the reduction of modalities to divine power.

Objections to modal voluntarism were many. John Punch offers three arguments against Hurtado’s view that possibles are derived from God’s

86 Hurtado de Mendoza 1624, 828b: “Haec essentiae et existentiae non sunt priores ratione quam denominatio ab omnipotentia, nec haec est prior objecto denominatio.”
87 Hurtado de Mendoza 1624, 831a: “Deus non potest auferre ab homine rationale, quia est de eius conceptu.”
88 This point is discussed further in Coombs 1996.
89 Garber 1992, 5. For a description of the curriculum and what is known about Descartes’ education at La Flèche, see also ibid., 6-9. See also above, n. 69.
omnipotence as an extrinsic denomination. First, Punch holds that there is no denomination without the object denominated. Therefore, if there is an eternal extrinsic denomination from God’s omnipotence, there must be something that is denominated by the denomination. In other words, one cannot call something “possible” unless there is a possible something prior to God’s ability to create the possible. So, Punch concludes, eternal creaturely being cannot solely consist of the divine extrinsic denomination.⁹⁰

Second, the diversities between entities such as humans and horses which generate relations of consistency and inconsistency are known eternally by God, but these diversities cannot be derived from omnipotence, since horses and humans are the same insofar as their possibility is derived from omnipotence. Punch seems to have in mind that from the perspective of divine omnipotence, a horse is simply something that can be created, which is exactly all that humans are: things that can be created. Hurtado’s view, in other words, cannot explain why horses and humans are different even as mere possibilities.⁹¹

Third, God knows eternally the nature (rationem) in humans that makes them possible, and it is because of that ratio that humans are able to possess a denomination from omnipotence. The impossible chimera lacks the denomination because it lacks the ratio, and this entails that there must be something eternal prior to the denomination.⁹²

Bartholomew Mastri adds the argument that since divine omnipotence is unbounded, it would be equally capable of bringing about an impossible chimera as a possible human being. According to modal voluntarism, this would entail that both humans and chimeras would be possible. Thus, everything would be possible, there would be no distinction between possibles and impossibles, and the criterion of self-consistency would no

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⁹⁰ Punch 1662, 903a: “Illud esse quod habent creatura ab aeterno, verbi gratia, homo, non consistit in denominatione extrinseca desumpta ab omnipotentia Dei (....) Probatur (...) primo, quia nulla est denominatione extrinseca absque denominato; ergo si sit ab aeterno denominationi extrinseca desumpta ab omnipotentia Dei, debet esse aliquid quod per ipsam denominatur; ergo esse, quod habent creaturae ab aeterno, non consistit in sola denominatione.”

⁹¹ Punch 1662, 903a: “Probatur secundo, quia creaturae habent ab aeterno esse diversae rationis, et ut sic cognoscuntur a Deo; cognoscit enim ab aeterno Deus, quod homo sit distinctae rationis ab equo, sed illa diversitatis non potest praecise oriri ex denominatione aliqua desumpta ab omnipotentia Dei; ergo esse creaturarum ab aeterno non consistit tantum in illa denominatione.”

⁹² Punch 1662, 903a: “Probatur tertio, quia ab aeterno cognoscit Deus esse aliquid rationem in homine, ratione cuius sit possibilis, et possit habere denominationem possibilitis ab omnipotentia Dei; non vero in chymera. Ergo datur aliquid ab aeterno praeter illam denominationem.”
longer identify the possibles.\textsuperscript{93} In another interesting argument, Mastri points out that one could not say that God is logically possible if modal voluntarism were true. God’s logical possibility would be an “extrinsic denomination”, and the possibility of God’s existence would mean that God has the power to create Himself.\textsuperscript{94}

5. DIVINE CONCEPTUALISM

The view I call “divine conceptualism” holds that possibility and modality are based on God’s intellect. This perspective was championed in late medieval philosophy by John Capreolus, who exercised much influence on the Thomists of the sixteenth and seventeenth centuries. For him, the “eternal truths are eternally true in the divine intellect.”\textsuperscript{95} Suárez attributes this view to nearly everyone, including many who hold the transcendental view such as Cajetan, Sylvester of Ferrara, and Socinas. He does qualify this attribution by saying that many of the authors hold the string theory, and we have seen Socinas and Ferrara decide that the strings are transcendental thanks to Cajetan’s rose.\textsuperscript{96}

Clearer cases include Francisco Zumel, who, after attacking the string view, concludes that true propositions must eternally reside in God’s mind. This conclusion leads to a further difficulty, namely that if a truth is an eternal truth because it eternally resides in God’s mind, then would not contingent truths also be eternal truths, because they are eternally in God’s mind as well? Zumel’s answer is that there is an idea in God that represents the necessary relation of extremes in necessary propositions while it represents only a contingent relation of extreme terms in contingent

\textsuperscript{93} Mastrius 1727, 25b: “<S>i chimaera est impossumilis, sane ex parte divinae omnipotentiae talis impossibilitas attendi nequit, quia divina omnipotentia, quantum ex se est virtus infinita, ac proinde aeque valens ad producendum hominem, ac chimaeram quantum est ex parte sui.” Mastri (1727, 25a) also gives arguments from Scottus (\textit{Ord. I, d. 43, qu. un. = John Duns Scottus 1950–, VII, 354-57}) against a version of modal voluntarism expressed by Henry of Ghent, the basic idea of which is contained in Pynch’s third argument. It is interesting that no second scholastic notes that Jesus says that everything is possible for God, at least according to Matthew 19:26.

\textsuperscript{94} Mastrius 1727, 26a: “<chiciero dici solet possibilitas absoluta, quia consistit in sola non repugnantia sei praescindendo ab eo, quod illa res sit alio producibilis, vel a seipsa existat, qua de causa ipse Deus dictur possibilis logice, quod utique dici non potest, si haec possibilitas imbibet extremum ad potentiam activam agentis.”

\textsuperscript{95} John Capreolus 1900, I, 304b.

\textsuperscript{96} Suárez 1983, 201 (\textit{DM} 31, 12, 41). For Socinas and Ferrara, see above at and around nn. 39-44.
propositions. Domingo Bañez also embraces the view, at least in one text.

In the early decades of the seventeenth century, as Jesuits and Franciscans joined the debate, some philosophers resurrected exemplar causality as the ground of logical modalities. Francisco Albertinus, S.J., Zaccaria Pasqualigo, and later Bartholomew Mastri, O.F.M., were the main advocates of this position. Albertinus differs from the last two in that he accepts what he takes to be Henry of Ghent’s idea that an essence is eternally actual prior to the existence of the individual of which it is the essence. Although he claims that this essential being (esse essentiae) is external to God’s mind and is necessary, essential beings are not necessarily existent, as God is. The essences of entities are still dependent on God because God is their exemplar cause. God also creates entities with regard to their existence. Thus, essences are eternal but individual entities are created ex puro nihil, that is, from an existential nothing. The existence of a given entity is also contingent while its essence is necessary. Albertinus believes that he must attribute an eternal actuality to essences in order to distinguish impossibles from possibles. In other words, the reason why a stone is possible is because it has an eternal actual essence while a chimera remains impossible because it lacks such an essence.

Pasqualigo, however, rejects Albertinus’ return to Henry of Ghent’s actual esse essentia. Thus, when an individual is created, both its existence and the “actuality” of its essence are created. Therefore, there is no actuality of the essence prior to creation. Pasqualigo’s main reason for this conclusion is his fear that an actual essence prior to creation would be independent of God’s causation.

However, Pasqualigo holds that the essences can be considered “in the state of possibility” (in statu possibilitatis) because of the necessity of the eternal truths. The predicative connections between essences, prior to the creation of individuals, are based on the Divine Ideas that direct God’s productive power. Thus, God’s power is controlled by His intellect, and the divine mind, or any other, could form the objective concept of any essence from the Divine Idea even when the essence does not exist in an actual

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97 Zumel 1597, 158b: “Unde idea existens in Deo representaet habitudinem necessariam extremon in propositionibus necessariis, in aliis vero solum habitudinem contingentem.”
On Henry of Ghent’s view, see above at and around nn. 31-34.
98 See Bañez 1934, 227b (Summa theologica 1, q. 10. a. 5). However, he flirts with the transcendental view in the 1548 Salamanca edition of his Commentary on the Summa theologica, quoted in Wells 1994, 28, n. 73.
99 Di Vona 1968, 96-100.
100 Di Vona 1968, 159.
entity. So, God can know what a human is before any humans exist by consulting His Ideas which represent essences to Him.

Pasqualigo realizes he must discuss the source of the possibility of the possible essences. Why are humans possible but chimeras not? Pasqualigo says that it may seem that possibility is intrinsic to the possible essence because its self-consistency is intrinsic to it. So, too, the impossibility of impossibles such as round-squares and chimeras would be their intrinsic inconsistency.

Pasqualigo rejects the intrinsic possibility view after claiming that string theorists must embrace such a view in order to maintain the connections between essences. He concludes that the possibility of possibles is the result of God’s exemplar causation. Exemplar causation points out to an agent, by means of an idea, what is to be made and how it is to be made, because it in fact represents to the agent what he intends to make.

Possible essences cannot have an efficient cause, Pasqualigo thinks, because the only existence they possess prior to the creation of individuals is as part of “God Himself”, as His Ideas and productive power. Since efficient causation results in the actual existence of entities, essences, insofar as they are in God’s Ideas and His power, cannot have an efficient cause. They only exist as images before God’s mind, which imitate the Divine Ideas and guarantee the conformity of possible essences with the Divine Ideas. Actual entities imitate the Divine Ideas, and they have a being that conforms with the Ideas and is intrinsic to and inseparable from their essence. No intellect could conceive of any created entity unless it conceived of the entity though this conformity with the Divine Ideas. Thus, when an entity is created, not only does God provide an efficient cause for

102 Pasqualigo 1634, 634b: “Sed aliqui existimant quod rerum essentiae, seu connexiones illaei predicatorum, quatenus connexiones sunt quo ad esse essentiae, non habeant aliquam causam extrinsicam, sed ex ipsis possibiles sint independenter a quocumque alio.” Among the aliqui are listed Socinas, Cajetan, and Suárez. John Poinset also mentions that many Thomists of the early sixteenth century were committed to an intrinsic possibility; see Poinset 1931, vol. III, 578b, sec. 7.
103 Pasqualigo 1634, 635b: “<A>adversumus quod proprius modus causandi ideae, sive exemplaris, in eo consistit, quod agenti per ideam ostendet quid faciendum sit et quomodo faciendum, quia scilicet illi representat opus quod intendit facere.”
104 Pasqualigo 1634, 635b: “Essentiae possibiles (...) non possunt habere causam, prout continentur in virtute divina, aut prout sunt representaetae in Ideis divinis; quia utroque modo sunt ipsi Dei, et aeternae, et proinde illi repugnat habere causam. Et quia causa tendit ad ponendam rem in seipsum, non possunt essentiae habere causam, nisi prout sunt aliquo pacto in seipsum, non quidem secundum esse reale, sed secundum esse objectivum.”
105 Pasqualigo 1634, 635b: “Essentiae illae possibiles sunt quaedam imagines ipsius Dei, et imitantur Ideas divinas, ita ut ad ipsas conformentur.”
its existence, He provides an exemplar cause that produces its essence and guarantees that the entity can be known and be consistent with the logical structure dictated by the Divine Ideas.\footnote{Pasqualigo 1634, 635b: “Res, quae ponuntur in actu, imitantur Ideas divinas. Deus enim illas product iuxta Ideas, quas habet, ita ut esse conforme Ideis divinis sit quid intrinsecum rebus creatis, et ab earundem essentia inseparabile; neque enim intellectus concipere potest rem aliquam creatam, nisi simul illam concipiat ex vi sui esse essentialis factam ad similitudinem aliusius Ideae, quae sit in Deo. Cum autem illud esse obiectivum, quod dicunt essentiae possibles, quando illas concipimus, sit illud omnino, quod Deus communica creaturis, quando illas ponit in actu, quandoquidem intellectus, concipiendo essentialia possibles, concipit illud ipsum esse quod potest ipsius communicare.”} 

Pasqualigo rejects Socinas’ claim that even if there were no God, the proposition ‘human are animals’ would still be true (see above at n. 40). Socinas’ claim derives, Pasqualigo believes, from a belief that entities possess an “intrinsic possibility”. Entities cannot possess such an intrinsic possibility that is not communicated to them from God because, he thinks, they would then also possess their actuality from themselves.

Pasqualigo’s argument for this claim proceeds in this way. If something is intrinsically possible, then it has its possibility from itself (\textit{a se}). Whatever is possible \textit{a se} is \textit{a se} from its genus (that is, by definition), and whatever is \textit{a se} by definition, does not require, and therefore is independent of, everything else. Thus God is said to be \textit{a se} because He is not dependent on anything else.\footnote{Pasqualigo 1634, 638a-b: “<Q>ut si res suam possibilitatem a seipsum, et non communicatam ab alio, haberent etiam a seipsum actualitatem, quod implicat. Huius sequelae ratio esse potest, quia esse a se ex genere suo, et ex vi sui esse formalitas tollit indigentiam alterius. Ideo enim Deus non indiget aliquo alio, quia est a se. Si ergo res haberent suam possibilitatem a se, constitueretur huiusmodi possibilitas in tali statu, ut non indigeret aliquo alio, unde non indigeret causa efficiente, quae ipsam promoveret ad actualitatem, sed ipsa ex se illam haberet. Oportet enim quod haberet totum id, quod sufficeret, ut excluderet a se omnem intrinsecam indigentiam.”}

Pasqualigo directly rejects Socinas’ transcendental view by saying that if there were no God, there would be no possibilities either. Socinas’ view that even if there were no God, ‘humans are animals’ would be true is a
“great absurdity” because if God, the Being on which all others depend, did not exist, then none of the others would either.\textsuperscript{108}

The usual attack on exemplar causality holds that the notion of exemplar causality only makes sense if it is really only a type of efficient causality.\textsuperscript{109} John Poinset (aka. John of St. Thomas) makes such an objection, but still holds that God’s Ideas are a “formal” cause of the possibles.\textsuperscript{110} Pasqualigo’s response, we have already noted, is that if the possibles are to function as a blueprint for creation, but prior to creation only exist in God’s power and Ideas, and in addition, must have some dependence on God, then they must be caused by something other than an efficient cause.

The Franciscan Bartholomew Mastri should be included among those who derive the possibles from God’s intellect. He eschews exemplar causality, however, because Scotus does, with no less an authority than Aristotle.\textsuperscript{111} Mastri may at first appear to be a transcendentalist because he holds that the possibles, although they are not actual in any way, still have a real possibility that distinguishes them eternally from impossibles.\textsuperscript{112} However, even though he claims that it is a mistake to ask whether this real possibility has a cause in the narrow sense of efficient causality, it is perfectly acceptable to ask if the primary reason (prima ratio) why something is possible results from the possible entity itself or from God.\textsuperscript{113}

Mastri’s answer is truly subtle. Although the real possibilities generate their possibilities and other logical relations from themselves (ex se), their possibility has its source through (a) the divine intellect.\textsuperscript{114} Mastri explains

\textsuperscript{108} Pasqualigo 1634, 638b: “Socin<as> (...) inquit quod si non esset Deus, adhuc vera esset haec propositio, Homo est animal. Sed (...) magnum absurdum inde sequitur, quia non potest concedi aliquid participatum seu participabile, nisi concedatur ens per essentiam, quia participatum seu participabile dictum essentialem ordinem ad ens per essentiam, ita ut sit tale ex vi huius ordinis, quo praecisus, non sit amplius tale. Ergo si non dareatur Deus, qui est ens per essentiam, neque daretur possibilitas aliqua, cum possibilitas dicat quid participatum, vel saltem quid participabile.”

\textsuperscript{109} Suárez 1983, 9 and 97-9 (DM 31, 6, 17).

\textsuperscript{110} See Coombs 1994, 325 and 327.

\textsuperscript{111} Mastrius 1727, 21a. He also reproduces Scotus’ other arguments against exemplar causality there.

\textsuperscript{112} Mastrius 1727, 25a: “<P>lane, inquam (...) nil remanere, per quod possit explicari rerum essentia ab aeterno, ut ab existentia praecedet, nisi sola realis possibilitas, per quam praecise creatura ab aeterno distinguishatur a chimaeris et aliis impossibilitibus.”

\textsuperscript{113} Mastrius 1727, 26b-27a: “<S>ciendum est, non huc esse sermonem de causa vere et proprie dicta; cum enim creatura ab aeterno nullum esse reale et actuale importet (...) <S>ensus quaeuisi sit, unde attendenda sit prima ratio possibilisatis et impossibilitatis rerum, nam ex parte Dei, aut potius ipsarum rerum, adeo ut ex se, et a se dicantur possibiles vel impossibiles independenter a Deo.”

\textsuperscript{114} Mastrius 1727, 27a: “Dicendum itaque est res possibilitatem vel impossibilitatem non omnino ex seipsis, et a seipsis habere independenter prorsus a Deo, sed nec omnino a Divina
the distinction between \textit{ex} and \textit{a} in this way. For a possibility to have its possibility \textit{from} itself (\textit{ex seipsa}) means that the possible entity intrinsically is such that its existence would not involve any contradiction. However, for it to have its possibility \textit{through} itself (\textit{a se}) would mean that its possibility is not communicated to it \textit{through} another (\textit{ab altero}) independently of everything extrinsic to it.\footnote{Mastrius 1727, 27a: \textit{\"{}A\text{"}dvertendum est quod aliiu est dicere quod res habent possibilitatem ex seipsis, et aliiu quod habeant a seipsis. Primum est omnino verum, quia per id solum significatur quod intrinsec et se habeant, ut non involvint aliquid implicantium, nec eis repugnet esse, quod verissimum est. Secundum est prorsus falsum, quia significat quod illam intrinsecem possibilitatem habeant a seipsis, et non communicant ab altero, sed independenter a quocumque extrinsecu.\text{"}{}}} Only God is \textit{a se} and essentially and existentially independent of everything else.\footnote{Mastrius 1727, 20b.}

God is the extrinsic reason of possibility because he conceives of the defining features of the possibles. Just as the divine volition produces creatures into actual existence along with those predicates that are consistent with their formal concepts, so the divine intellect eternally produces entities as known objects, but with their possibility or impossibility attached.\footnote{Mastrius 1727, 27a-b: \textit{Unde sicut divina voluntas ad extra in tempore res product in esse simpliciter et actuali, ut sunt suapte natura productibiles, cum his seclicit vel illis praedicatis, quae eis ex suis rationibus formalibus conventunt, ita intellectus divinus ab aeterno res product in esse cognito cum possibilitate vel impossibilitate annexa.}} In fact, Mastri holds that logical relationships always require a mind to conceive of them. A mind must first have concepts as its objects and then will combine the concepts to conceive of the logical relationships. If there were no divine mind, or any mind at all, there would be no possibility or impossibility.\footnote{Mastrius 1727, 27b: \textit{\"{}S\text{"}i nullus daretur intellectus potens iudicare aliqua extrema esse inter se compossibilita vel incompossibilita, nulla daretur possibilitas vel impossibilitas logica, quia haec attenditur in ordine ad intellectum sic vel sic iudicantem.\text{"}{}}} However, \textit{\"{}once\text{"}{}} conceived, the defining features intrinsically determine the logical relations represented in Porphyry’s trees. Thus, God’s intellect generates logical relationships. But when viewed \textit{\"{}in themselves\text{"}{}} the elements of the trees have the relations they do \textit{\"{}from themselves\text{"}{}} (\textit{ex se}).\footnote{For further discussion of Mastri’s views, see Coombs 1991, 456-58.}

John Punch, who supports transcendentalism, objects to deriving possibility from God’s intellect because doing so does not offer a sufficient reason for distinguishing possibles from impossibles. Punch thinks that one cannot say that God does not conceive of impossibles such as the chimera, since, first, God can conceive of the chimera, and second, one would still have no reason why God could not conceive of it even if \textit{de facto} God does.
not conceive of it. What reason could there be except that the possibilities are

\textit{ex se} possible and the impossibles \textit{ex se} impossible?\footnote{Pasqualigo's answer to Punch's question is that possibilities have divine
ideas that are their exemplar causes and impossibles do not. Thus,
ultimately the question why possibilities are possible and impossibles are
impossible is the same question as why is God God? It amounts to asking
why do God's Ideas contain possibilities and not impossibles, which is
equivalent to asking why does God have the essence He does?\footnote{One reason Mastri says that possibilities are possible \textit{ex se} but not \textit{a se} is in
response to Punch's argument. Mastri can then say that he agrees with
Punch that possibilities can be possible \textit{ex se}. The main thrust of Punch's
attack still holds however, because Mastri holds that possibility and
impossibility do have their source in God's intellect. Mastri points out,
however, that God's intellect is immediately the source of possibilities,
presumably because God has a unitary, positive concept of possibilities such
as humans. However, he borrows Scotus' analysis of impossibles as always
being complex notions. The chimera is not a simple, unitary concept as it
might seem, but a complex one consisting of inconsistent natures.\footnote{Pasqualigo 1634, 640a-b: "<C>um quaeritur cur divinae idea
repraesentent hominem et non chimerae, nulla ratio assignari potest, quia, ut diximus, non habent divinae ideae
causam sui praesentationis, neque determinatur ab aliquo ad hoc potius
praesentandum quam illud, quia sicuti si quaeratur cur Deus sit Deus, non potest aliqua
causa assignari."}\footnote{Mastrius 1727, 27b: "Intra deductit <Scotus> vanum esse quaerere impossibilitatem
aliqurum, quasi in aliquo uno, quia omne impossibile, qua tale, includit rationes plurium
invicem repugnantium (<C>r)<m> (repugnantiam ed.)." Cf. Scotus, \textit{Ord.} I, d. 43, qu. un., n. 16 (John
Duns Scotus 1950-, VII, 359-60).}

6. PROGRESS IN SECOND SCHOLASTICISM

Second scholasticism has usually been viewed as a sickly child living off
the riches of its parent, medieval scholasticism. There can be no doubt, of
course, that second scholasticism in some ways did not achieve the glories
of the medieval period. For example, recent histories of second scholastic
(post-medieval) logic document the unfortunate decline in formal logic that marked the period.\footnote{123}

In the case of the ontological foundation of possibility, however, the second scholastics made significant progress. First, by directly raising the problem as a problem distinct from the usual contexts of God’s power and knowledge, the second scholastics surpassed medieval scholastics. Never in the medieval period is there found the question “what is it for creatures to be possible” or “what is the status of possibility?”\footnote{124} This is not to say that the medievals had no conception of the difficulties entailed by the question, nor that they failed to address those difficulties. However, only the second scholastics ask the question directly.\footnote{125} The question, in fact, only seems to appear during the teens of the seventeenth century in the work of Hurtado de Mendoza. Because they asked the question directly, the second scholastics were in a better position to confront the question and consider arguments about that topic instead of approaching it indirectly. The

\footnote{123} On the other hand, semioticians are finding much of interest in the period. See, for example, Deely 1994.

\footnote{124} The first is from Hurtado de Mendoza 1624, 827a, perhaps the first thinker to take up the separate question (see also n. 125 below). The second is from Poinset 1931- II, 376b.

\footnote{125} As support for this claim, consider that the medieval discussions of the topic begin with Henry of Ghent’s (in fact, Avicenna’s) question “are things impossible because God cannot make them, or is it rather that God cannot make them because they are impossible?” For a list of the variants of the question see Wolter 1950, 71. Adams notes the differences between the question(s) of the ground of possibility and Henry of Ghent’s (Ockham’s) question in Adams 1987, II, 1066-1067. The point to bear in mind is that one can take up Henry of Ghent’s question without directly addressing the problem of the ground of possibility.

A separate quaesitio for the ground of the possibles seems to appear in the work of Hurtado de Mendoza for the first time in 1615. In a work such as Fonseca’s \textit{Commentariorum in libros Metaphysicorum Aristotelis Stagiritae} (1577), one finds relevant discussions at various places in the work entirely dependent on where Aristotle discussed such matters. This is of course not surprising since Fonseca’s work is a commentary on Aristotle’s text. In \textit{Suárez’ Metaphysical Disputations} (1597) one again finds relevant discussions throughout the text, although disputation 31 is a \textit{locus classicus} for the topic. However, note that the title of this disputation is “On the Essence of Simple Being as Such, on the Existence of that Essence, and their Distinction.” The main topic is the ontological status of essences, not of modalities \textit{per se}. Since however the question of the ontological basis of essences and possibilities are closely connected in the scholastic mind, it is in these discussions that I have found the most interesting material for this essay. However, at the beginning of the seventeenth century, one finds something new in the philosophy textbooks: a section deliberately devoted to possibility. So, for example, one finds in Hurtado de Mendoza’s \textit{Metaphysics} (p. 827a) a section entitled: “what does it mean for a creature to be possible?” And in Bartholomew Mastri’s work on metaphysics, in disputation 8 (“On the essence and existence of finite being”), Mastri first raises the question: “whether the state of the essence of a creature, insofar as it prescinds from existence, is only a possibility, or some kind of actuality.” Mastri completed his \textit{Metaphysics} around 1646-47. It is clear from Mastri’s text, however, that the \textit{quaesitio} was already widespread by that time.
medievalists, therefore, had to deal with all the problems stemming from a vaguely worded question.

As for philosophical progress, I cannot say that we moderns have progressed much further on the question of the ontological foundation of possibility than the second scholastics. Of course, we benefit from advances in modal logic and modal semantics that have helped us clarify whether essences can be reduced to possible worlds or vice versa. And we are open-minded (or ungodly) enough to entertain the possibility that perhaps modalities and essences are merely conventional constructions of the human mind. Conventionalism, it seems to me, was not a "live" option even to the most adventuresome Nominalists of the late medieval period. However, among modern philosophical theologians, who are beginning to take up the question once again, one finds positions that are not as well conceived as those of the second scholastics. Of course, the second scholastics benefited from the fact that the problem of the ontological ground of modality was one of the burning issues of the day, concerning which nearly everyone wrote and debated, and modern day philosophical theologians suffer from their lack of acquaintance with the second scholastics. It is time to rectify that situation and no longer tolerate the willful ignorance of second scholasticism.

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