

Existential Import in Cartesian Semantics

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Abstract

The paper explores the existential import of universal affirmative in Descartes, Arnauld and Malebranche. Descartes holds, inconsistently, that eternal truths are true even if the subject term is empty but that a proposition with a false idea as subject is false. Malebranche extends Descartes' truth-conditions for eternal truths, which lack existential import, to all knowledge, allowing only for non-propositional knowledge of contingent existence. Malebranche's rather implausible Neoplatonic semantics is detailed as consisting of three key semantic relations: *illumination* by which God's ideas cause mental terms, *creation* by which God's ideas cause material substances by a kind of 'ontic privation,' and *sensation* in which brain events occasion states of mental awareness. In contrast, Arnauld distinguishes two types of propositions – necessary and contingent -- with distinct truth-conditions, one with and one without existential import. Arnauld's more modern semantics is laid out as a theory of reference that substitutes earlier causal accounts with one that adapts the medieval notion of *objective being*. His version anticipates modern notions of intentional content and appeals in its ontology only to substances and their modes.

1. Introduction¹

In this paper I will explore the existential implications of the universal affirmative in the philosophy of Descartes, and his followers Antoine Arnauld and Nicolas Malebranche. Descartes himself appears to hold two inconsistent views. On the one hand, in his doctrine of eternal truths he holds that an essential truth like *every triangle has three sides* is necessary and would be true even if its subject term were empty. Malebranche extends what is essentially this view to all universal truths. They lack existential import because their terms, he thinks, stand not for material things but ideas in God's mind. They signify an immutable reality and convey information about the contingent world only to the degree that God's ideas function as 'seminal reasons' or perfect exemplars in creation. On the other hand, Descartes in his explanation of error as due to false ideas implies that among the truth-conditions of a universal affirmative is the requirement that its subject term be non-empty. Though Descartes himself never lays out the semantics of propositions in sufficient detail to support this view,

¹ This reaserch was made possible through the supported of the Charles Phelps Taft Humanities Center, University of Cincinnati.

Primary texts are cited by reference to standard editions together with an a reference to an English translation if available. Latin texts without standard translations are translated by the author.

Abbreviations:

AT: *Descartes 1897-1909.*

B: *Arnauld 1996.*

De veritate: *Aquino 1970 (2006)* . English translation *Aquinas 1952* . Translations used here are the author's.

G: *Arnauld 1990.*

HR: *Decartes 1934.*

LAP KM: *Kremer 2003.*

LO: *Malebranche 1997b.*

N: *Nadler 1992.*

OC: *Robinet 1959-66.*

Pleiade: *Bridou 1953.*

S: *Malebranche 1843.*

TL: *Malebranche 1805.*

Vivès: *Suárez 1856-1878.*

Arnauld provides the needed theory. He develops an account of reference that holds that a term signifies any actual object that satisfies its intentional content. A false idea, then, is a mental term that fails to signify. Part 1 of the paper sketches the historical background to Descartes' two views. Part 2 marshals the texts in which he seems committed to both views at once. Part 3 details Arnauld's existential semantics, and Part 4 explains Malebranche's Platonic theory.

2. Background

In this section I sketch two alternative analyses of the universal affirmative in pre-Cartesian semantics. The first, which may be called the standard view, has its roots in Aristotle. On this reading, the universal affirmative has as part of its truth-conditions the requirement that the subject term stand for something that actually exists. The standard relations of immediate inference follow. Because the universal entails the particular affirmative, it too carries existential import. Because the universal affirmative and particular negative are contradictories, the universal negative entails the particular, and neither negative carries existential import.

Prior to modern logic and its analysis of the universal affirmative by means of the material conditional, the only counter-examples to the existential import of universal affirmatives that logicians considered seriously were cases that describe the nature or essence of the subject. The problem cases were essential

truths about non-existent objects. Aristotle himself, however, was clear that even these require a non-empty subject term:

He who knows what human – or any other – nature is, must know also that man exists; for no one knows the nature of what does not exist – one can know the meaning of the phrase or name ‘goat-stag’ but not what the essential nature of a goat-stag is.²

So long as the Aristotelian doctrine held sway that species existed from all eternity, there was no reason to think that the subject term of an essential truth would ever fail of existential import. But logical intuitions changed when Christian logicians came to deny the eternality of the world and simultaneously to believe in an omniscient deity. According to Augustine, for example, God’s knowledge was to be explained by the ideas he possesses from all eternity, grounded in his Idea, the so-called seminal reasons that serve as exemplars in creation.³ The eternality of God’s knowledge, moreover, has direct implications for logic. According to the doctrine, if God has knowledge of an idea’s essence prior to the existence of any actual creature, then the true proposition that describes this essence would have to be true even if its subject term did not stand for an existing thing. Hence such an ‘eternal’ truth would not seem to require that its subject term refer.

William of Sherwood was one of the earliest to put forward what we may call the non-standard analysis of existential import applicable to these cases. On this view the copula is ambiguous. On the one hand are the standard cases that assert contingent truths about the actual world. These conform to Aristotle’s

² *Posterior Analytics*, II,vii 92b5-8, translated by G. R. G. Mure.

³ See, for example, *De genesi ad litteram* vi,10.

semantic analysis. In these the copula attributes what he calls 'actual being' (*esse actuale*) to the subject, and the subject term carries existential import. On the other hand are necessarily true propositions in which the genus is predicated of the species. These are propositions which predicate of the subject its essence or nature. Sherwood suggests that in these cases the copula attributes to the subject being in a second sense, which he and later logicians call 'habitual being' (*esse habituale*). When the copula is used in this sense, the proposition does not entail actual existence. Speaking of an argument that makes use of existential statements and the problematic proposition *every man is an animal*, he says,

But again, consider this counterargument: 'every animal is, every man is an animal; therefore every man is.' The first premise is true, and the second is necessary, [it is claimed] since the genus is predicated of a species. [In response to this] we must point out that the argument is not valid [*non vale*], for when one says 'every animal is' one predicates *actual* being [*esse actuale*] - i.e., existence. But when I say 'every man is an animal *relational* being [*esse habituale*] is predicated, ...

On this analysis the argument is equivocal because it uses the actual sense of the copula in the major premise, the habitual in the minor, and the actual in the conclusion.

He goes on to say that it is possible to demonstrate that the copula does not require the subject's existence. This conclusion follows, he says, from the fact that the categorical proposition is equivalent to a certain conditional:

... and insofar as it [namely, 'every man is an animal'] is necessary it has the force of this conditional: 'if it is a man it is an animal (*si homo est, animal est*). For when 'is' is placed as a kind of mean between the extremes 'a man' and 'an animal' it declares an

interrelation between the two (*dicit habitudinem mediam inter haec duo*). Thus it is clear that the signification of 'is' in the first proposition differs from that in the second. Therefore the conclusion 'every man is' does not follow.⁴ Here Sherwood is assuming that the conditional and the categorical are equivalent and that there are cases in which the conditional is true although the antecedent is false. It then follows that the universal affirmative is also true and that its subject term does not stand for an actual thing.

Note that Sherwood is not proposing something like the modern first-order analysis of an *A*-proposition as a universally quantified material conditional. As the terminology *habitual* suggests, the conditional he has in mind is a non-extensional counter-factual, as we shall see in more detail shortly.

We should remark that the view that the copula is ambiguous was far from universally accepted.⁵ Ockham, for example, strongly defends the standard existential reading, and rejects the claim that it is equivalent to a conditional.

Referring to those who hold Sherwood's view, he says:

... on the assumption that there are no donkeys, they deny this syllogism, 'Every animal is a man; every donkey is an animal; therefore every donkey is a man'. They claim that the verb 'to be' is equivocal in these syllogisms, since in the major premises it is taken for an operation of a being – and this is the 'to be' of what exists -- whereas in the minor premises it is taken for the 'to be' of condition or consequence. The verb 'to be' in this

⁴ William of Sherwood: *Introductiones in logicam* I.14, ed. M. Grabmann, *Sitzungsberichte der Bayerischen Akademie der Wissenschaften*, (10)1937, English text *Sherwood* 1966 p. 124-126. Klima also mentions a text to the same effect from Garland the Computist (11th century), cited in *Henry* 1984 pp. 85-86. See also *Rijk* 1962-1967 II-2 p.730, and the discussion in Klima, 'Introduction to *Summulae*', xlv-xlvii, in *Buridan* 2001.

⁵Others in addition to Ockham include Roger Bacon (see *Braakhuis* 1977) and Robert Kilwardby (see *Ebbesen* 1986).

sense occurs when one says: 'If it is white, then it is colored'. This claim is completely irrational, for it amounts to destroying every syllogistic form. For whenever it pleases me, I will say that 'to be' is equivocal in the propositions, and I will ascribe at will a fallacy of equivocation to every syllogism.⁶

He rejects the non-standard reading because it vitiates the validity of any syllogism because it becomes open to the charge that its propositions equivocate on the meaning of the copula. He seems to assume, somewhat unfairly, that there would be no principled way to tell which of the two senses was being used.

As Ockham admits, the standard reading has what may appear to be counter-intuitive consequences. Accordingly, in discussing the standard example on which accounts differed, *a chimera is a chimera*, he holds it to be false even though it might appear to be a trivial truth.⁷

Ockham also rejects Sherwood's claim that an essential truth is equivalent to a conditional. The passage continues,

Hence, distinctions such as that between the 'to be' which is an operation of a being and the 'to be' of condition are frivolous, and they are posited by those who do not know how to distinguish between a categorical proposition and a conditional proposition. Hence, these propositions are distinct: 'A donkey is an animal' and 'If a donkey exists, an animal exists'. For the one is categorical and the other is conditional and hypothetical – and they

⁶ SL P II.14. *Ockham* 1980 p. 123.

⁷ He says:

... any affirmative proposition in which the name 'chimaera' or one just like it, taken significatively, is either the subject or the predicate is, strictly speaking, false ... if the terms supposit significatively, then 'A chimaera is a chimaera' is, strictly speaking, false. *Ockham* 1980 II.14, p. 123.

Note the use of 'true' and 'false' as applied to terms of a proposition. This is the same distinction we will find below in Descartes and Arnauld.

are not interchangeable. Rather, one can be true while the other is false. In the same way, 'A non-creating God is God' is now false, and yet these conditionals are true: 'If a non-creating God exists, then God exists' and 'If this is a non-creating God, then it is God'.⁸

Thus, the categorical and the conditional are non-equivalent, he claims, because there are examples in which an essential truth has an empty subject term and is therefore false, but the conditional is true even though it has a false antecedent. The categorical proposition is false because – assuming (in a rather question-begging way) Aristotle's analysis – its subject term is empty. The conditional is true because what it asserts is a true logical 'consequence,' an inference from the antecedent to the consequent, and this consequence relation holds regardless of the truth of the antecedent.

The non-standard account was nevertheless accepted by others. John Buridan, for example, accepts Aristotle's account for standard cases but allows that there are special occasion in which the terms are used in what he calls *natural supposition*. He agrees with Sherwood on that their truth-conditions require an existing subject, and like Ockham holds that these conditions force examples like *a chimera is a chimera* to be false.⁹

Buridan, however, agrees with Sherwood that on some occasions we use terms in a way that abstracts from time or tense altogether with the result that the copula does not signify a time, past, present or future. In such cases the standard definition of truth requires only that of any individual, be it past, present,

⁸ *Summa logicae* II.4, Ockam 1980, pp. 98-100.

or future, if the subject term stands for it, then the predicate should also stand for it:

Again, just as the intellect is able to conceive of man and animal without any distinction of time by means of the concepts whence the terms 'man' and 'animal' are imposed, so it is likely that it is able to form a complexive concept without any distinction of time. But then the mental proposition [formed with this concept] will be indifferent with respect to all present, past and future times, and so also [its] terms will supposit for everything from those times indifferently. But we do not have an utterance properly imposed to signify such a mental copula, so we can use the verb 'is' by convention [*ad placitum*] to signify such a copula by which the present time will no more be signified than is the past or the future; indeed, [it will signify] no time at all, and so there will occur a natural supposition of the terms.¹⁰

Buridan moreover stresses that the proposition in such cases is eternally true, much like what Quine calls an eternal statement. He continues,

In fact, perhaps we can show from our faith that we are able to form such mental propositions. For God could preserve all things in rest, without motion (I mean all things other than motion). So let us suppose that He does so. Then nothing would be time, if every time is motion, as Aristotle shows in bk. 4 of the *Physics*. Nevertheless, the souls of the blessed would know and understand by mental propositions that God is good and that they are present to Him; and by the copulas of those mental propositions they would not co-understand [*cointelligerent*] time, for they would also know that there is no time, and so they would know that neither they themselves nor God did exist in the present time, and that they did not coexist with the present time either. And it appears to me that a spoken copula imposed precisely to signify such a complexive concept would be purely syncategorematic, while others, which connote a certain time, already share [the

⁹ *Sophismata*, Chapter 1, Sophism 6, 5th Conclusion. *Buridan 2001*. p 834. See the discussion in *Ashworth 1977*.

characteristics of] categorematic [terms], in that beyond their concept they also signify an external thing conceived besides the things signified by the subject and the predicate, namely, time.¹¹

Thus, Buridan illustrates cases of timeless natural supposition by likening them to the proposition that *God is good*, which would be true and known by the blessed in heaven even if there were no time, which would be the case if God causes motion to cease and hence for there to be (on Aristotle's account of time) no time at all. Like *God is good*, *every man is an animal* too would be true and known to the blessed. If these propositions are true even if there is no time, the copula cannot require that the proposition be true at the present or accordingly that its subject stand for an actually existing thing.

Suárez, who was a more immediate influence on the Cartesians, accepts the dual senses of the copula:¹²

¹⁰ Section 4.3.4, *Buridan 2001*.

¹¹ Section 4.3.4, *Buridan 2001*.

¹² The discussion here and below draws in part on *DM XXXI.12.44 & 45*; *Vivès XXVI.296*. :

44. It seems to me that this controversy derives entirely from the multiple signification of the copula *is* which joins the extremes of these propositions, for it can be taken in two ways: first, so that it signifies the actual and real conjunction of the extremes that exist in the thing itself, for example, when *man is an animal* is said, it is signified that the thing itself exists (*significetur re ipsa ita esse*); second, so that it signifies that the predicate exists as the subject's *ratio*, whether or not the extremes exist. In the former sense the propositions' truth depends without doubt on the existence of the extremes because the union does not remove the tense from the signification of the word *is*, or – what is the same thing – *is* signifies a real and actual duration. For when existence [at a time, as indicated by its present tense] is taken away, there is nothing there [*nulla est*]; and therefore, such a proposition is false because it is affirmed of a subject that does not stand for anything [*non-supponente*]. It is also in this sense that the *rationes* conforming to the facts well establish that the truth of these sentences depends on the efficient cause on which the existence of the extremes depends. Further, it is established not only that a created essence, taken absolutely, has an efficient cause, but also

that 'the application of the essence' [*applicationem essentiae*] (as I call it) to this thing has an efficient cause, i.e. not only that a man or an animal has an efficient cause but also that a-man's-being-an-animal, itself a thing, [*hominem reipsa esse animal*] has an efficient cause. For, even though action and efficiency are not 'two' [*duplex*], it is one thing to be a man, and another for a man to be an animal, even though when a man is brought into being, so is the other. They differ only in this: when the thing [i.e. a man] is conceived by us, it is signified 'complexly' [*complexe*] by the words *man is an animal*; the thing itself, however, comes to be through a simple action in that it comes to be a thing that is both man and animal inasmuch as in the thing man and animal are the same. Hervaeus teaches this at length (*Quodl.* I, q. 10, whom Lavell defended, in *Metaph.* V, q. 12, 'Against Soncinas', *ibid.* V. q. 10, who clearly employs the double meaning explained.) Thus, it is in this same signification [of the copula, namely the first sense of above] that our claim is being made that existence is not separated from essence without the destruction and removal of that same essence. Nor can the objection be sustained, which was advanced earlier against our proposal relative to this sense, for when existence is taken away from an actual thing, it is denied that propositions are true in which essential predicates in this sense are said of subjects, for, as it is true, as says in *Categories* (in the chapter on substance) concerning substance, 'when primary substance is taken away, it is impossible that anything remains,' and in the same way Averroes said (*Phys.* I, com. 63) that when a thing ceases to exist, its name and definition are lost as well.

45. Certainly in another sense propositions are true even if the extremes do not exist, and in this sense they are necessary and perpetual truths, for since the copula *is* in this sense does not signify existence, it does not attribute actual reality to the extremes in themselves, and therefore does not require for its truth either existence or actual reality. Further, this view is defended in the authors mentioned earlier because propositions in this sense are reduced to a hypothetical or conditioned sense [*sensum hypotheticum seu conditionatum*], for when we abstract from a tense and say that man is an animal, we say only the nature of man is such that it would not be possible for a man to exist unless it was an animal. Hence, just as the conditional *if it is a man, it is an animal*, is perpetual or *if it runs, it is moved*, so too this is perpetual: *man is an animal* is perpetual, or *running is a motion*. From this it also true that these connections, in this sense, do not have an efficient cause because every efficiency is terminated in an actual existent from which the stated propositions understood in this sense abstract. And those arguments that Soncinas collected in the place cited establishes only this. Indeed, these connections, understood in this sense, not only do not require an efficient cause in act, neither, in truth, does it appear necessary to postulate one in potency – if we rest on their truth understood formally and precisely. This can be maintained on the basis of the argument already given about a conditional proposition whose truth does not depend on

It seems to me that this controversy derives entirely from the multiple signification of the copula *is* which joins the extremes of these propositions, for it can be taken in two ways.¹³

The first is the standard case in which the proposition formed is true only if its subject term stands for an actually existing thing. He says of this sense that the copula

an efficient cause or on the power to effect [something], and therefore does not require, and therefore neither [efficient cause nor the power to affect something] is found in things that are impossible, or possible [but not actual]. For both of these conditionals are equally true: *if a stone is an animal, then it is sensible*, and *if a man is an animal, it is sensible*. Also, therefore, this proposition *every animal is sensible* does not [for its truth] depend, in itself [*per se*], on a cause that can effect an animal. Hence, if *per impossibile* there were no efficient causes [and hence no actual entities or actual truths], that sentence would nevertheless be true, just as this would be true: *a chimera is a chimera*, and similar examples. If we can make a distinction among necessary, conceptual or sentential connections between possible things and real essences or between invented things [*res fictitas*] and beings of reason, it is because among these there is such a necessary connection [as described above] conforming to an intrinsic disposition [*habitudinem*] of extremes abstracted from actual existence, so that it is possible for actual existence to be so ordered, and all of this can be signified by the copula *is*, so that it even it abstracts from tense – as when it is said *man is a rational animal*, it is signified that man has a real essence definable in this way, or (what is the same thing) that man is such a being [*ens*], one that is not invented [*fictum*] but real, or at least possible, and on account of this the truth of such sentences depends on a cause potent enough to affect the existence of the terms. But, really, among invented entities [*in entibus fictitiis*] necessary connections only come to be if they lack a disposition [*sine habitudine*], and even relative to one that is possible, it only could come to be an existing thing in the manner ordered by the imagination or as a mental fiction [*solum per ordinem ad imaginationem seu fictionem mentis*]. Thus, when this sense is adopted, the proposed objection against our assertion is stymied because though connections might be necessary independently of existence, the essences signified by these connections, if they are deprived of existence, nonetheless are not true or actual entities.

¹³ DM XXXI.12.44.

signifies the actual and real conjunction of the extremes that exists in the thing itself, for example, when *man is an animal* is said, it is signified that the thing itself exists (*significetur reipsa ita esse*); ... the proposition's truth depends without doubt on the existence of the extremes because the union does not remove the tense from the signification of the word *is*, or – what is the same thing – *is* signifies a real and actual duration. For when existence [at a time, as indicated by its present tense] is taken away, there is nothing there [*nulla est*]; and therefore, such a proposition is false because it is affirmed of a subject that does not stand for anything [*non-supponente*].¹⁴

Suárez acknowledges that he is following Aristotle on this point:

when existence is taken away from an actual thing, it is denied that propositions are true in which essential predicates in this sense are said of subjects, for, as it is true, as it says in *Categories* in the chapter on substance, 'when primary substance is taken away, it is impossible that anything remains',¹⁵

When the copula is used in its second sense, however, its terms stands for the subject's *ratio*, not for a thing in the world. The copula, he says,

signifies that the predicate exists as the subject's *ratio*, whether or not the extremes exist.
...¹⁶

In this sense the terms lack existential import:

... propositions are true even if the extremes do not exist, and in this sense they are necessary and perpetual truths, for since the copula *is* in this sense does not signify existence, it does not attribute actual reality to the extremes in themselves, and therefore does not require for its truth either existence or actual reality.¹⁷

¹⁴ DM XXXI.12.44 cont.

¹⁵ DM XXXI.12.44 cont.

¹⁶ DM XXXI.12.44 cont.

¹⁷ DM XXXI.12.45.

Suárez' view is a version of the correspondence theory of truth in which the proposition is true if the entities that the terms stand for stand in the appropriate relation. Here the entities corresponding to terms are the subject's *ratio* or essence, which are different from those things in the world that possess 'real being' (*esse reale*):

The first thing to be established is that the essence of a creature, or the creature as such prior to being brought into being by God [*priusquam a Deo fiat*], has in itself no true real being [*esse reale*], and in this sense, namely 'the being of existence [*esse existentiae*], it is not any existing thing, but is entirely nothing [*omnino esse nihil*].¹⁸

In a step that anticipates the Cartesians, he identifies the sort of being that constitutes essence with what he calls 'objective being' (*esse objectivum*). In the passage below, he distinguishes between real being and the real effects of real being, on the one hand, and what he calls a being of reason (*ens rationis*) that possesses objective being (*esse objective*), on the other:

To which [it is replied as follows]: if the essence of a creature is considered as a being in act [*actu ens*], taken precisely, on its own and not as a something made, it is either: attributed to some [other and relating] being in act [*actu esse*], or it is considered not as something in itself [*in se*], but relative to its cause [*in causa*], [and as such] it does not possess any real being [*esse reale*] apart from that of its cause, or if understood as having being in itself in the way that something true does [*sic verum est*], then, on this understanding, it is not a real being [*ens reale*], but a being of reason [*ens rationis*], because it does not exist in itself, but only objectively [*objective*] in the intellect.¹⁹

Objective being exists in the intellect and is the sort of being that terms in essential truths stand for. As a technical term, objective being has multiple roots

¹⁸ DM XXXI.2.1. Vivès XXVI.229.

in medieval philosophy. Among its earliest is its use, by for example, Duns Scotus, is its role in categorizing the special ontological status of God's ideas. Quoting Scotus with approval, Suárez lists the various ways Scotus characterizes the special sort of being that essences possess:

[essences] have some eternal existence, which is their 'diminished' being [*esse diminutum*], namely objective being [*esse objectivum*] or the being of essence within cognized being [*esse cognito*]²⁰

On this view, God's ideas must be different from created things because they constitute his knowledge of eternal essences, and serve as the exemplar causes ontologically prior to the creatures that conform to those essences.

Others like Peter Aureol and Ockham (before he rejected the view) make use of objective being to explain further problems in epistemology, for example, to identify 'what it is we perceive' when we experience an illusion or 'what it is we know' when we have knowledge of an abstract idea.²¹ What is of interest in this paper, however, is the semantic use to which it is put by Suárez. As we shall

¹⁹ DM XXXI.2.10. *Vivès* XXVI.232.

²⁰ DM XXXI.2.1, *Vivès* XXVI.229.

²¹ Of pre-Cartesian semantic explanations of how concepts signify objects outside the mind, two are relevant to the Cartesian semantics of Arnauld and Malebranche: those that like Arnauld appeal to objective being, and those that like Malebranche appeal to divine illumination. The literature on objective being in medieval philosophy is substantial. For a broad discussion see *Pasnau 1997*. On Scotus' and Suárez's use of objective being to explain God's ideas and their role in creation, as well as eternal truths, see: *Cronin 1966*, *Normore 1986*. Extended use of Neoplatonic ideas in semantics by medieval logicians is rare because they were generally skeptical of robust Platonism. Malebranche accepts two key views that are distinctly Neoplatonic: that the direct objects of knowledge are ideas and the semantic relation ideas bear to the material objects is explained as a causal relation of ontic privation. To find any account similar in

see, the Cartesians later also attribute a semantic role to objective being in the explanation of reference, of how mental terms 'signify' objects outside the mind. It is not an exaggeration to say that the main point of contention between Arnauld and Malebranche is exactly what objective being is and how it functions in the semantics of terms.

Like Sherwood Suárez holds that in this second sense the proposition is equivalent to a hypothetical or conditional sense that has the special property of being perpetually true:

... propositions in this sense are reduced to a hypothetical or conditioned sense [*sensum hypotheticum seu conditionatum*], for when we abstract from a tense and say that man is an animal, we say only the nature of man is such that it would not be possible for a man to exist unless it was an animal. ... Hence, just as the conditional *if it is a man, it is an animal*, is perpetual or *if it runs, it is moved*, so too this is perpetual: *man is an animal*, or *running is a motion*.²²

Thus, *man is an animal* means that no man could have been brought into existence without being an animal. Moreover, this proposition is equivalent to the perpetually true conditional *if it is a man, it is an animal*, just as *running is a motion* is perpetually true and is equivalent to the conditional *if it runs, it is moved*.

Suárez explicitly relates this sense to an explanation of the truth of propositions describing God's knowledge prior to creation by explaining that

philosophy antecedent to Malebranche and as detailed in its semantics as his one must go back to Proclus. See *Martin 2004*.

²² *DM XXXI.12.45 cont.*

propositions of this sort do not require there to exist an efficient cause in order to be true:

For both of these conditionals are equally true: *if a stone is an animal, then it is sensible*, and *if a man is an animal, it is sensible*. Also, therefore, this proposition *every animal is sensible* does not [for its truth] depend, in itself [*per se*], on a cause that can affect an animal. Hence, if *per impossibile* there were no efficient causes [and hence no actual entities or actual truths], that sentence would nevertheless be true, just as this would be true: *a chimera is a chimera*, and similar examples.²³

Thus, just as the propositions

If a stone is an animal, then it is sensible

If a man is an animal, then it is sensible

do not require, in his words, an efficient cause in order for them to be true – that is, they do not require that an animal has been caused to actually exist – neither does *every man is sensible*.

Note that by appeal to the same conditional analysis, Suárez departs from both Buridan and Ockham on the truth of *a chimera is a chimera*. The proposition is true, he holds, because the conditional *if it is a chimera, it is a chimera* is true.

It is now possible to make a metalogical point. Using Suárez' examples, it is clear that the conditional at issue is non-truth-functional, and hence it is quite different from the analysis in modern logic of the universal affirmative as a universally quantified material conditional. The analysis assumes that *every animal is sensible* is true, and *every plant is sensible* false, and that these

²³ DM XXXI.12.45 cont.

assumptions are confirmed by the truth-values of their corresponding conditionals:

If a stone is an animal, then it is sensible.

If a stone is a plant, then it is sensible.

The first is assumed to be true and the second false. But the component 'atomic' propositions that serve as the antecedents and consequences of these conditionals all have the same truth-value – they are all false. Hence the conditionals themselves are non-truth-functional. Rather the if-then asserts something like a natural consequence relation with all the opacity endemic to such relations: it follows as a law of nature from the fact that something is an animal that it is sensible.

3. Descartes

Descartes says very little of a systematic nature about logic or semantics, and what his views are on these topics must be gleaned from passing remarks. Two of his central philosophical claims, however, entail what appear to be opposite positions on the technical issue of the existential import of universal affirmatives. He does not acknowledge the conflict; nor does he say anything that would resolve it. On the one hand, there is his doctrine of eternal truth. In this he maintains, famously, that the reason a proposition is eternally true is that God freely willed it to be so, but that he might equally have willed it to be otherwise. What is relevant is the implication that because a truth is eternal, its truth cannot require the actual existence of instances of its subject term. On the other hand, there is Descartes' epistemological account of error. Error, he

claims, largely consists of belief in judgments with false ideas as subjects. Here the explanation of what it means for an idea to be false is semantic: it is a term fails to stand for something that actually exists. It follows, then, that since it is the failure of the subject's existential import that makes the proposition false, its truth requires that its terms refer.

Eternal truths. According to Descartes, the truths of logic and mathematics are true, necessary and eternal because God wills them to be so.²⁴ Moreover, in *Meditation V* he says such truths are about immutable nature and as such may be true even if their subject term is an idea that fails to stand for something that actually exists:

The most important point is that I find in myself countless ideas of things that can't be called *nothing*, even if they don't exist anywhere outside me. For although I am free to think of these ideas or not, as I choose, *I didn't invent them*: they have their own true and immutable natures, which are not under my control. Even if there are not and never were any triangles outside my thought, still, when I imagine a triangle -I am constrained in how I do this, because there is a determinate nature or essence or form of *triangle* that is eternal, unchanging, and independent of my mind.²⁵

Here what Descartes calls immutable truths about nature are very close to what Suárez calls perpetual truths about essence and nature. In claiming that what these are about is 'not nothing', he is invoking similar language from *Meditation*

²⁴ Response to 6th set of Objections, VI: HR II, 238; Pléiade 535, AT 7, 431-433.

²⁵ *Meditation V*.05, AT 7.64, 76-77. English translations of the *Meditations* are from *Descartes 2007-2010*

III where Descartes uses this locution to describe the fact that ideas possess objective being. There he says,

however imperfect may be the mode of existence by which a thing is objectively in the understanding by its idea, we certainly cannot, for all that, allege that this mode of existence is nothing.²⁶

The motivation for this claim is in part semantic. Descartes appears to be alluding to the kind of correspondence analysis proffered by Suárez and others for the truth of essential predications. On this doctrine a mental proposition describing a nature is true not because it corresponds to facts in the corporeal world, or to what Suárez calls *esse reale*, but because it asserts a true identity between the *esse objectivum* of two ideas.²⁷ That is, by invoking the language of ‘not nothings’ to explain eternal truth, which is the language Descartes uses to explain objective being, he associates himself with the tradition dating to Augustine that holds essential definitions are true because of ‘facts’ independent of what actually happens in the material world. Accordingly, an eternal truth, typically a universal affirmative, is to be understood in such a way that its truth does not require that its subject term stand for an actual referent.

Error and false ideas. Descartes’ explanation of error, on the other hand, points to the opposite conclusion. Error, Descartes thinks, typically consists of believing a false judgment, typically a categorical affirmative. The reason it is false is that it contains a false idea as subject.

²⁶ *Meditation* 3.14; 7:41.26-29. III.6, AT 7.37,36.

See also *Meditation*. 5; 7:65.2-6, and 5; 7:64.6-9.

The notion of a 'false idea' may strike the modern reader as a category mistake because contemporary logic teaches that it is sentences, not terms, that have truth-values. But it was a well established practice of medieval logic to extend the application of *true* and *false* from propositions to terms. A false concept or, in Cartesian terminology, a false idea is what we would call today a non-referring term. In a rudimentary form the usage can be found in Aristotle. In the *De Anima*, he refers to a phantasm ('an imagination') as false because the affirmation (combination) ascribing existence to that object is false.²⁸ But he is clear elsewhere that in its primary sense truth and falsity belong to a proposition,

²⁷ See Suárez, *DM* XXXI.12.46. *Vivès* XXVI.298.

²⁸ He distinguishes assertion from the possession of an 'image', roughly awareness of a sensation, *De anima* III,8, 432a8-14.

Truth and falsity, he says, require combination, but intuition is a 'simple thought.' He says (*De anima* III,6, 430a25-b6):

The thinking then of the simple objects of thought is found in those cases where falsehood is impossible: where the alternative of true or false applies, there we always find a putting together of objects of thought in a quasi-unity. As Empedocles said that 'where heads of many a creature sprouted without necks' they afterwards by Love's power were combined, so here too objects of thought which were given separate are combined, e.g. 'incommensurate' and 'diagonal': if the combination be of objects past or future the combination of thought includes in its content the date. For falsehood always involves a synthesis; for even if you assert that what is white is not white you have included not white in a synthesis. It is possible also to call all these cases division as well as combination. However that may be, there is not only the true or false assertion that Cleon is white but also the true or false assertion that he was or will be white. In each and every case that which unifies is mind.

In another place (*De partibus animalium* A I,16a13-19) he points out that even if the individuals in intuition were to have names, these alone are still pre-propositional and do not allow for truth or falsity:

Nouns and verbs, provided nothing is added, are like thoughts without combination or separation; 'man' and 'white', as isolated terms, are not yet either true or false. In proof of

which he calls a combination (affirmation) or division (denial).²⁹ By the time of Aquinas the secondary usage of *true* and *false* was well established. He goes to great lengths, for example, to explain how what he calls a *ratio*, which is roughly a ‘thought’ or definition and very much like what Descartes and Arnauld will call an idea, is true or false but only in a sense derivative on the truth and falsity of a prior proposition.³⁰ Accordingly, because the proposition *every animal is insensible* is false, there are no insensible animals, and the subject term does not stand for anything that actually exists. Hence in a sense the thought *insensible animal* is false.³¹

this, consider the word ‘goat-stag.’ It has significance, but there is no truth or falsity about it, unless ‘is’ or ‘is not’ is added, either in the present or in some other tense.

²⁹ *De anima* III,6, 430a25-b6, *De partibus animalium* I,16a13-19.

³⁰ *De veritate*, q. 1 a. 3 co.

[51615] It is to be said that just as ‘the true’ is to be found more in the intellect than in things, so also is putting together and dividing more to be found in that act of the intellect than in its the act that consists of being informed by the quiddity of a thing. For the essence (ratio) of truth consists in the equality of the thing and the intellect; the same thing moreover is not being made equal to itself, but rather it is an equality of distinct things; whence the idea of truth is primarily found as belonging to the intellect when the intellect first comes to possess something unique to itself, which is not possessed by the thing outside the soul, but rather the thing outside the soul has something corresponding to it, such that between the two equality can be achieved. The intellect moreover when being informed with the quiddity of a thing does not possess only a similitude to the thing existing outside the soul, as the sensation does to the degree that it receives the sensible species..

[54811] ... And therefore Augustine says that while man can do some things not willingly, it is not possible for him to believe without willing. Therefore it is patently clear from what was said that in that operation of the intellect by which it forms the simple quiddities of things, assent only occurs when there is something true or false; for we are not said to assent to something unless we inhear in it as something true.

³¹ Note that though the application of *false* to an entire sentence is historically, and therefore lexically, earlier than its application to a subject term alone because the former was extended to

It is clear that Descartes too accepts the view that truth and falsity apply in the primary instance to propositions or, in his preferred mental act terminology, to judgments:

Now, with respect to ideas, if these are considered only in themselves, and are not referred to any object beyond them, they cannot, properly speaking, be false³²

There is a sense however in which ideas are false. To explain himself, he makes use of the medieval distinction between the formal and material properties of ideas.

A formal property is relatively straightforward. In the loose usage of the term ‘form’ that Descartes employs, a formal property is any property or mode of an object, whether essential or accidental. In addition, a standard feature of the medieval theory of mental language that Descartes accepts is the view that a concept or, in Descartes usage, idea is a mental act or mode of the soul. As a mode of the soul, therefore, it counts as a formal property of the soul.

As the context makes clear, the sort of property Descartes intends to contrast with an idea’s formal properties are what medieval philosophers would have called extrinsic relational properties. When he says above, ‘ideas are ... related to (*ad aliud*) that to which I bind them, they can’t be false’ (III.6) he is using the standard Latin jargon for a relation, *ad aliud*. The relational property in question is falsity. Just as truth is a property defined in terms of a relation in the correspondence theory of truth, so too falsity is here defined relationally.

the latter, once both usages are a fixed part of metatheory, it is a necessary condition for the truth of the sentence that its subject be non-false, and therefore the historically secondary usage becomes logically prior.

³² *Meditations* III.06, AT 7.13, 37.

Following the tradition as sketched above, Descartes thinks that the kind of entity that possesses formal truth or falsity (*falsitas formalis*), in the primary sense, consists of judgments, not ideas. But an idea can be said to be false in a secondary and relational sense, which he calls material falsity (*falsitas materialis*). The term 'material' comes from medieval semantic theory. There a term was said to possess what was called *material supposition*, or to be used *materially*, if it was used to refer not to its usual significata but to itself as a sign. For example, if one asserts, *man is a species*, the affirmation is literally false if the term *man* is taken to stand for its usual significata or to be used, as the medieval would say, with personal supposition because men as such are not species. But if *man* is taken in material supposition, i.e. to stand for the word itself, then because both the word and a species are in fact the same idea in mental language, the proposition would be true. The word in mental language moreover stands, he says, in a semantic relation to things outside the mind. In particular as an idea, it is true or false according to whether it is 'of things' or 'not of things (*sint rerum, non rerum*).'¹ That is, an idea possesses material truth when they represent something in the way in which it is (*cum rem tanquam rem repraesentant*), and material falsity (*falsitas materialis*), when they represent something in a way it is not (*cum non rem tanquam rem repraesentant*), or represent 'no things' (*nullas res repraesentant*) at all.

... But with regard to light, colors, sounds, odors, tastes, heat, cold, and the other tactile qualities, they are thought with so much obscurity and confusion, that I cannot determine even whether they are true or false; in other words, whether or not the ideas I have of these qualities are in truth the ideas of real objects. [*an ideae, quas de illis habeo, sint*

rerum quarundam ideae, an non rerum]. For although I before remarked that it is only in judgments that formal falsity, or falsity properly so called [*falsificatem proprie dictam, siue formalem*], can be met with, there may nevertheless be found in ideas a certain material falsity [*falsitas materialis*], which arises when they represent what is nothing as if it were something [*cum non rem tanquam rem repraesentant*]. Thus, for example, the ideas I have of cold and heat are so far from being clear and distinct, that I am unable from them to discover whether cold is only the privation of heat, or heat the privation of cold; or whether they are or are not real qualities: and since, ideas being as it were images there can be none that does not seem to us to represent some object, the idea which represents cold as something real and positive will not improperly be called false, if it be correct to say that cold is nothing but a privation of heat; and so in other cases.

To ideas of this kind, indeed, it is not necessary that I should assign any author besides myself: for if they are false, that is, represent objects that are unreal [*nullas res repraesentent*], the natural light teaches me that they proceed from nothing; in other words, that they are in me only because something is wanting to the perfection of my nature; but if these ideas are true, yet because they exhibit to me so little reality that I cannot even distinguish the object represented from nonbeing, I do not see why I should not be the author of them.³³

In III.6 he gives the examples of goat and chimera in a context that suggests he thinks goat would normally be what we take to be a true idea, on the one hand, and chimera to be a false idea, on the other. Moreover, it is to false ideas that Descartes attributes most human error, both in metaphysics and morals. He goes on:

But the chief and most ordinary error that arises in them consists in judging that the ideas which are in us are like or conformed to the things that are external to us ...³⁴

³³ *Meditations* III.19-20; AT 7.43, 45-47.

³⁴ *Meditations* III.6. AT 7.37, 37. The text literally reads:

Descartes does not himself attempt to reconcile what he says about eternal truths with the doctrine of the existential import of ordinary knowledge claims.

4. Arnauld

Antoine Arnauld provides the much needed revision of medieval semantics required by Descartes' dualism, which because it rejects the causal transmission of modes from matter to spirit, could not support any of the various causal theories of reference common in earlier logic. Especially problematic was the Aristotelian view that sensible properties instantiated in a material substance outside the mind travel via sensation and abstraction to be instantiated 'intentionally' in the soul itself. His positive theory of reference, which exploits the medieval notion of objective being, remains of interest to modern semantics because it features the role of intentional content, a concept that is still very much alive in current philosophy of mind and language. The bulk of Arnauld's semantics is laid out in two works: the books on the logic of terms and propositions in the *Art of Thinking* (the *Port Royal Logic*), which he co-authored with Pierre Nicole, and in *On False Ideas*.

Like various medieval logicians and Suárez, but unlike his teacher Descartes, Arnauld recognizes that there is a clear difference between, on the

consist in this that I might judge that ideas, which are in me, are similar to things posited as external to me but without conforming [to them]. [*Praecipuus autem error et frequentissimus qui possit in illis reperiri, consistit in eo quod ideas, quae in me sunt, iudicem rebus quibusdam extra me positis similes esse siue conformes...*].

one hand, essential truths, which are eternal and, he says, do not carry existential import, and, on the other, ordinary contingent truths, which do:

The first reflection is that it is necessary to draw a sharp distinction between two sorts of truths. First are truths that concern merely the nature of things and their immutable essence, independently of their existence. The others concern existing things, especially human and contingent events, which may or may not come to exist when it is a question of the past. I am referring in this context to the proximate causes of things, in abstraction from their immutable order in God's providence, because on the one hand, God's providence does not preclude contingency, and on the other, since we know nothing about it [i.e. contingent creation], it contributes nothing to our beliefs about things.

For the other kind of truth [viz. of essential natures], since everything [of this sort] is necessary, nothing is true that is not universally true. So we ought to conclude that something is false if it is false in a single case.³⁵

Here Arnauld makes several points that align him with Suárez's account of essential truth. He distinguishes between two types of universal affirmative, those that describe essences and do not require the actual existence of instances of their subject term, and those that describe contingent facts which do. He also describes essential truths as necessary, immutable and independent

³⁵ LAP IV, 13, KM 398, B 263. In the first edition of 1662 the text continues:

On the contrary, possibility [i.e. even a single possible instance, a *possibilium*] is a sure mark of the truth with respect to what is recognized as possible, whenever it is a question only of the essence of things. For the mind cannot conceive anything [concerning essences] as possible unless it conceives it as true according to its existence. Thus when a geometer conceived that a line could be described by four or five different motions, he never took the trouble actually to draw the line, because it was enough for it to be possible in order for him to consider it as true, and to reason based on this assumption.

In this additional remark the authors seem to be making what is essentially a point in modal logic, that if a proposition is about essences (which would be either necessarily true or false) and is also possibly true, then it is in fact necessary: $(\Box P \vee \sim \Box P) \wedge \Diamond P \vdash \Box P$.

of time, and stresses that they are universal in their logical form because they are refutable by a single counter-instance.

Although in the text cited Arnauld mentions essential truths and ascribes to them their distinct lack of existential import, it must be stressed that this text is unusual. The bulk of his writing is concerned with how we come to know contingent truth and fall into error about it. It is in this work that he lays out the necessary semantic underpinnings for his views about error, and it is here that he sketches what is really of most interest to modern theory, the explanation of reference in terms of intentional content. The key is his notion of false ideas, which we can explain only by laying out somewhat systematically more elementary parts of Arnauld's semantics.³⁶

The construction of the relevant semantics starts with ontology. On the one hand, the *Logic*'s ontology is traditionally Aristotelian. It accepts the Aristotelian ten categories, which in the terminology of late medieval logic it divides into substances and the residual categories called modes.³⁷ At the same time, however, it is dualistic in the special Cartesian sense that rejects the causal transmission of modes from material to spiritual substances. Accordingly, cases of apparent interaction between the two must have an alternative explanation, which for Arnauld (and later Malebranche) is occasionalism – the view that independently and simultaneously God creates the two apparently interacting modes, one material and one spiritual, so that they appear to us as if one causes

³⁶ For further discussion of the concept of a false idea in Arnauld see *Martin 2010*.

³⁷ *LAP* I.2.

the other.³⁸ It is this dualistic separation of mind and that compells the Cartesian logicians to reject the various medieval causal theories of reference common in earlier logic that posit a body to mind transmission of modes.

Next in the definitional order is syntax. The Cartesian account of syntax, especially of the more elementary propositions relevant to the semantic issues discussed in this paper, draws on standard teachings about mental language developed in medieval logic. The syntax is what we would call today a generative grammar. It begins by laying down two basic parts of speech or grammatical types, simple nouns and adjectives. Noun phrases and sentences, called nouns and propositions, are constructed from these. All expressions are understood to be mental acts. What Arnauld calls a noun is essentially what medieval logicians, and Descartes, call a concept. Nouns and mental terms generally are also often referred to as ideas, though in Cartesian usage idea is also used very broadly to include a wide variety of mental acts. Propositions in turn are understood to be subject to additional mental operations like judgment (affirmation and denial) and deduction.

Several grammatical rules are relevant here. The first, called *restriction*, fashions complex nouns phrases, called nouns, by affixing an adjective, or a relative clause functioning as an adjective, to a noun, as in *transparent body*, *wise man*, *reasoning animal*, *a body that is transparent*, and *the pope who now reigns*.³⁹

³⁸ For *Logic*'s commitment to occasionalism see *LAP* I,2, *KM* 5,133, *B* 30; *Discours* II, *KM* V,122, *B* 33; I,9, *KM* V,157, *B* 49-50.

³⁹ *LAP* I.vii, *KM* 151-2, *B* 45; *KM* 145, *B* 40; *KM* 248, *B* 130, and *KM* 250, *B* 131.

Nouns and adjectives are combined to form the four traditional categorical propositions, and these in turn to form complex, including the conjunctions, disjunctions, and hypotheticals as in medieval sentential logic.

Nouns and adjectives are also distinguished semantically. As a fact of nature, which ultimately is ordained by God, each noun possesses a descriptive 'content' or what Arnauld calls its *comprehension*. This content consists of a group of modes that has the function of determining the noun's referents: it refers to or, in the logical terminology of the day, *signifies* those objects that instantiate all the modes in its comprehension. If the comprehension consists of modes of material objects, the mental term signifies objects outside the mind.⁴⁰ Generally a noun will signify more than one object, and in this case it is an abstract or common noun. A proper noun is a special case of a noun in general; it is a noun with a content jointly true of only a single individual.⁴¹

Though a noun has formal being because as a mode of the soul it is part of the soul's form, it also possesses what Arnauld calls objective being. The Cartesians varied in what exactly they thought an idea's objective being was. In Arnauld's opinion it is the being an idea has as a relatum in its relation to its comprehension. Much as we might say a boy has *the-being-of-a-son* because it stands in the *is-a-child-of* relation to its parents, an idea has the being of an object (a thing thrown) because it stands in the *being-thrown-against* relation (*ob* = *against*; *iacere* = *to throw*) to the modes in its comprehension. Thus, as Arnauld understands the two species of being, one and the same entity, an idea,

⁴⁰ LAP I.vi, KM 145, B 59. See note 51 below.

both has formal and objective being. It has formal being because it is a mode true of the soul and as such functions as a term in mental language. It has objective being because it is one terminus of the relation the idea bears to its comprehension.⁴² One striking feature of this understanding of objective being is that it is ontologically minimal. It draws only on the substance-mode ontology of mental language, without attributing to objective being any special ontological status like that of Ockham's *ficta* or of the ideas in God's mind posited by Scotus, Suárez, and, as we shall see, Malebranche. What is of interest to logic about Arnauld's objective being, however, is less its ontological status than its role in explaining reference through what was to become known as intentional content.⁴³

Unlike a noun, an adjective is said to be a connotative term, a technical distinction from medieval logic. It is so called because it possesses a double signification. The adjective signifies first a mode, and, in turn, this mode determines those objects that the adjective signifies. A noun too stands in two semantic relations, but in the case of a noun these are distinguished by different terminology for their relata – a noun expresses its *comprehension*, and, in turn, this comprehension determines the objects the noun signifies. The practice of

⁴¹ On singular propositions being a special case of universal see *LAP* II, 2, *KM* V, 191, *B* 84.

⁴² On Arnauld's use of objective being see *VFI* Chapt 6, *KMI*, 204, *G* 71-71; *LAP* I, 2, *KM* V, 134, *B* 30; *VFI* Chapt 4, *KMI*, 193, 198-199, 200-201, *G* 61, 66, 68.

⁴³ Brown makes a case for Descartes as the source in modern philosophy for Brentano's notion of intentionality. Descartes, however, says very little about semantics and scarcely anything that could be construed as a theory of reference. It is Arnauld and Nicole in the *Art of Thinking* who first lay out in a systematic way how a term's objective being determines its 'modal content' and thereby what it signifies. *Brown 2007*. Also, *Brown 2000*.

using signification to name both relations in the case of adjectives is a holdover from medieval usage.

The terminology is further complicated by the fact that though an adjective's signification of its mode determines its signification of things, the former is called its *secondary* and the later its *primary* signification. This oddity is due to the Aristotelian principle that the being of a substance is ontologically prior to that of its modes.⁴⁴

Nouns and adjectives, which are mental modes, come into being or are 'caused' in one of three ways. Some are innate and simple, and these possess their comprehensions by nature. Some innate ideas, like that of extended substance, contain modes in their comprehensions that are material, like extension. Ideas are also acquired in a second way, by abstraction from 'sensation.'⁴⁵ Cartesian abstraction is an operation on the experience of sensation, which is understood as entirely mental. It is a self-conscious awareness that the soul is currently instantiating various mental modes. Abstraction consists of the forming of a new idea by attending to some of the modes experienced in sensation so that the comprehension of the idea contains just these modes. Since the modes experienced in sensation are all mental, abstraction in this sense does not allow for the formation of an idea that 'contains' material modes. A third way in which ideas are acquired is by construction. The soul itself can form complex nouns by restriction, the

⁴⁴ On Significations see *LAP* I.2 and II. 27 and 28 . On connotative terms see *LAP* I,8, *KM* V,153, *B* 46.

⁴⁵ *LAP* I,v.

grammatical operation previously described in which a noun is modified by an adjective. The process consists of forming an idea with a comprehension that combines the modes from the comprehensions of the two component ideas. It follows that the complex noun has its signification restricted to those things that simultaneously satisfy the content of both component terms.

Although in his ontology Arnauld posits both mental and spiritual modes – indeed he speaks of substances and modes as a straightforward realist⁴⁶ – he nevertheless holds that genera and species are mental ‘universals’ or modes of the soul. The result is that he can be seen to divide the traditional five predicables in a non-traditional way.⁴⁷ Difference, proprium and accident he

⁴⁶ See *LAP*, *Discours I*, p. 24, *KMV*, 11-113, *B* 11-12.

⁴⁷ *Predicable* is systematically ambiguous in *LAP*. When predicables are identified in the *Logic* as varieties of common nouns, they are abstract ideas. They are modes of the soul, not modes of bodies outside the mind. The two substantial predicables, genus and species, are always understood this way in the *Logic*. Though the Arnauld and Nicole speak straightforwardly as realists about the existence of extra-mental modes, they do not identify species or genera with extra-mental Boethian universals. Rather, they are purely spiritual. However, in the *Logic*'s ontology, *difference*, *proprium* and *accident* have already been introduced as terms that stand for modes, which in general exist outside the mind and inhere in extra-mental subjects. But the mind also has ideas that signify these three sorts of extra-mental predicable modes – second intentions in medieval logic – and these go by the same name in an ambiguous terminology. Thus, an idea, which is a mental mode, that has as its content an extra-mental difference, and hence signifies substances that instantiate that difference, is also called a difference. Likewise an idea that signifies a proprium is called a proprium and one signifying an accident is called an accident.

In the main discussion of the five predicables (I,vii) it is clear that in the paragraphs devoted to genera and species, these two are identified with ideas. The authors say literally that genera and species are (*être*) ideas. But in the paragraphs explaining difference, proprium and accident the meaning of these terms is ambiguous. There the authors use the expression *idea of* difference, proprium and accident. The ambiguity lies in the genitive construction *idea of* (*idée de*). It can be read as the descriptive genitive, as in the genitive in *he is a man of no character*. On this reading *an idea of a difference* would refer to an idea of the sort that was literally a

classifies simply as modes, and as modes they may be either material or spiritual. Genera and species, on the other hand, are classified as abstract ideas. As such, they are mental modes and function as nouns or 'general terms' in mental language. Because a proper noun also counts as a noun, it too is a species. It is what a medieval logician would call an individual concept.

It is due to the identification of nouns, abstract ideas, and species that Arnauld dilutes Aristotelian essentialism to virtual meaninglessness. He makes no distinction between, on the one hand, species terms as found in natural science and, on the other, the nouns of ordinary speech. Rather, every mental term has a 'real definition' setting out its comprehension or intentional content,

difference. That is, difference, proprium and accident would be ideas. On the other hand, *idea of* could be understood as the possessive genitive, as in *the dog of the man*. Philosophers use this sense to talk about the object that is paired with an idea, as does Arnauld in his standard example *the idea of Alexander*. Here Alexander is a thing in the world, not an idea. On this reading the three predicables *difference*, *proprium*, *accident* would in general not be ideas but modes in the world that inhere in subjects.

Though the use of the genitive is in principle open to both readings, the authors' intention is clearly the second. They have already explained that they think modes exist, and in the case of accident have said explicitly in the section on the categories (I.iii) that the non-substantial categories are called as a group *accidents*. But in the section on the predicables under discussion the subject is the *idea of accident*. If the authors are here to be understood as using the descriptive genitive, they can be charged with equivocation. In the earlier section an *accident* is understood as a mode, but in this section it is an idea. If they are here using a possessive construction, then the text may be read univocally using *accident* in both places to refer to a mode. This reading is the simpler and more straightforward. It avoids an equivocation and fits the authors' earlier remarks on ontology. But on this reading we are forced into an interpretation in which the predicables are treated unequally. The first two, genera and species, are literally universal ideas, but the last three, difference, proprium, and accident, are extra-mental modes of which we also have corresponding abstract ideas *of* difference, proprium, and accident. Such seems to be the *Logic's* view.

something like a modern dictionary entry or the descriptive content of a Fregean sense. To be sure, this rejection of essentialism by generalizing it all nouns is not surprising given the Cartesian rejection of Aristotelian science. On the Cartesian view, the natural world is nothing more than varieties of corpuscles in motion. Among their geometrical patterns there is no natural basis for singling out from nouns in general a subset of 'species' arrayed in structures like the tree of Porphyry.

Next in conceptual order is the definition of truth, and what is important to this study, the notion of a false idea. Both are defined in terms of signification.

It is useful to introduce the notion of a false idea first because it motivates the notion of an empty term which figures in the definition of truth. Key to understanding a false idea is its role in Descartes' explanation of error. Arnauld elaborates the account as follows:

Because we were children before we became adults, and because external things acted on us, causing various sensations in the soul by the impressions they made on the body, the soul saw that these sensations were not caused in it at will, but only on the occasion of certain bodies, for example, when it senses heat in approaching the fire. But it was not content to judge merely that there was something outside it that caused its sensations, in which case it would not have been mistaken. It went further, believing that what was in these objects was exactly like the sensations or ideas it had on these *occasions*. From these judgments the soul formed ideas of these things, transporting the sensations of heat, color, and so on, to the things themselves outside the soul. These are *the obscure and confused* ideas we have of sensible qualities, the soul adding *its false judgments* to what nature caused it to know.⁴⁸

⁴⁸ LAPI,9, KMV,157-158, B 49-50.

Here *heat as caused by an external object*, *color as caused by an external object*, etc. are examples of false ideas. As the text explains, the cases of error cited consist in believing a judgment in which the content of a false idea is predicated of that idea itself, as in *heat as caused by fire is caused by fire*. Here the predicate would be contained in the subject and the proposition would be trivially true if the subject were a legitimate term. But because the subject term is 'false,' it is not. The implication from such cases for the definition of truth is that an affirmation *every S is P* cannot be true if its subject term is 'false.'

But what does it mean to say an idea is false? The *Logic* explains the notion as follows:

If the objects represented by these ideas, whether of substances or modes, are in fact such as they are represented to us, one calls them true. If they are not such, they are false in the manner in which they could be. [*si ils ne sont pas tels elles sont fausses en la maniere qu'elles les peuvent être*], and this is what one calls in the schools beings of reason, which consist ordinarily of the assemblage that the soul makes out of two ideas real in themselves, but which are not joined in truth to form a single idea, as that which one can form of a mountain of gold is a being of reason because it is composed of two ideas, of mountain and of gold, which it represents as unified though they really would not be so.⁴⁹

The text is clear about the meaning of a true idea: it is one that represents things as they are. It is however somewhat less clear on the meaning of false idea. *Heat as caused by an external object* is an example of a false idea.

Clearly, such an idea mixes mental and material modes in an impossible way; there cannot be a substance that instantiates both at once. Moreover, it explains

⁴⁹ LAPI,2, KM V,136, B 32.

that the idea is false because it represents things not merely inaccurately – as they in fact are not; it also says they are false in ‘the way they can be’ (*sont fausses en la maniere qu’elles les peuvent être*). This expression contains the denial of the modal verb *pouvoir*. It suggests the reading that a false idea is not just false but impossible, that Arnauld may mean by false idea not simply one that fails to stand for actual things but one that could not possibly stand for anything.

This stronger reading is supported by the fact that the text equates *heat as caused by an external object* with a ‘being of reason’ and illustrates a being of reason by the example of *golden mountain*. In the earlier logical literature a being of reason was often understood to be an impossible object, and a golden mountain is one of the stock examples, like chimera, of an impossible object.

There are several reasons, however, that support the weaker and less logically simple reading that understands a false idea as one that is simply not true – one that does not in fact apply to an actual being.

First, the text is formulated as a conditional that suggests that its antecedent contrasts with its consequent:

If they are not such [i.e. if they are not true], they are false in the manner in which they could be. [*Si ils ne sont pas tels elles sont fausses en la manniere qu’elles les peuvent être.*]

The grammar suggests, then, that a false idea is the contradictory opposite of a true idea, which is spelled out in the antecedent. The alternative stronger reading would understand the contrast to be between a true and an impossible

idea, and would have to understand Arnauld here, rather implausibly, as committing a fallacy, that if something is 'not true,' it is impossible.

At issue in the text is the placement of the modal modifier, *in the manner in which they could be*. Does it apply to the relation (the conditional as a whole), as in the stronger reading, or to one of its relata (false idea), as in the weaker? Does it mean *if an idea is not true, it can only be false*, or *if an idea is not true, it is an idea that can only be a false*. This kind of ambiguity is familiar. There is, for example, the traditional distinction between the necessity of a consequence and the necessity of its consequent. (It is a fallacy to confuse the epistemic triviality '*God knows that P necessarily entails P*' with the more contentious '*God know that P entails Necessarily P*', a version of determinism.) Because the grammar is ambiguous, it is open to the simpler reading. On this reading it makes the relatively non-controversial point that if an idea is not true, it cannot represent what is not the case.

Thirdly, some of the examples that the *Logic* proffers as false ideas cannot reasonably be understood to be impossible. In the text below it is implausible to read as impossible the ideas *happy and rich* or *poor and unhappy*.

Now since there is a certain excellence in happiness, the soul never separates these two ideas, and always regarding everyone it considers happy as great, and those it considers poor as unhappy and lowly. This is why people scorn the poor and admire the rich. These judgments are so unjust and false, that St. Thomas believes it is this attitude of esteem and admiration for the rich that the Apostle St James condemns so severely when he forbids giving a more elevated seat to the rich than to the poor in church assemblies.⁵⁰

⁵⁰ LAPI,9, KMOV,163, B 54.

Lastly, the stronger reading entails various absurdities that it is implausible to attribute to Arnauld. These follow when the condition that a subject term be non-false is added to the truth-conditions for a universal affirmative. If false means impossible, the proposition may be true if the subject term is possible but not actual. Various trivial propositions with empty subject terms would then count as true, for example, *the present king of France is a king*. It is implausible to think, however, that Arnauld would accept *the present king of France is a king* as true yet reject *a golden mountain is a mountain* because the one has a true and the other a false idea as subject.

It is clear then that among its truth-conditions for the standard universal affirmative, which are those used to express contingent truths, Arnauld intends to include the requirement that the subject term stand for at least one existing thing. Accordingly, in the section setting out the theory of immediate inference the *Logic* teaches that subalternation is valid: the universal entails its particular affirmative.⁵¹ In other words, on the weaker reading the particular affirmative carries its normal existential reading, as one would expect.

We may now proceed to the definition of truth itself. Logicians since Aristotle had preferred some version of a formula that says a proposition is true if 'the subject and predicate stand for the same.' Defining the relevant notion of 'stand for' and 'the same', however, gave rise to some of the more complicated parts of medieval semantics, including supposition theory. True to his reformist tendencies, Arnauld introduces a much simpler definition of truth by appeal to a

⁵¹ *LAP* II,4, *KMV*,201, B 86.

new technical term, extension (*étendue*). A noun's extension (in this sense) consists of all the 'species' subordinate to it, or as Aristotle would have said, everything that the term is 'said of'. The definitional order is important. Subordination here is defined in terms of signification. One species is subordinate to a second if all the entities that satisfy the modes in the comprehension of the first are included among all those entities that satisfy the modes in the comprehension of the second. If we call the significance range of a noun all the actual entities that satisfy the modes in its comprehension, then S_1 is subordinate to S_2 iff the significance range of S_1 is a subset of that of S_2 . Since signification is defined in terms of comprehension, subordination can also be characterized in terms of signification: S_1 is subordinate to S_2 iff all the entities signified by S_1 are signified by S_2 . Because a species is an idea, a term's extension consists of ideas. Moreover, among its subordinate species a term will include singleton species (individual concepts). On the assumption that every individual possesses a name, an idea that applies to it uniquely, singleton species would stand one to one to the objects in an idea's significance range. It would follow that the part of a term's Cartesian extension composed of singleton species would be mapped 1 to 1 to the term's extension as that notion is defined in modern logic. In other words, a term's significance range is essentially its extension in the modern sense.⁵²

⁵² The ideas inferior to a species is called its *extension*. *Comprehension* and *extension* are defined as follows (*LAP* I.6, *KM* 145, *B* 59):

I call the *comprehension* of an idea the attributes that it contains in itself, and that cannot be removed without destroying the idea. For example, the comprehension of the ideas of

In a true universal affirmative the extension of the predicate is generally broader than that of the subject, not identical to it. Arnauld, however, manages to formulate the definition of truth in terms of identity by observing that in a true affirmative the extension of the subject restricted by the predicate is identical to that of the subject alone, as in the related set theoretic fact: $A \subseteq B$ iff $A \cap B = A$.

In the truth conditions the requirement must also be added that the subject term be non-empty. By definition S is a *false idea* if there is no object that instantiates all the modes in its comprehension or, to say the same thing, if it signifies nothing. Let SP indicate the complex noun in which the noun S is restricted by the adjective P . The truth conditions of the universal affirmative may then be stated in a way that makes explicit the condition that incorporates its existential import:

Every S is P is true iff S is not a false idea and the extension of SP is identical to that of S .⁵³

Having seen in some detail the conditions of truth for a non-essential universal affirmative, let us consider the case of essential truths. The closest Arnauld ever comes to providing an analysis of essential truth is to be found in the *Logic's* explanation of real definitions (*definitio rei*).⁵⁴ The examples given are *man is a rational animal* and *time is the measure of motion*. Purported

triangle contains extension, shape, three lines, three angles, and the equality of these three angles to the two right angles, etc.

I call the *extension* of an idea the subjects to which this idea applies. These are also called the inferiors of a general term, which is superior with respect to them. For example, the idea of triangle in general extends to all the different species of triangles.

⁵³ On the truth-conditions for the universal affirmative the text reads see *LAP* II.17, *KM* 147-149, *B* 129-131).

⁵⁴ See *LAP* 1:12, *KMV*, 170-175, *B* 60-63.

definitions of this sort, he holds, are generally either true or false. Though the text does not give a straightforward statement of truth-conditions for a real definition, it does refer to them as claims about what ideas are 'contained' in one another. We can formulate this vague account more explicitly in terms of comprehension: a real definition *every S is P* is true iff *S* contains *P* as part of its comprehension. Moreover, Arnauld says that a mistaken real definition like *a parallelogram is a figure of three lines* is not simply false but impossible. It follows that a real definition would be necessary if it is true.

What is interesting about Arnauld's account of real definitions is how it must be construed within a correspondence theory of truth of a certain sort. A real definition *S is P* asserts that the subject term *S*, an idea, stands in the natural relation of 'containment' to the mode signified by predicate *P*. Equivalently, the definition asserts that the predicate is part of the term's objective being as Arnauld understands that notion. This is a metalinguistic fact about language, about how words, mental modes, relate to other modes. The necessity attached to this fact is then the necessity imposed by the order of nature, due ultimately to God, which determines a word's comprehension.

It is relevant that instead of appealing to odd entities like Platonic ideas, objective being in God's mind, or possibilia, Arnauld understands essential truths as describing a term's 'objective being' understood in an ontologically innocuous sense. An essential truth corresponds to mental facts formulated in the ontology of mental substances and modes, in a way not unlike that, for example, of John Buridan but shorn of any causal notion of reference.

This ontological point deserves elaboration because it stands at the root of Arnauld's dispute with Malebranche. Arnauld rejects objective being as a 'third' entity distinct from the idea itself and things in the world. On the contrary, he is clear that the intentional content of an idea, its objective being, is nothing other than the being it has as a result of standing in relation to the modes in its comprehension. Objective being in this sense is simply the idea's being as a sign, as a relatum standing in a relation to modes. There are no special entities to play the role of extra mental essences for the terms in essential truths to refer to, as in the correspondence theories of Scotus and Suárez who place objective being outside the human mind and in the mind of God. Arnauld is quite clear that he thinks Malebranche is wrong in thinking that there are such special entities – ideas in God's mind, images, representations – that are distinct from ideas in the human soul and that function as intermediaries between a mental idea and the substances or modes it signifies.⁵⁵

Nor could Arnauld have appealed to *possibilia*, a second candidate for the special entity that might serve as the referent of the terms in an essential truth. As we saw earlier, this is the proposal made by Buridan. This analysis is part of the logical doctrine of *ampliatio*. On this view when the copula is modified by tense or modal auxiliaries, the terms in the proposition signify past, future or possible objects depending on the modifier. But Arnauld cannot accept this analysis because he rejects the very notion of a possible entity. He rejects

⁵⁵ On the rejection of representational realism see: *VFI* Chapt. 1, *KMI*, 190; *G* 58; Chapt. 4, *KMI*, 192-2, *G* 60-62.

possibilia out of hand as an absurd idea.⁵⁶ Instead he fashions his account from the entities already available in his analysis of reference for normal contingent truths. It appeals only to words, to the modes that make up their ‘intentional content’ and to the substances and modes that make up the external world. The

⁵⁶In this the *Logic* holds to a general pattern of eschewing the complexities of medieval semantics. Likewise it totally ignores the rich resources of supposition theory, though both supposition and application theory were still being expounded in various logical manuals of the day. For Arnauld’s principled rejection of *possibilia* see ‘Arnauld to Leibniz,’ May 13, 1686, *KM* VI, pp. 31-32:

I acknowledge in good faith that I have no idea of substances purely possible, that is to say, which God will never create. I am inclined to think that these are chimeras which we construct and that whatever we call possible substances, pure possibilities are nothing else than the omnipotence of God who, being a pure act, does not allow of there being a possibility in him. Possibilities, however, may be conceived of in the natures which he has created, for, not being of the same essence throughout, they are necessarily composites of power and action. I can therefore think of them as possibilities. I can also do the same with an infinity of modifications which are within the power of these created natures, such as are the thoughts of intelligent beings, and the forms of extended substance. But I am very much mistaken if there is any one who will venture to say that he has an idea of a possible substance as pure possibility. As for myself, I am convinced that, although there is so much talk of these substances which are pure possibilities, they are, nevertheless, always conceived of only under the idea of some one of those which God has actually created. We seem to me, therefore, able to say that outside of the things which God has created, or must create, there is no mere negative possibility but only an active and infinite power.

Because Arnauld rejects possible beings and does not appeal to ampliation, I think the reconstruction by Bas van Fraassen of Arnauld’s theory of comprehension as extensions of possible object points in logical space, though capturing the sort of meaning relations Arnauld would like, does not cleave very closely to his ontology. See *van Fraassen 1967*.

Suárez, in contrast, clearly identities the objective being of ideas in God’s mind with *possibilia*. See *DM XXXI.2,6 Vivès XXVI.30*; *DM XXXI.2,8, Vivès XXVI.23*; *DM XXXI.2,10, Vivès XXVI.232*. Descartes too seems to treat objective being in his sense as *possibilia*. See *Normore 1986*.

account is ontologically uncontentious, especially when contrasted with that of Malebranche.

5. Malebranche

Unlike Descartes but like Arnauld, Malebranche acknowledges clearly the difference between, on the one hand, knowledge of essential truths, which do not carry existential commitment to actual objects, and knowledge of contingent truths, which do.

For there are two kinds of truth, those that are *necessary* and those that are *contingent*.

I call those truths necessary that by their nature are immutable, or that have been fixed by the will of God, which is in no way subject to change. All others are *contingent* truths. Mathematics, metaphysics, and even a large part of physics and morals contain necessary truths. History, grammar, local custom, and several other things that depend on the changing will of men, contain only *contingent* truths.⁵⁷

But while Arnauld devotes his analytic apparatus to explaining contingent judgments and scarcely mentions essential truths, Malebranche's emphasis is the reverse. He provides an elaborate ontology and epistemology that lays out a correspondence theory for essential truths, but relegates knowledge of contingent reality to non-conceptual sensation, which he regards as containing very little semantic information about the external world.

Like Arnauld, Malebranche wrestles with the implications for semantics of Cartesian dualism and its rejection of medieval accounts of reference based on sensation and abstraction. But he focuses his analysis on essential truths.

Malebranche's task as he saw it was to provide a correspondence theory of truth for terms that need not stand for actual things, but may nevertheless express what we would call scientific knowledge and indirectly, in his opinion, convey information about the contingent external world.

To do so, he adopts a model of indirect reference common in the semantics of contingent truths: a word refers to a thing through an intermediary entity that determines its reference. Sense occupy this role in Frege's semantics; ideas in God's mind have this role according to Malebranche. Like Frege, Malebranche also holds that in some contexts a word stands directly for this intermediate entity, but unlike Frege he thinks this is the norm in the case of genuine knowledge because these directly describes ideas in God's mind.

His theory postulates three 'levels' of reality: (1) the material substances and its modes that make up in contingent the actual world, (2) the soul and its modes that make up the terms of mental language, and (3) God and his ideas. These levels are bridged by three semantic relations: (1) *illumination*, which is the causal relation by which ideas in God's mind affect the soul and its modes, (2) *creation*, which is the causal relation by which God's ideas affect material substances and their modes, and (3) a relation of *indirect reference* that obtains between mental words and material substances. This last is in modern terms the composition relation formed from the other two: a mental word *x* indirectly stands for an extramental object *y* iff, for some *z*, *x* is a mental state that consists in seeing *z* as part of illumination and *z* is the exemplar cause of *y*.

⁵⁷ *Search after Truth* (hereafter *Search*) I.3.2; LO 14-15; OC 1:63. *Search* VI.2.vi.; *Elucidation* VI,

Malebranche accepts Descartes' account of the material world as extension in motion. Like Descartes he also understands the terms of mental language to be modes of the soul, and like Arnauld he explains the apparent causal interaction between matter and mind by occasionalism. However, God's ideas, the third type of semantic entity, fall outside Descartes' substance-mode, mind-matter dualism. God's ideas have an odd status. If Malebranche were to explain God's ideas within substance-mode ontology by identifying them with modes inhering in God's substance, as Suárez sometimes seems to do, he would make God a composite being and contradict the doctrine of God's simplicity. To avoid this theological difficulty, Malebranche understands divine ideas to have a *sui generis* ontological status as manifestations of God's nature distinct from modes.⁵⁸ But like Suárez and explicitly unlike Descartes, Malebranche holds that they arise necessarily from God's nature prior to any act of his will⁵⁹; they are, therefore, contra Descartes, not only eternal but necessary and immutable.⁶⁰

The terms of mental language, understood as modes of the soul, are linked to their referents by two causal relations. Neither of these is the Aristotelian causal transfer of material modes to the soul rejected as part of Cartesian dualism. Nor does Malebranche accept the alternative causal origins

OC 3:66-66, LO 575.

⁵⁸ See *Search* III.2.i; OC 1:414-5; LO 217-18; and TL I, OC 6:217, and Also *Réponse du Père Malebranche au Livre des fausses Idées* VI :vi, OC 6 :58, S p 317.

⁵⁹ See *Elucidation* VIII,20, OC 3:85-86, LO 586-7.

⁶⁰ All knowledge, which is through God's ideas, is necessary, immutable, and eternal. TL I, OC 6:199-200; LO 217-1.

of ideas defended by Descartes and Arnauld: innateness, abstraction from sensation, and construction by grammatical restriction. Like the medieval logician Peter John Olivi⁶¹, who shared a similar motivation in rejecting Aristotelian causal accounts of reference, Malebranche adopts a radically different quasi-Platonic account of reference based on Augustine's theory of illumination.

As in the standard accounts of mental language, a term is a mode of the soul. In Malebranche's view, however, mode is a mental act of understanding an idea in God's mind. When we conceptual a mental word, we are 'see' the idea in God's mind that is part of the causal process by which God causes our act of understanding.⁶² When we 'see' the idea, we also see other ideas identical to it. We understand that a proposition composed of a subject and a predicate is true. When we do so, we are 'understand' the term's content or objective being as Malebranche understands that technical term. The details turn on his theory of truth. In *The Search After Truth* Malebranche advances a series of arguments for his views and against earlier semantic theory, including the various alternative causal explanations of mental states advanced by the Aristotelians, Descartes and Arnauld. Here it will suffice to concentrate on issues relevant to his semantics.⁶³

⁶¹ See the discussion of Olivi in *Pasnau 1997*.

⁶² *Elucidation X*, OC3:136, LO 617..

Elucidation X, OC 3:141-143, LO 621.

Elucidation X, OC 3:151-153, LO 626-8.

⁶³ For a general review of Malebranche's arguments see *N*, Chapter 2, and Chapter 4. p 108 ff.

General terms. One of Malebranche's arguments in favor of his claim that mental terms stand for divine ideas turns on his view that the terms of mental language are abstract and general, or what we would call common nouns.⁶⁴ What we know and what our terms stand for – he thinks the two states are the same – cannot be either a particular in the external world or a particular modal state of our soul because what we know has properties like the infinite that cannot be true of these particulars. More relevant to our purposes, however, is a second semantic point: our knowledge is general, and the terms we use to express it are abstract.

But the soul, however it might sense itself, does not know either itself or its modifications, the soul which is a particular being, a very limited and imperfect being. Certainly it cannot see in itself what is not there in any way at all. How could we see in one species of being all species of being, or in a finite and particular being a triangle in general and infinite triangles?⁶⁵

He often makes this point in terms of an idea's objective being, which, as he understands it, is identical with the idea itself. The predicates true of a subject express the subject's objective being. As we shall see shortly in the theory of truth, objective being of an idea is strictly speaking just another way of talking about the idea itself.⁶⁶ We express the 'content' of the idea of God when we say he is infinite, and that of the idea of a circle when we say it is general. These abstractions, however, cannot, Malebranche argues, be identified with non-

⁶⁴ *Search* I.4.i. OC 1:66, LO 16; *Search* I.1.2, OC 1:48, LO 5.

⁶⁵ *Elucidation* X, OC 3:149, LO 625.

⁶⁶ *TL* I, OC 6:217. Also see note 51 above, and *Réponse du Père Malebranche au Livre des fausses Idées* VI :vi,xii, OC 6 :58,60, S p 317, 319.

abstract particular substances or particular mental modes because it is in the nature of an idea to be general and abstract whereas particulars are unique.

Truth. An affirmation is a necessary essential truth if it describes what he calls an 'equality' among God's ideas and is necessarily false (its denial is necessarily true) if it describes an 'inequality':

Now, truths are but relations of equality of inequality between these intelligible beings (since it is true that twice two is four or that twice two is not five only because there is a relation of equality between twice two and four, and one of inequality between twice two and five). It has always been true that twice two is four and this cannot become false.⁶⁷

This analysis again is an identity theory of truth but with a special understanding of the sort of identity relevant to essential truths. According to this passage, which is most plausible when applied to cases in which the subject exhausts the predicate like *every triangle is a three sided plane figure*, a universal affirmative is necessarily true if the idea that 'causes' the subject term is the same as that which 'causes' the predicate.⁶⁸

He even provides a gloss in terms of the theory of relations in which he explains why there is no more to the 'fact' corresponding to the true essential judgment other than the single idea that the subject and predicate both correspond to.

⁶⁷ *Elucidation X*, OC 3:136, LO 617.

⁶⁸ Suárez offers the same truth-conditions for essential propositions: the sameness of the objective being in the mind of God to which the terms correspond. *DM XXXI.12.46*. *Vivès XXVI.298*. *DM XXXI.12.45*. *Vivès XXVI.297*.

Truths are unreal (identity) relations between [the contents of] ideas, are in God, and neither substance or modes [but therefore are emanations].⁶⁹

...

We see God in seeing ideas of these truths – for the ideas are real, whereas the equality between the ideas, which is the truth, is nothing real. When we say, for example, that the cloth we are measuring is three ells long, the cloth and the ells are real. But the equality between then is not a real being – it is only a relation found between the three ells and the cloth.⁷⁰

Here Malebranche is invoking the standard medieval analysis of relations.

According to this approach, a dyadic relation is ‘unreal’ as a category of being distinct from one-place modes because the fact that a relation obtains ‘reduces to’ or consists of nothing other than the fact that substances are instantiating appropriate one-place modes. More formally, *a* bears *R* to *b* iff there are appropriate modes *F* and *G* such that *a* instantiates *F* and *b* instantiates *G*.

(Sometimes, depending on the relation and the theorist, *F* and *G* may be considered the same mode.) In his application of this general approach to the identity relation, Malebranche cannot reduce it to modes in the standard way because in his ontology ideas in God’s mind are not modes. He says, rather, that an identity proposition (e.g. *every man is a rational animal*) is true if its terms stand for identical ideas in God’s mind. Moreover, he says that like relations in general, this identity relation is ‘nothing real’ in the sense that the only entity described by the proposition’s terms is a single idea in God’s mind.

⁶⁹ Search III.2.vi, OC 1:444, LO 234.

⁷⁰ Search III.2.vi., OC 1:444, LO 234. Also, Search III.2.vi, OC 1:444, LO 234.

In this account semantics and epistemology are closely linked.

Illumination is a 'reference' relation in the sense that the mental term stands for the idea that causes it. Illumination is also an epistemic state of self-conscious awareness of its object. Like Augustine the example Malebranche offers of knowledge of eternal truths is knowledge of essences, mathematics and ethics.⁷¹ Accordingly if a human subject understands the relevant terms and formulates a true essential proposition, he automatically 'sees' that its terms stand for the same idea. The very act of meaningful affirmation goes hand in hand with knowledge of ideas.

Though Malebranche usually explains truth in terms of equality and inequality, he does sometime expand the truth-conditions to include 'equality or resemblance.'⁷² This more general formulation is important because it allows the theory to embrace examples of predications in which the subject is narrower in scope than the predicate, as in the case of necessary truths like *every triangle has three sides*.⁷³ As we shall see, it also helps explain how essential truth can carry information about the contingent entities that make up the actual world.

⁷¹ Examples include mathematics, essential truths, speculative and moral principles, eternal laws. *Dialogues*, *Preface* OC 12:18; *Response* OC 6.64. For an example of one of the many quotations in which Malebranche quotes views similar to his in Augustine see OC 9:933.

⁷² The discussion will explain why, contrary to Nadler's interpretation, Malebranche holds to a resemblance theory of reference. This is not the resemblance of a concept resembling its referent because the very same mode, or an internalized version of it, has traveled by Aristotelian sensation and abstraction from the referent to the concept, which is the kind of resemblance found in medieval accounts like that of Aquinas. Rather it is the resemblance characteristic of Platonic theory in which an idea resembles the material objects that participate in it because the objects are less perfect or incomplete versions of the idea. Compare *N* pp. 45-49.

⁷³ *Search* III.2.x; OC 1:474, LO 252.

We may summarize Malebranche's theory of truth as follows: a universal affirmative is true if its terms stand for the same or similar ideas in God's mind. Moreover, if it is true, it is also necessary because God's ideas are eternal and unchanging.

Reference to Bodies and Contingent Truth. According to Malebranche, strictly speaking the terms of mental language stand for ideas in God's mind, and knowledge is limited to necessary truths that describe their relations. He does, however, allow for a kind of indirect reference to material substances and for knowledge of a lesser sort about the contingent world. The needed relation is present, Malebranche thinks, in the order laid down in his Christianized Neoplatonism. A mental term in effect indirectly represent things in the world through the idea it stands for because the idea in turn, as an exemplar in God's mind, stands in a causal relation to created things.⁷⁴ He explains the process in terms of perfection.⁷⁵

If it is true, then, that God, who is the universal Being, contains all beings within Himself in an intelligible fashion, and that all these intelligible beings that have a necessary existence in God are not in every sense equally perfect, it is clear that there will be a necessary and immutable order among them, and that just as there are necessary and eternal truths because there are relations of magnitude among intelligible being, there must also be a necessary and immutable order because of the relations of perfection among these same beings.

⁷⁴ In Malebranche ideas are exemplar causes. OC 17:1, 307-8.

⁷⁵ *Elucidation X*, OC3:136 LO 617. Also, *Elucidation X* OC3:136, LO 61; *Elucidation X*, OC 3:138, LO 617-18; *Elucidation X*, OC 3:137-138.

Like Plato Malebranche sometimes calls the relation of an idea to material substance *participation*.⁷⁶ True to its Neoplatonic roots, perfection here is quite literally a kind of completion. Moreover, in a manner reminiscent of Proclus, Malebranche also explains the relation of the more perfect to the less as one of whole to part.⁷⁷ Though he uses different terminology, he also subscribes to Proclus' doctrine that 'negation generates affirmation',⁷⁸ that degrees of perfection among material substances (negations) reflect degrees of perfection among the ideas (affirmations) that cause them. For example, he holds that instances of corporeal extension fall in an order that reflects the order of being among the more perfect ideas of extension that cause them:

But although we might suppose that the intelligible parts of the idea of extension always maintain the same relation of intelligible distance between them and that this idea therefore cannot be moved even intelligibly, nonetheless, if we conceive of a given created extension to which there corresponds a given part of intelligible extension as its idea, we shall be able through the same idea of space (though intelligibly immobile) to see that the parts of created extension are mobile, because the idea of space, although assumed intelligibly immobile, necessarily represents all sorts of relations of distance and shows that the parts of a body can fail to maintain the same situation relative to each other.⁷⁹

The metalogic of neoplatonic order. The Neoplatonic order described by the terms of mental language in terms of which subjects are graded in degrees of

⁷⁶ *Dialogues*, Preface OC 12:12; and OC 12:19.

⁷⁷ Proclus describes the part-whole ordering in a triad of progressively diminutive parts: 'Every whole is either a whole-before-the parts, a whole-of-the-parts, or a whole-in-the-parts.' *Elements of Theology*, Proposition 70. Proclus 1963 pp 66-67.

⁷⁸ See *In platonic parmenidem*, Proclus 1987 p 416. On Proclus's semantics see Martin 2001. Reprinted in Martin 2004.

perfection is related linguistically to, and indeed is a special case of, the logical properties of scalar adjectives, their associated mass nouns, and negative affixes. Scalar adjectives, which include the 'terms' of Neoplatonic predication, possess a characteristic semantics. They take as their semantic interpretation extensions sets that fall in a ranked structure. The order among these sets is determined by reference to some 'mass' quantity in such a way that one set is 'higher' in the order than another if its elements possess 'more' of that mass property. For example, the family of scalar adjectives *beautiful*, *pretty*, *plain*, *homely*, *ugly* are interpreted as standing for extensions ranked according to the degree to which they possess beauty, the mass quantity corresponding to the mass noun *beauty*. In a similar way the Neoplatonic tradition understands 'being' as a mass quantity, and accordingly, as part of a more general linguistic semantics of mass terms, there are associated with it associated certain adjectives or 'ideas' that are by their nature scalar. In the tradition, these are understood to fall in an order described as one of 'perfection,' literally an order determined by the degree to which an object possesses being or is ontologically 'complete'.

Malebranche falls in this tradition. An excellent example is his understanding of the idea of extension. When we understand intellectually a particular kind of extended substance, he thinks we are actually seeing an idea in God's mind that is a diminished version of the more perfect idea of extension

⁷⁹ *Elucidation X*, OC 3:151-153, LO 626-8.

from which it derives. This idea of extension, moreover, exists in an ontologically prior sense in God's mind. He describes the process:

just as one can sculpt all kinds of figures from a block of marble by using a chisel, so God can represent all material beings to us through various applications of intelligible extension to our mind.⁸⁰

As he understands it, efficient causation by which God creates the contingent world consists of the generation of less perfect instances of God's more perfect ideas.⁸¹ Within Malebranche's semantics, then, indirect reference of mental terms to material things is possible due to the fact that the ideas that terms represent cause material things as imperfect copies. When God chooses to create a material instance of an idea, the mental term standing for that idea then conveys general information about that material substance. It exhibits its nature. The more particularized an idea is, the less perfect it ranks within the hierarchy of ideas, but the closer it comes to uniquely specifying an individual. Though Malebranche does not discuss this issue, in principle a divine idea could uniquely specify an individual because it has a single individual as a material instance. Such an idea would be an individual concept. Though God does not need to understand each person individually because he understands every material creature through his idea of extension in general, if God were to have individual concepts of each creature, we could understand them indirectly through illumination.

⁸⁰ *Dialogue I*, Malebranche 1997a p. 17).

⁸¹ *Elucidation X*, OC 3:153-154. LO 626-27.

Understanding of any individual material substance, however, is in principle general and must remain in a sense incomplete. We cannot know intellectually whether any given corporeal substance exists. The best we are afforded, on Malebranche's view, are indirect indications of existence through sensation. As in Arnauld, sensation is a direct awareness of sensory qualities instantiated in the soul. Though sensation is of the mental, it nevertheless gives an indirect indication that material things exist due to the happy fact of occasionalism. 'Sensation,' he says somewhat misleadingly, 'is of what is.'⁸² On the occasion of a corporeal substance affecting the body's sense organs and brain, God causes the soul to be affected by a sensory quality, which is a quality of the soul. The occurrence of that quality is then a mark that an object exists. Sensation accordingly gives rise to a degenerate species of knowledge. It is a conscious experience of a mental state that indicates the existence of a material substance. This sensory experience is, however, non-intellectual and as such is totally uninformative about the abstract nature of the substance affecting the body's sense organs. Malebranche calls the experience a 'confused idea' and contrasts it to illumination, which he calls a 'clear idea'.⁸³

⁸² *Search, Elucidation VI* OC 3:66, OC 3:65-66, LO 575.

⁸³ For representative texts explaining sensation see *Elucidation X* OC 3:141-143, LO 621), and *Response VI*, OC 6:61, N 16.

Response VI, OC 6:55.

Elucidation X, OC 3:141-143, LO 621 cited in notes 61 and 82 above.

Elucidation X, OC 3:136, LO 617;

Réponse de Père Malebranche au Livre des vraie et des fausses Idées, VI:xii, OC 6 :60-61, S p.319, XII as quoted in note 64 .

Nevertheless, this section began with a quotation in which Malebranche says that we have knowledge of contingent truths, and he cited the examples of history, grammar, and local custom. It turns out that this knowledge of contingencies is limited in several ways. The mechanism that allows for any contingent knowledge at all is the joining of the causal outputs of illumination and emanation – modes in our mind and material objects – by God's benign occasionalism. Because God is good and could not deceive us, on the occasion of a sensory experience associated in a 1-1 manner with a given individual substance affecting the body's sense organs, God causes us to experience by illumination an abstract idea in our mind which is the idea that is an exemplar cause of the substance affecting the senses.⁸⁴ This mechanism, however, provides only limited knowledge of the material world.

First, because the terms of propositions are in principle abstract ideas propositional knowledge, including that of universal affirmatives, is never strictly speaking about material substances. We can be aware that we are experiencing sensation and that there exists a material substance correlated to it, but his knowledge is not propositional. If there were God's mind an individual concept of that substance an idea that was its unique exemplar cause, and this was the idea that God caused us to experience on the occasion of that sensation – a possibility Malebranche does not directly discuss – we could form a proposition with that idea as its subject. For example, if we had the idea *Socrates* on the occasion of the sensation correlated with the material substance Socrates

⁸⁴ *Elucidation* X, LO 626-8, OC 3:151-153.

affecting our sense organs, then we could know various necessarily true universal affirmatives that had *Socrates* its subject. But this knowledge would not be contingent. Of the contingent existence of *Socrates* we could have only the kind of non-propositional awareness characteristic of sensation.

In addition to singular existential propositions – those that predicate existence of the subject – we normally include others sorts of propositions among contingent truths. For example, we predicate properties other than existence of individuals, and we make true contingent generalizations. Many of these make up the bulk of ‘history, grammar, and local custom,’ subjects of which, he says, we have contingent knowledge. Malebranche’s framework, however, does not seem to allow for any sort of contingent knowledge other than the non-propositional awareness through sensation of the existence of individuals. We cannot know, it seems, that an individual student in the classroom or, indeed, all of them is asleep. It says something, I think, about the implausibility of the Descartes’ separation of mind and body and about the attractiveness of Arnauld’s more moderate views that making sense of Descartes should lead Malebranche to accept such extreme views.

6. Conclusion

We are now in a position to compare the attempts of Descartes’ disciples to fill out his semantic doctrines consistently. Both Arnauld and Malebranche

acknowledge the two types of truth, essential and contingent. They differ, however, on which plays the more fundamental role in truth theory.

Arnauld makes use of intentional content to explain both contingent and essential truth. A contingent truth is one in which the objects the terms signify via their content are the 'same,' and an essential truth is one in which the mode signified by the predicate is contained in the comprehension of the subject. His account is suggestive of various modern theories that explain reference by the satisfaction of intentional content. He does so by appeal to no more contentious ontological types than things, the mind, and their properties.

Malebranche, on the other hand, limits genuine knowledge to essential truths, allows only indirect reference to things in the material world, and denies that we have any propositional knowledge of the objects of sensation. In the process he appeals to such uncongenial explanatory principles as ideas in God's mind, divine illumination, and Neoplatonic causation. It is not surprising, then, that despite its rejection of empiricism, the *Port Royal Logic* was a dominant influence in logic for two hundred years. It is somewhat more surprising that it is not better known today.

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