*Ockham's Theory of Connotative Terms, Quantity and the Body of Christ*

John Martin, May 2006

# Introduction

Perhaps the most well know way in which Ockham is a "nominalist" is in his rejection of universals as entities outside the mind, i.e. his rejection of a universal – whether genus, species or one of the other categories – that can bed numerically one but inhere in numerically different individuals.  Rather, in his views, each instance of any predicables, of whatever category, is numerically distinct from any other instance of that predicable.  But there is a second and equally interesting way in which Ockham is a champion of ontological parsimony.  It is contained in his theory of connotative terms, which on one standard interpretation, is a theory that "reduces" all categories to just two: substance and quality.  It is a theory that shows that all languague using terms for quantities, relations, times, places, actions, passions, habit, and deportment is really in an important sense dispensible in favor of language that signifies just substances and instances of qualities.

# The Causal Theory of Meaning

According to Ockham's theory of mental language, concepts abstracted from sensory experience are literally words in mental language.[1]  As such they possess several semantic properties.  Foremost among these is signification.  Signification is much like the modern reference between words their referents except that signification holds between words and what we would call today their possible referents.  For two types of terms – substance terms (genera, species and proper names) like *animal* and abstract quality terms like *whiteness* – signification is directly determined by the perceptual/abstraction process, in what we would call today a causal theory of reference.  Substance and abstract quality terms are special for Ockham because it is only these he thinks that are true of entities that exit independently (they are true respectively of individual substances (*Socrates* and *man* are true of Socrates) and individual quality instances (*whiteness* is true of the instance of whiteness in Socrates), and for this reason they are called absolute terms.  All other terms, i.e. all the terms from the other categories – relation, quantity, action, passion, time, place, habit, deportment – are called *connotative terms,* for reasons we shall see shortly.  In Ockham's view, connotative terms are not absolute because they are not true of entities that exist on their own.  Indeed, as we shall see, he thinks they are not true of any entity whatever because in mental language they are entirely

---

[1] For an exposition of the theory of abstraction see *Reportatio* II, q. 13.

eliminable – at least on the reading of Ockham due to Spade and Normore that we shall explore here.

Let us first spell out the signification relation for absolute terms. Recall the details of the perceptual abstractive process. An individual substance $S$ outside the mind instantiates an individual instance of its predicables. That is, S instantiates numerically distinct instances of its form $F$, of the difference $D$ definitive of the various genera and species into which it falls, and of various other perceptual qualities $Q$ some of which are sensible. As part of his nominalism, Ockham holds that these instances of $S's$ form, its differences and its qualities are numerically distinct from all their other instances in any other individual. Any such predicable – whether it be a form, a difference, or a quality – is similar to its other instances in other individuals, and these similarity relations determine two sorts of similarity classes. The first is a class of predicable instances, i.e. the class of all possible similar instances that form, or that difference, or that quality. Let us call this the set of *possible property instances* determined by that particular instance of its form, difference, or quality. There is also the class of possible substances that these similar instances inhere. That is, there is the class of all substances that instantiate one of the instances of that form, or that difference, or that quality. Let us call it the set of *possiblia* determined by that form, difference, or quality. Both sorts of these similarity sets are important later in Ockham's semantics.

Now let $S$ be sensed by a perceiver $P$. A process is initiated. First S is the partial cause (together with light) of the alteration of the air (or other media) $M$ between $S$ and $P$. $M$ thereby instantiates its own numerically unique but similar instance of the quality $Q$ and of $S$'s other sensible qualities though these instantiations are instantiated *intentionally* in the sense that though $S$ instantiates instances of $Q$ and $S$'s others sensible qualities is it would not be true to say of $M$ that it was $Q$ or that possessed itself any of the other sensible qualities of $S$. (Heat is a partial exception.) $M$'s being $Q$ etc. in turn cause other individual portions of the medium between $S$ and $P$, and the sense organs of $P$ so that they all instantiate intentionally their own instances of $Q$ and the other sensible qualities similar to those in the medium and in $S$ non-intentionally. As a result of this causal transmission intentional instantiations of $Q$ and the other sensible qualities similar to those in $S$ all come to be instantiated in the central sense organs of $P$ (which in Aristotle is the heart). However these are not the only intentional qualities instantiated in the central sense organ as a result of this process. The fact that sensible qualities from different senses are instantiated together cause the instantiation of additional qualities intentionally, like motion and extension, which are the result of what Aristotle's calls the "common sense". Moreover, since in Aristotelian metaphysics no substance can instantiate the qualities of a substance without also instantiating the form of that substance, the form. That is, there must also be instantiated in $S$ intentionally, an instance of $S's$ form $F$, and of the various differentiae of $S$ that define the genera and species that $S$ falls in. All these predicables instances have be transmitted to $P$ in their intentional form through the causal process of sensation.

At his stage the intentional instantiation in $P$ of these various instances of qualities and differentiae numerically distinct yet similar to those in $S$ are the partial cause, together with the active intellect, of a mental act of cognitive intuition in $P$. Ontologically this act consists of the intentional instantiations of $Q$ and the other qualities of $S$. The act however counts as cognition (as intellective) because $S$ becomes aware of a confused way of the fact of these instantiations (in modern terms $S$ becomes "conscious" that the sensory act is occurring), and because the act causes a further act (called complex intuition) that consists of the $P$'s evidently affirming the proposition *Something exists.* This cognition, however, is preconceptual because the proposition lacks either a subject or a predicate that counts as a concept.

Next, the intuitive cognitive act is the partial cause together with the active intellect of a further mental act in $P$ of the abstractive cognition of any one of the intentional predicables of $S$ instantiated intentionally in $P$. Ontologically, this abstractive cognition is still an intentionally instantiation of an particular instance of the form $F$, the difference $D$, or the quality $Q$ of $S$ instantiated intentionally in $P$, *but* this cognition is limited to a single such predicable instance. Like intuition, this act too is cognitive and intellective because it is conscious and because it justifies the evident affirmation of a proposition, in this case the proposition *This thing is an F* or *This thing is D* or *This thing is Q.* This act of intentionally instantiating an instance of $Q$ is a concept.

This concept, moreover, is a term (subject or predicate) in mental language, and we cannot define its semantic property of signification. Because $Q$ is a quality or a difference, and the concept $Q$ is an intentional instantiation, a number of similarity sets are definable. Earlier we meet two similarity sets determined by the instantiation of the particular instance of $Q$ in $S$, namely the set of $Q$-possible instances and the set of $Q$-possibilia. Both of these are sets of possible entities outside the mind, the first a set of possible quality instances, and the second a set of possible individuals substances. Let us now expand these ideas also to the similarity sets determined by the differentiae $D$ of $S$. There is, then, the set of $D$-possible instances and the set of $D$-possibilia. These sets comprise possible entities outside the mind, either possible quality or difference instances, or of the possible individuals substances that instantiate them. In addition, we may now also define a similarity set of mental entities by reference to the intentional instantiation of $Q$ in $P$, namely the set of all concepts that are similar to the intentional instantiation of $Q$ in $P$. This is a set of mental acts, i.e. of qualities of perceivers. All three are important semantically.

Let us consider first absolute terms.[2] The first sort of absolute term is one that is true of genera and species of substances. In Ockham's account such a term is $P$'s concept of the form $F$ of some substance $S$ − i.e. it is an instance in $P$ of the intentional instantiation of the form $F$ of $S$. Such an intentional instantiation *of* a form in Ockham's nominalism what he calls a species or a genus. The intentional instance of a form also assume the role in mental language of a common noun, and its signification is defined by the perceptual/abstractive process that caused it: the concept $F$ in $P$ signifies all possible substances in the

---

[2] For the main exposition of Ockham's account of absolute and connotative terms see SL I:10.

set of possibilia similar to *S* with respect to *F*. Moreover, not only does *F* in *P* signify these possibilia, so does any other concept in any other perceiver that is similar to the concept *F* in *S,* i.e. so does any other common noun that is an intentional instantiation of *F* similar to that in *P* no matter who it is who is thinking that concept.

The second sort of absolute term is an abstract noun formed from an adjective, like *whiteness.* These are true not of substances but of quality instances. For example, *whiteness* is true of a particular instance of white that inheres in some substance or other. Any intentional quality *Q* instantiated in *P* can cause an absolute term of this sort, namely the concept, which we shall call *Q-ness* that is abstracted from (caused by) the intentional inherence of the quality *Q* in *P.* An abstract quality noun (concept) *Q-ness* signifies not substances, but rather possible quality instances, namely any instance that falls in the set of all possible quality instances that are similar to the instance of *Q* in *S* that is the partial cause the concept *Q-ness* in *P.* Moreover, any concept similar to *Q-ness* in *P* in any thinker likewise signifies this set. An abstract noun formed from a difference is similar. For example, *rationality* in any thinker signifies all possible instances of rationality in any possible substance.

In Ockham's ontology the only entities that exist are individual substances and individual instances of what we might call today "properties", but in Ockham Aristotelian theory break down into forms, differences and qualities. Only these are signified by absolute terms.

The remaining categorematic terms – those of quantity, relation, action, passion, time, place, habit and deportment – function quite differently, and on one standard interpretation of Ockham can be eliminated all together from mental language, thus demonstrating that the only entities needed for thought and language are those signified by absolute terms. To see how this is so we must refer to Ockham's theory of definition.

## Absolute and Connotative Terms: Real and Nominal Definitions

In modern philosophy we think of definitions as explanations of the meaning of terms. This is only partly true in mediaeval logic. Mediaeval logicians standardly distinguish between two sorts of term definitions. A *real definition* specifies the term's *quid rei* ("the what of the thing"), and a nominal definition specifies the term's *quid nominis* ("the what of the name").

Real definitions are limited to absolute common nouns, which are literally genera and species in Ockham's theory. These are Aristotle's well know essential definitions and they are defined as a specification of the species' difference and genus. It is important to see that, contrary to what is suggested by the word "definition", the role of such definitions is not to explain the meaning of the common noun it "defines". The concept's meaning is explained otherwise, by the theory of signification, which is in turn explained by the perceptual/abstractive process that caused the concept. Rather, essential definitions record important facts about the nature of the species. When

formulated as universal affirmatives, as in *man is a rational animal*, they constitute major apodictic truths about nature – today we would call them "laws". Mediaevals thought that these are very difficult for humans to discover, and that many we never know. They are anything but the trivial *a priori* "analytic truths" of modern philosophy.

Nominal definitions, however, do explain meaning. They explain a name's "quid nominis" or "the what of the name". This obscure formula seems to be simply a jargonish way of tasking about signification. A term's *quid nominis* is just the possible entities the term signifies. Ockham remarks that though absolute terms clearly do have fixed significations, they do not have a single formula that specifies their range of signification because various complex formulations that do that job equally well. All that is required is that the "quid nominis" of the formula be the same as that of the absolute term. The example he gives are two equivalent ways to describe the set of possible significata of the absolute term *angle:* as *a substance separated from matter* or *a simple substance that does not enter into combination with anything else.* Thus, though there are various ways to specify the signification of an absolute name it does not have a singe nominal definition.

It should also be remarked that neither Ockham nor modern logicians regard sameness of signification as sufficient for synonymy for the simple reason that logically equivalent formulas must have the same signification but are often clearly not synonymous. It is for this reason that Ockham can hold both that absolute terms may be paired with more than one complex concept with the same signification but yet (1) the simple and complex concepts are not synonymous – indeed Ockham holds, it seems, that there is no synonymy at all in mental language – nor (2) can the simple concept be defined by the complex.

The situation is different for non-absolute terms – those that fall in the categories of quantity, relation, action, passion, time, place, habit and deportment. In standard 13th century logic these had come to be know as connotative terms. As Ockham explains, they are distinguished from absolute terms by the fact that unlike absolute terms that possess a single range of signification, connotative terms have both a set of possible entities that they signify primarily and a second set that they "connote" (*con* + *noscere, with* + *get to know*) or signify secondarily. Like the signification of absolute terms, the primary significata of a connotative term comprises all those possible entities of which the term is true. But a connotative term also "connotes" a predicable that inheres in these primary significata in such a way that it is the predicable's inherence in its subject that makes that term true of the subject and thereby qualifies the subject as being one of the term's primary significata. Realist logicians tend to identity the entity connoted by a connotative terms as a universal outside the mind – as that universal that inheres in the subject making the term true of it. But because Ockham holds that each instance of a predicables is numerically distinct, he identifies the connotation of a term with all the possible instances of a predicable which are such that it is that fact of its inherence in a subject that makes the term true of that subject. A typical example is the adjective *white.* It signifies primarily all possible white substances and it

signifies secondarily ("connotes") all the instances of possible whiteness that are in those substances. From the perspective of modern semantics, a term's primary signification is something like the union of its extension throughout possible worlds, and its secondary signification is set of property tropes (individual instances of a property) that inhere uniquely in exactly its primary significata.

An important feature of a connotative term according to Ockham is that there is one and only one formulation in language that will express its "quid nominis". This unique formulation is its *nominal definition.* First let us review the standard form of a nominal definition and then turn to the reason why it must be unique.

A nominal definition has what we might call a topic-comment form. This is dictated by the fact that the term has both a primary signification – its topic – and a secondary signification – its comment. These are put together in a single sentence in which that topic is expressed in the nominative case and the comment in an oblique case. In Latin as in English, the nominative case normally indicates the subject term and through it the entities that the sentence is about. Latin, however, has oblique cases – the genitive, dative, accusative, and ablative – which in English are all grouped into the possessive (genitive) and objective (accusative) cases. The role of nouns in these cases is to indicate collateral entities related to the subject by verbs or prepositions. Thus, *white* is defined as a *white thing informed by whiteness* (*aliquid* [nominative] *informatum albidine* [ablative]), or *a white thing having whiteness* (*aliquid* [nominative] *habentem albitudinem* [accusative]). In mental language therefore the concept *white* is really a complex concept white *thing informed by whiteness.*

We also need now to appeal to another fact of grammar and semantics. In both Latin and English the verb *to have* may be used to express the fact that a predicable inheres in a subject, as in *Socrates has whiteness.* Here *whiteness* is the proposition's direct object and is in an oblique case. In this case, however, the direct object is an abstract adjective noun that is affirmed to be "true of" the subject. It is an absolute term that signifies possible predicable instances. Hence Ockham holds that in the proposition *S has Q-ness,* (1) the proposition asserts that the predicate *Q-ness* is true of the subject *S,* (2) *to have* functions as the logical copula, and (3) both the subject and predicate are absolute terms.

At this point we may ask an important theoretical question: what is the relation between a connotative term and its definition. Is it numerical identity? The theoretically simpler answer and the one that makes the most sense of Ockham's overall theory is *yes.* On this reading the concept *white* in mental language is really the complex concept white *thing informed by whiteness.* On this view, although we may use the spoken word *white* in speech, in mental language there is only the complex concept, and we use the grammatically simple spoken term only as a convenient abbreviation for the mental complex. Let us hold for a moment in mind the claim that a connotative term and its nominal definition are identical and turn to a special feature of connotative terms that would make this identity extremely important, namely the possibility of iterative applications of nominal definitions.

Note that in nominal definitions while the subject noun is always in the nominative case and is an absolute term, the complementary noun or adjective is sometimes in an oblique case is itself connotative, as is *albidine* in the first formulation of the definition of *white* above. In these cases a connotative term is defined in terms of a connotative term. But the second defining connotative term has itself a unique nominal definition, and hence may in turn be replaced by its definition. Ockham points out such reformulations, and thereby draws nominal definitions under the broader class of what mediaeval logicians called *exponibilia*, terms or expressions that look like simple propositions but that are really conjunctions in mental language. A good example is a non-restrictive relative clause: *Socrates, who is hungry, is a Greek* really means *Socrates is hungry and Socrates is a Greek.*

Though Ockham's examples do not all fit exactly the same pattern, the reformulation of connotative terms obeys a rough general rule. Let *C* be a connotative term with a nominal definition in terms of an absolute subject term *T* in the nominative case and a complement *N* in an oblique case. Then, any affirmation *S is C* is "expounded" in a conjunctive proposition *S is T and S is N.* For example, *Socrates is white* expounds to *Socrates is a substance and Socrates has whiteness.* Logically, the first conjunct specifies the "type" of entity in question, and the second conjunct restricts this type to a subset.

What is especially interesting about such "expositions" is that if the oblique term in the definition is an absolute term, then the original connotative term has be replaced by a conjunctive proposition that is formulated using only absolute terms and syncategoremata (i.e. the copula and logical connectives). Even if a second connotative term appears in the nominal definition of the first, then it too has a nominal definition allowing for a further exposition, and at that point it might be eliminated in favor of a longer formulation that used only absolute terms and syncategoremata. If a connotative term appears in that nominal definition, then its too can be expounded. There is strong reason to believe that Ockham hoped that at the end of all such expositions, the propositions of mental language would contain only absolute terms and syncategoremata. If that is the case, then the only entities signified by terms in mental language are only individual substances and numerically distinct predicable instances. In other words, the theory of mind and language presupposes only Ockham's minimalist nominalistic ontology.

There are various reasons both theoretical and textual for and against the interpretation that Ockham believed that all no connotative term exists in mental language.[3] In favor of the reading are two principle considerations.

1. Ockham holds in various places that there are no synonyms in mental language. It follows that if a connotative term has a nominal definition then it is literally identical to the complex concept expounded in the definition. Such an identification is presupposed in the elimination of connotative terms. On this reading, then, connotative terms should only appear in spoken language, and the role of a nominal definition is essentially that of explaining to spoken

---

[3] For references to the debate and a brief discussion see Paul Spade, "Ockham's Nominalist Metaphysics", *Cambridge Companion to Ockham* (Cambridge,1999) in page 107, and notes 44-47

word to a new speaker of the language by indicating what complex concept it serves as a convenient abbreviation for. (John Buridan, who follows Ockham in many of his view, is quite explicit that this is precisely the role of nominal definitions.)

2. Ockham also holds that the only categories that are necessary in mental language are substances and qualities, both of which are understood to be numerical distinct in each instance. All the other categories are not really used in mental language. He also holds that all these remaining categories are connotative terms. It seems to follow then that all propositions affirming the remaining categories are eliminable in some way. The theory of elimination by nominal definition provides an explanation of how this happens.

Against this view, however, is the textual problem that Ockham often seems to say that simple concepts can have nominal definitions, which are complex concepts. Since the two are distinct, one being simple and the other complex, they are not identical. But they have the same meaning. It follows both that connotative concepts cannot be eliminated by nominal definitions (because they are not identical to it) and that synonymy is possible in mental language (because the two have the same meaning). Paul Spade seems to conclude that Ockham is probably a bit muddled. He ought to have accepted 1 and 2, reformulated the passages in which he defines simple connotative concepts as Buridan later did.

## Quantity as a Connotative and Privative Term[4]

To understand Ockham's treatment of quantity, it is necessary to review his more general treatment of privative negations. For Ockham privative negations are a special type of connotative term. Aristotle distinguishes a privative term as one that applies to subjects that are lacking some predicable that they either have normally or by nature. Humans naturally possess both sight and teeth, but they may be deprived of both. Accordingly he calls both privations. Since men are naturally sighted, the terms *blind (typhlos)* and *toothless (noda)* are privative. In classical Greek and in some of Aristotle's example privatives are often indicated by a negative "marker ", an affix *that* attaches to an adjective that names the quality that holds normally or naturally (as in *noda*). Such is the role in Greek, for example, of the α-privative, which remains in the English cognates like *atheist, amoral, a temporal*. In mediaeval logic privatives are all viewed as marked by an explicit negative affix called *privative negation.* Ockham understands any proposition *S is P* affirming a privative predicate P*, like *S is blind, as* short for a more explicit formulation *S is non Q* that expresses the privative negation explicitly, as in *S is non sighted.* Moreover, he regards the privative predicate *non Q* as connotative, and therefore

---

[4] For Ockham's views on quantity and the body of Christ see, Ockham, *De Qantitate* (translation of the course web page); André Goddu, "Ockham's Philosophy of Nature," in *Cambridge Companion to Ockham* (Cambridge,1999); and Elenore Stump, Theology and Physics in *De scramento altaris"* in *Infinity and Continuity in Ancient and Medieval Thought*, Norman Kretzmann, ed. (Cornell, 1982).

as exponible to a conjunction. More precisely, *S is non Q* is expounded to *S is T and S is naturally Q and S is not Q.* Here, *T* is an absolute term, and the negation *not* is the ordinary negation of the copula. As in any nominal definition, the predicate *Q* may be either absolute or connotative. If it is connotative, then the original proposition has been reformulated in terms of one that signifies only substances and instances of qualities.

Ockham applies he account of the nominal definition of privative terms to expound ordinary propositions expressing quantity. Ockham makes use of Euclid well known negative definitions of *point* as line without length, *line* as plane without breadth, and *plane* as space without depth. He regards these as affirmations of privations. Fundamentally Ockham regarded spatial quantity as a relational property of the parts of a substance: to say that a substance occupies a certain space, that it is extended, is to say that it is possible to divide the substance into parts and for this parts to change place (to *locomote*). Thus the following propositions are essentially the same:

*S has (spatial) quantity.*
*S is extended.*
*S has these various possible parts and these may locomote.*

But since the locomotion of parts, or at least some locomotions of parts, would not alter the essential properties of some substance, for these substances the adding the extra conjunct that they parts may locomote is redundant, and the propositions above are the same as

*S has these various possible parts.*

To say that *S* has a given depth is then essential a privative negation denying that has certain relevant possible parts

*S has these possible parts but does not have those possible parts.*

*S* now refers to a special planar section of a substance, but since this is composed of possible substantial parts it too is a substance.

To say that *S* has a give length is to deny even more parts using a privative negation:

*S has these possible parts but does not have those possible part or those possible parts.*

The subject of this proposition is then a linear cut of the possible substantial parts that was the subject of the previous proposition. To say that *S* occupies a point is to deny yet more possible parts

*S has these possible parts but not those or those or those.*

There is only one possible substantial part for *S* to signify, a point. But note that this is a possible part of a substance and hence a possible entity.

## The Body of Christ

The puzzle Ockham addresses is how can the body of Christ both be extended yet not visible in the Eucharist, which is supposed to instantiate this body as one of its accidents. Ockham solves this problem by showing in effect that no particular quantity of spatial extension is in fact among the accidents of a body. Suppose, for example, we say of a body *S:*

*S is extended.*

This may be express the same proposition as

*S has these various possible parts.*

But his proposition does not assert any particular measure of length, breath, or depth. These spatial measures are not part of what is asserted; even if this is an assertion is of an accidental quantity. Now, this equivalence holds only if the particular extensional quantity is non-essential. If in general all quantities are accidents, as Ockham holds, this equivalence follows trivially. For you as a human, for example, it would mean that all your parts could be condensed (moved closer relative to one another) or dispersed (moved further apart) and you would remain you.

There are no particular extensive dimensions, therefore, as part of the predication *extended.* Hence is perfectly possible that the spatial extension of Christ, his body, be instantiated in each part of the bread of the Eucharist. I n Ockham's terminology it is instantiated *definitively* rather than *circumspectly.*