William of Ockham (c. 1287–1347) is, along with Thomas Aquinas and John Duns Scotus, among the most prominent figures in the history of philosophy during the High Middle Ages. He is probably best known today for his espousal of metaphysical nominalism; indeed, the methodological principle known as “Ockham's Razor” is named after him. But Ockham held important, often influential views not only in metaphysics but also in all other major areas of medieval philosophy—logic, physics or natural philosophy, theory of knowledge, ethics, and political philosophy—as well as in theology.

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1. Life

Ockham led an unusually eventful life for a philosopher. As with so many medieval figures who were not prominent when they were born, we know next to nothing about the circumstances of Ockham's birth and early years, and have to estimate dates by extrapolating from known dates of events later in his life.\[1\]

Ockham's life may be divided into three main periods.

1.1 England (c. 1287-1324)

Ockham was born, probably in late 1287 or early 1288, in the village of Ockham (= Oak Hamlet) in Surrey, a little to the southwest of London.\[2\] He probably learned basic Latin at a village school in Ockham or nearby, but this is not certain.\[3\] At an early age, somewhere between seven and thirteen, Ockham was "given" to the Franciscan order (the so called "Greyfriars").\[4\] There was no Franciscan house (called a "convent") in the tiny village of Ockham itself; the nearest one was in London, a day's ride to the northeast. It was there that Ockham was sent.

As an educational institution, even for higher education, London Greyfriars was a distinguished place; at the time, it was second only to the full-fledged Universities of Paris and Oxford. At Greyfriars, Ockham probably got most of his "grade school" education, and then went on to what we might think of as "high school" education in basic logic and "science" (natural philosophy), beginning around the age of fourteen.

Around 1310, when he was about 23, Ockham began his theological training. It is not certain where this training occurred. It could well have been at the London Convent, or it could have been at Oxford, where there was another Franciscan convent associated with the university. In any event, Ockham was at Oxford studying theology by at least the year 1318–19, and probably the previous year as well, when (in 1317) he began a required two-year cycle of lectures commenting on Peter Lombard's *Sentences*, the standard theological textbook of the day. Then, probably in 1321, Ockham returned to London Greyfriars, where he remained. Although he had taken the initial steps in the theology program at Oxford (hence his occasional nickname, the *Venerabilis Inceptor*, "Venerable Beginner"), Ockham did not complete the program there, and never became a fully qualified "master" of theology at Oxford. Nevertheless, London Greyfriars was an intellectually lively place, and Ockham was by no means isolated from the heat of academic controversy. Among his "housemates" were two other important Franciscan thinkers of the day, Walter Chatton and Adam Wodeham, both sharp critics of Ockham's views. It was in this context that Ockham wrote many of his most important philosophical and theological works.

In 1323 Ockham was called before the Franciscan province's chapter meeting, held that year in Bristol, to defend his views, which were regarded with suspicion by some of his confreres. About the same time, someone—it is not clear who—went from England to the Papal court at Avignon and charged
Ockham with teaching heresy. As a result, a commission of theologians was set up to study the case. Ockham was called to Avignon in May, 1324, to answer the charges. He never went back to England.

1.2 Avignon (1324–28)

While in Avignon, Ockham stayed at the Franciscan convent there. It has sometimes been suggested that he was effectively under “house arrest,” but this seems an exaggeration. On the contrary, he appears to have been free to do more or less as he pleased, although of course he did have to be “on hand” in case the investigating commission wanted to question him about his writings. The investigation must not have demanded much of Ockham's own time, since he was able to work on a number of other projects while he was in Avignon, including finishing his last major theological work, the *Quodlibets*. It should be pointed out that, although there were some stern pronouncements that came out of the investigation of Ockham, his views were never officially condemned as heretical.

In 1327, Michael of Cesena, the Franciscan “Minister General” (the chief administrative officer of the order) likewise came to Avignon, in his case because of an emerging controversy between the Franciscans and the current Pope, John XXII, over the idea of “Apostolic poverty,” the view that Jesus and the Apostles owned no property at all of their own but, like the mendicant Franciscans, went around begging and living off the generosity of others. The Franciscans held this view, and maintained that their own practices were a special form of “imitation of Christ.” Pope John XXII rejected the doctrine, which is why Michael of Cesena was in Avignon.

Things came to a real crisis in 1328, when Michael and the Pope had a serious confrontation over the matter. As a result, Michael asked Ockham to study the question from the point of view of previous papal statements and John's own previous writings on the subject. When he did so, Ockham came to the conclusion, apparently somewhat to his own surprise, that John's view was not only wrong but outright heretical. Furthermore, the heresy was not just an honest mistake; it was stubbornly heretical, a view John maintained even after he had been shown it was wrong. As a result, Ockham argued, Pope John was not just teaching heresy, but was a heretic himself in the strongest possible sense, and had therefore effectively abdicated his papacy. In short, Pope John XXII was no pope at all!

Clearly, things had become intolerable for Ockham in Avignon.

1.3 Munich (1328/29–47)

Under cover of darkness the night of May 26, 1328, Michael of Cesena, Ockham, and a few other sympathetic Franciscans fled Avignon and went into exile. They initially went to Italy, where Louis (Ludwig) of Bavaria, the Holy Roman Emperor, was in Pisa at the time, along with his court and retinue. The Holy Roman Emperor was engaged in a political dispute with the Papacy, and Ockham's group found refuge under his protection. On June 6, 1328, Ockham was officially excommunicated for leaving Avignon without permission. Around 1329, Louis returned to Munich, together with Michael, Ockham and the rest of their fugitive band. Ockham stayed there, or at any rate in areas under Imperial control, until his death. During this time, Ockham wrote exclusively on political matters. He died on the night of April 9/10, 1347, at roughly the age of sixty.

2. Writings
Ockham's writings are conventionally divided into two groups: the so-called “academic” writings and the “political” ones. By and large, the former were written or at least begun while Ockham was still in England, while the latter were written toward the end of Ockham’s Avignon period and later, in exile. With the exception of his Dialogue, a huge political work, all are now available in modern critical editions, and many are now translated into English, in whole or in part. The academic writings are in turn divided into two groups: the “theological” works and the “philosophical” ones, although both groups are essential for any study of Ockham's philosophy.

Among Ockham's most important writings are:

- **Academic Writings**
  - **Theological Works**
    - *Commentary on the Sentences of Peter Lombard* (1317–18). Book I survives in an *ordinatio* or *scriptum*—a revised and corrected version, approved by the author himself for distribution. Books II-IV survive only as a *reportatio*—a transcript of the actually delivered lectures, taken down by a “reporter,” without benefit of later revisions or corrections by the author.
    - *Seven Quodlibets* (based on London disputations held in 1322–24, but revised and edited in Avignon 1324–25).
  - **Philosophical Works**
    - **Logical Writings**
      - *Summa of Logic* (c. 1323–25). A large, independent and systematic treatment of logic and semantics.
    - **Writings on Natural Philosophy**
      - *Questions on Aristotle’s Books of the Physics* (before 1324). Not strictly a commentary, this work nevertheless discusses a long series of questions arising out of Aristotle's *Physics*.

- **Political Writings**
  - *Letter to the Friars Minor* (1334).
  - *Short Discourse* (1341–42).
  - *Dialogue* (c. 1334–46).

Several lesser items are omitted from the above list.

### 3. Logic and Semantics

Ockham is rightly regarded as one of the most significant logicians of the Middle Ages. Nevertheless, his originality and influence should not be exaggerated. For all his deserved reputation, his logical views are sometimes derivative and occasionally very idiosyncratic.

Logic, for Ockham, is crucial to the advancement of knowledge. In the "Prefatory Letter" to his *Summa of Logic*, for example, he praises it in striking
For logic is the most useful tool of all the arts. Without it no science can be fully known. It is not worn out by repeated use, after the manner of material tools, but rather admits of continual growth through the diligent exercise of any other science. For just as a mechanic who lacks a complete knowledge of his tool gains a fuller [knowledge] by using it, so one who is educated in the firm principles of logic, while he painstakingly devotes his labor to the other sciences, acquires at the same time a greater skill at this art.

Ockham's main logical writings consist of a series of commentaries (or “expositions”) on Aristotle's and Porphyry's own logical works, plus his own *Summa of Logic*, his major work in the field. His *Treatise on Predestination* contains an influential theory on the logic of future contingent propositions, and other works as well include occasional discussions of logical topics, notably his *Quodlibets*.

### 3.1 The *Summa of Logic*

Ockham's *Summa of Logic* is divided into three parts, with the third part subdivided into four subparts. Part I divides language, in accordance with Aristotle's *On Interpretation* (1, 16a3–8, as influenced by Boethius's interpretation), into written, spoken and mental language, with the written kind dependent on the spoken, and the spoken on mental language. Mental language, the language of thought, is thus the most primitive and basic level of language. Part I goes on to lay out a fairly detailed theory of terms, including the distinctions between (a) categorematic and syncategorematic terms, (b) abstract and concrete terms, and (c) absolute and connotative terms. Part I then concludes with a discussion of the five “predicables” from Porphyry's *Isagoge* and of each of Aristotle's categories.

While Part I is about terms, Part II is about “propositions,” which are made up of terms. Part II gives a systematic and nuanced theory of truth conditions for the four traditional kinds of assertoric categorical propositions on the “Square of Opposition,” and then goes on to tensed, modal and more complicated categorical propositions, as well as a variety of “hypothetical” (molecular [13]) propositions. The vehicle for this account of truth conditions is the semantic theory of “supposition,” which will be treated below.

If Part I is about terms and Part II about propositions made up of terms, Part III is about arguments, which are in turn made up of propositions made up of terms. As mentioned, Part III is divided into four subparts. Part III.1 treats syllogisms, and includes a comprehensive theory of modal syllogistic. Part III.2 concerns demonstrative syllogisms in particular. Part III.3 is in effect Ockham's theory of consequence, although it also includes discussions of semantic paradoxes like the Liar (the so called *insolubilia*) and of the still little-understood disputation form known as “obligation.” Part III.4 is a discussion of fallacies.

Thus, while the *Summa of Logic* is not in any sense a “commentary” on Aristotle's logical writings, it nevertheless covers all the traditional ground in the traditional order: Porphyry's *Isagoge* and Aristotle's *Categories* in Part I, *On Interpretation* in Part II, *Prior Analytics* in Part III.1, *Posterior Analytics* in Part III.2, *Topics* (and much else) in Part III.3, and finally *Sophistic Refutations* in Part III.4.

### 3.2 Signification, Connotation, Supposition

Part I of the *Summa of Logic* also introduces a number of semantic notions that play an important role throughout much of Ockham's philosophy. None of
these notions is original with Ockham, although he develops them with great sophistication and employs them with skill. The most basic such notion is “signification.” For the Middle Ages, a term “signifies” what it makes us think of. This notion of signification was unanimously accepted; although there was great dispute over what terms signified, there was agreement over the criterion. Ockham, unlike many (but no means all) other medieval logicians, held that terms do not in general signify thought, but can signify anything at all (including things not presently existing). The function of language, therefore, is not so much to communicate thoughts from one mind to another, but to convey information about the world.

In *Summa of Logic* I.33, Ockham acknowledges four different kinds of signification, although the third and fourth kinds are not clearly distinguished. In his first sense, a term signifies whatever things it is truly predicable of by means of a present-tensed, assertoric copula. That is, a term \( t \) signifies \( x \) if and only if “This is a \( t \)” is true, pointing to \( x \). In the second sense, \( t \) signifies \( x \) if and only if “This is (or was, or will be, or can be) a \( t \)” is true, pointing to \( x \). These first two senses of signification are together called “primary” signification.

In the third and fourth senses, terms can also be said to signify certain things they are not truly predicable of, no matter the tense or modality of the copula. For instance, the word ‘brave’ not only makes us think of brave people (whether presently existing or not); it also makes us think of the bravery in virtue of which we call them “brave.” Thus, ‘brave’ signifies and is truly predicable of brave people, but also signifies bravery, even though it is not truly predicable of bravery. (Bravery is not brave.) This kind of signification is called “secondary” signification. To a first approximation, then, we can say that what a term secondarily signifies is exactly what it signifies but does not primarily signify. Again to a first approximation, we can say that a “connotative” term is just a term that has a secondary signification, and that such a connotative term “connotes” exactly what it secondarily signifies; in short, connotation is just secondary signification.

The theory of supposition was the centerpiece of late medieval semantic theory. Supposition is not the same as signification. First of all, terms signify wherever we encounter them, whereas they have supposition only in the context of a proposition. But the differences go beyond that. Whereas signification is a psychological, cognitive relation, the theory of supposition is, at least in part, a theory of reference. For Ockham, there are three main kinds of supposition:

- **Personal supposition**, in which a term supposits for (refers to) what it signifies (in either of the first two senses of signification described above). For example, in ‘Every dog is a mammal’, both ‘dog’ and ‘mammal’ have personal supposition.
- **Simple supposition**, in which a term supposits for a concept it does not signify. Thus, in ‘Dog is a species’ or ‘Dog is a universal’, the subject ‘dog’ has simple supposition. For Ockham the nominalist, the only real universals are universal concepts in the mind and, derivatively, universal spoken or written terms expressing those concepts.
- **Material supposition**, in which a term supposits for a spoken or written expression it does not signify. Thus, in ‘Dog has three letters’, the subject ‘dog’ has material supposition.

Personal supposition, which was the main focus, was divided into various subkinds, distinguished in terms of a theory of “descent to singulars” and “ascent from singulars.” A quick example will give the flavor: In ‘Every dog is a mammal’, ‘dog’ is said to have “confused and distributive” personal supposition insofar as it is possible to “descend to singulars” as follows: “Every dog is a mammal; therefore, Fido is a mammal, and Rover is a mammal, and Bowser is a mammal …,” and so on for all dogs.
Although the mechanics of this part of supposition theory are well understood, in Ockham and in other authors, its exact purpose remains an open question. Although at first the theory looks like an account of truth conditions for quantified propositions, it will not work for that purpose. And although the theory was sometimes used as an aid to spotting and analyzing fallacies, this was never done systematically and the theory is in any event ill suited for that purpose.

3.3 Mental Language, Connotation and Definitions

Ockham was the first philosopher to develop in some detail the notion of “mental language” and to put it to work for him. Aristotle, Boethius and several others had mentioned it before, but Ockham’s innovation was to systematically transpose to the fine-grained analysis of human thought both the grammatical categories of his time, such as those of noun, verb, adverb, singular, plural and so on, and — even more importantly — the central semantical ideas of signification, connotation and supposition introduced in the previous section. Written words for him are “subordinated” to spoken words, and spoken words in turn are “subordinated” to mental units called “concepts”, which can be combined into syntactically structured mental propositions, just as spoken and written words can be combined into audible or visible sentences.

Whereas the signification of terms in spoken and written language is purely conventional and can be changed by mutual agreement (hence English speakers say ‘dog’ whereas in French it is *chien*), the signification of mental terms is established by nature, according to Ockham, and cannot be changed at will. Concepts, in other words, are natural signs: my concept of dog naturally signifies dogs. How this “natural signification” is to be accounted for in the final analysis for Ockham is not entirely clear, but it seems to be based both on the fact that simple concepts are normally caused within the mind by their objects (my simple concept of dog originated in me as an effect of my perceptual encounter with dogs), and on the fact that concepts are in some way “naturally similar” to their objects.

This arrangement provides an account of synonymy and equivocation in spoken and written language. Two simple terms (whether from the same or different spoken or written languages) are synonymous if they are ultimately subordinated to the same concept; a single given term of spoken or written language is equivocal if it is ultimately subordinated to more than one concept.

This raises an obvious question: Is there synonymy or equivocation in mental language itself? (If there is, it will obviously have to be accounted for in some other way than for spoken/written language.) A great deal of modern secondary literature has been devoted to this question. Trentman [1970] was the first to argue that no, there is no synonymy or equivocation in mental language. On the contrary, mental language for Ockham is a kind of lean, stripped down, “canonical” language with no frills or inessentials, a little like the “ideal languages” postulated by logical atomists in the first part of the twentieth century. Spade [1980] likewise argued in greater detail, on both theoretical and textual grounds, that there is no synonymy or equivocation in mental language. More recently, Panaccio [1990, 2004], Tweedale [1992] (both on largely textual grounds), and Chalmers [1999] (on mainly theoretical grounds) have argued for a different interpretation, which now tends to be more widely accepted. What comes out at this point is that Ockham’s mental language is not to be seen as a logically ideal language and that it does incorporate both some redundancies and some ambiguities.

The question is complicated, but it goes to the heart of much of what Ockham is up to. In order to see why, let us return briefly to the theory of connotation. Connotation was described above in terms of primary and secondary signification. But in *Summa of Logic* I.10, Ockham himself draws the distinction
between absolute and connotative terms by means of the theory of definition.

For Ockham, there are two kinds of definitions: real definitions and nominal definitions. A real definition is somehow supposed to reveal the essential metaphysical structure of what it defines; nominal definitions do not do that. As Ockham sets it up, all connotative terms have nominal definitions, never real definitions, and absolute terms (although not all of them) have real definitions, never nominal definitions. (Some absolute terms have no definitions at all.)

As an example of a real definition, consider: ‘Man is a rational animal’ or ‘Man is a substance composed of a body and an intellective soul’. Each of these traditional definitions is correct, and each in its own way expresses the essential metaphysical structure of a human being. But notice: the two definitions do not signify (make us think of) exactly the same things. The first one makes us think of all rational things (in virtue of the first word of the definiens) plus all animals (whether rational or not, in virtue of the second word of the definiens). The second definition makes us think of, among other things, all substances (in virtue of the word ‘substance’ in the definiens), whereas the first one does not. It follows therefore that an absolute term can have several distinct real definitions that don't always signify exactly the same things. They will primarily signify—be truly predicable of—exactly the same things, since they will primarily signify just what the term they define primarily signifies. But they can also (secondarily) signify other things as well.

Nominal definitions, Ockham says, are different: There is one and only one nominal definition for any given connotative term. While a real definition is expected to provide a structural description of certain things (which can be done in various ways, as we just saw), a nominal definition, by contrast, is supposed to unfold in a precise way the signification of the connotative term it serves to define, and this can only be done, Ockham thinks, by explicitly mentioning, in the right order and with the right connections, which kind of things are primarily signified by this term and which are secondarily signified. The nominal definition of the connotative term “brave”, to take a simple example, is “a living being endowed with bravery”; this reveals that “brave” primarily signifies certain living beings (referred to by the first part of the definition) and that it secondarily signifies — or connotes — singular qualities of bravery (referred to by the last part of the definition). Any non-equivalent nominal definition is bound to indicate a different signification and would, consequently, be unsuitable if the original one was correct.

Now, several commentators, following Trentman and Spade, concluded on this basis that there are no simple connotative terms in Ockham's mental language. They reasoned as follows: a connotative term is synonymous with its nominal definition, but there is no synonymy in mental language according to Ockham; mental language, therefore, cannot contain both a simple connotative term and its complex nominal definition; since it must certainly have the resources for formulating adequate definitions, what must be dispensed with is the defined simple term; and since all connotative terms are supposed to have a nominal definition, it follows that mental language contains only absolute terms (along with syncategorematic ones, of course). It even came to be supposed in this line of interpretation, that the very central point of Ockham's nominalist program was to show that if anything can be truly said about the world, it can be said using only absolute and syncategorematic terms, and that this is precisely what happens in mental language.

The consequences were far-reaching. Not only did this interpretation claim to provide an overall understanding of what Ockham was up to, but it also inevitably led to conclude that his whole nominalist program was bound to failure. All relational terms, indeed, are taken to be connotative terms in Ockham's semantics. The program, consequently, was thought to require the semantical reduction of all relational terms to combinations of non-relational ones, which seems hardly possible. Thus, the question whether there are simple connotative terms or not in Ockham's mental language is crucial to our understanding of the success of his overall ontological project. Since spoken and written languages are semantically derivative on mental language, it is vital that we get the semantics of mental language to work out right for Ockham, or else the systematic coherence of much of what he has to say will be in jeopardy.
In view of recent scholarship, though, it appears highly doubtful that Ockham's purpose really was to use nominal definitions to eliminate all simple connotative terms from mental language. For one thing, as Spade had remarked himself, Ockham never systematically engages in explicit attempts at such semantical reductions, which would be quite surprising if this was the central component of his nominalism. Furthermore it was shown that Ockham did in fact hold that there are simple connotative terms in mental language. He says it explicitly and repeatedly, and in a variety of texts from his earlier to his later philosophical and theological writings. The secondary literature, consequently, has now gradually converged on the view that, for Ockham, there is no synonymy among simple terms in mental language, but that there can be some redundancy between simple terms and complex expressions, or between various complex expressions. If so, nothing prevents a simple connotative concept to coexist in mental language with its nominal definition.

Ockham indeed explicitly denies that a complex definition is in general wholly synonymous with the corresponding defined term. His point, presumably, is that the definition usually signifies more things than the defined term. Take “brave” again. Its definition, remember, is “a living being endowed with bravery”. Now, the first part of this complex expression makes us think of all living beings, whereas the simple term “brave” has only the brave ones as its primary significates and does not signify in any way the non-brave living beings. This shows in effect that simple connotative terms are not — at least not always — shorthand abbreviations for their nominal definitions in Ockham's view. And it must be conjectured that some simple connotative concepts can be directly acquired on the basis of perceptual experiences, just as absolute ones are supposed to be (think of a relational concept like “taller than” or a qualitative one like “white”).

Ockham's nominal definitions, then, should not be seen as reductionist devices for eliminating certain terms, but as a privileged means for making conspicuous what the (primary and secondary) significates of the defined terms are. The main point here is that such definitions, when correctly formulated, explicitly reveal the ontological commitments associated with the normal use of the defined terms. The definition of “brave” as “a living being endowed with bravery”, for example, shows that the correct use of the term “brave” commits us only to the existence of singular living beings and singular braveries. Ockham's nominalism does not require the elimination of simple connotative concepts after all; its main relevant thesis, on the contrary, is that their use is ontologically harmless since they do not signify (either primarily or secondarily) anything but individual things, as their nominal definitions are supposed to make it clear.

4. Metaphysics

Ockham was a nominalist, indeed he is the person whose name is perhaps most famously associated with nominalism. But nominalism means many different things:

- A denial of metaphysical universals. Ockham was emphatically a nominalist in this sense.
- An emphasis on reducing one's ontology to a bare minimum, on paring down the supply of fundamental ontological categories. Ockham was likewise a nominalist in this sense.
- A denial of “abstract” entities. Depending on what one means, Ockham was or was not a nominalist in this sense. He believed in “abstractions” such as whiteness and humanity, for instance, although he did not believe they were universals. (On the contrary, there are at least as many distinct whitenesses as there are white things.) He certainly believed in immaterial entities such as God and angels. He did not believe in mathematical (“quantitative”) entities of any kind.

The first two kinds of nominalism listed above are independent of one another. Historically, there have been philosophers who denied metaphysical
universals, but allowed (individual) entities in more ontological categories than Ockham does. Conversely, one might reduce the number of ontological categories, and yet hold that universal entities are needed in the categories that remain.

4.1 Ockham's Razor

Still, Ockham's “nominalism,” in both the first and the second of the above senses, is often viewed as derived from a common source: an underlying concern for ontological parsimony. This is summed up in the famous slogan known as “Ockham's Razor,” often expressed as “Don't multiply entities beyond necessity.” Although the sentiment is certainly Ockham's, that particular formulation is nowhere to be found in his texts. Moreover, as usually stated, it is a sentiment that virtually all philosophers, medieval or otherwise, would accept; no one wants a needlessly bloated ontology. The question, of course, is which entities are needed and which are not.

Ockham's Razor, in the senses in which it can be found in Ockham himself, never allows us to deny putative entities; at best it allows us to refrain from positing them in the absence of known compelling reasons for doing so. In part, this is because human beings can never be sure they know what is and what is not “beyond necessity”; the necessities are not always clear to us. But even if we did know them, Ockham would still not allow that his Razor allows us to deny entities that are unnecessary. For Ockham, the only truly necessary entity is God; everything else, the whole of creation, is radically contingent through and through. In short, Ockham does not accept the Principle of Sufficient Reason.

Nevertheless, we do sometimes have sufficient methodological grounds for positively affirming the existence of certain things. Ockham acknowledges three sources for such grounds (three sources of positive knowledge). As he says in Sent. I, dist. 30, q. 1: “For nothing ought to be posited without a reason given, unless it is self-evident (literally, known through itself) or known by experience or proved by the authority of Sacred Scripture.”

4.2 The Rejection of Universals

In the case of universal entities, Ockham's nominalism is not based on his Razor, his principle of parsimony. That is, Ockham does not hold merely that there is no good reason for affirming universals, so that we should refrain from doing so in the absence of further evidence. No, he holds that theories of universals, or at least the theories he considers, are outright incoherent; they either are self-contradictory or at least violate certain other things we know are true in virtue of the three sources just cited. For Ockham, the only universal entities it makes sense to talk about are universal concepts, and derivative on them, universal terms in spoken and written language. Metaphysically, these “universal” concepts are singular entities like all others; they are “universal” only in the sense of being “predicable of many.”

With respect to the exact ontological status of such conceptual entities, however, Ockham changed his view over the course of his career. To begin with, he adopted what is known as the fictum-theory, a theory according to which universals have no “real” existence at all in the Aristotelian categories, but instead are purely “intentional objects” with a special mode of existence; they have only a kind of “thought”-reality. Eventually, however, Ockham came to think this intentional realm of “fictive” entities was not needed, and by the time of his Summa of Logic and the Quodlibets adopts instead a so called intellectio-theory, according to which a universal concept is just the act of thinking about several objects at once; metaphysically such an “act” is a singular quality of an individual mind, and is “universal” only in the sense of being a mental sign of several things at once and being predicable of them in mental propositions.

4.3 Exposition or Parsing Away Entities
Thus, Ockham is quite certain there are no metaphysically universal entities. But when it comes to paring down the number of basic ontological categories, he is more cautious, and it is there that he uses his Razor ruthlessly—always to suspend judgment, never to deny.

The main vehicle for this “ontological reduction” is the theory of connotation, coupled with the related theory of “exposition.” The theory of exposition, which is not fully developed in Ockham, will become increasingly prominent in authors immediately after him. In effect, the theory of connotation is related to the theory of exposition as explicit definition is related to contextual definition. The notion of the “square” of a number can be explicitly defined, for example, as the result of multiplying that number by itself. Contextual definition operates not at the level of terms, but at the level of propositions. Thus, Bertrand Russell famously treated ‘The present king of France is bald’ as amounting to ‘There is an $x$ such that $x$ is a present king of France and $x$ is bald, and for all $y$ if $y$ is a present king of France then $y = x$’. We are never given any outright definition of the term ‘present king of France’, but instead are given a technique of paraphrasing away seemingly referential occurrences of that term in such a way that we are not committed to any actually existing present kings of France. So too, Ockham tries to provide us, at the propositional level, with paraphrases of propositions that seem at first to refer to entities he sees no reason to believe in.

For example, in *Summa of Logic*, II.11, among other places, Ockham argues that we can account for the truth of ‘Socrates is similar to Plato’ without having to appeal to a relational entity called “similarity”:

For example, for the truth of ‘Socrates is similar to Plato’, it is required that Socrates have some quality and that Plato have a quality of the same species. Thus, from the very fact that Socrates is white and Plato is white, Socrates is similar to Plato and conversely. Likewise, if both are black, or hot, then they are similar without anything else added. (Emphasis added.)

In this way, Ockham removes all need for entities in seven of the traditional Aristotelian ten categories; all that remain are entities in the categories of substance and quality, and a few entities in the category of relation, which Ockham thinks are required for theological reasons pertaining to the Trinity, the Incarnation and the Eucharist, even though our natural cognitive powers would see no reason for them at all. As is to be expected, the ultimate success of Ockham's program is a matter of considerable dispute.

It should be stressed again, however, that this program in no way requires that it should be possible to dispense altogether with terms from any of the ten Aristotelian categories (relational and quantitative terms in particular). Ockham's claim is simply that all our basic scientific terms, whether absolute or connotative, signify nothing but singular substances or qualities (plus some singular relations in certain exceptional theological cases).

### 5. Natural Philosophy

Ockham's “physics” or natural philosophy is of a broadly Aristotelian sort, although he interprets Aristotle in his own fashion. Ockham wrote a great deal in this area; indeed his *Exposition of Aristotle's Physics* is his longest work except for his *Commentary on the Sentences*.

As a nominalist about universals, Ockham had to deal with the Aristotelian claim in the *Posterior Analytics* that science pertains to certain propositions about what is universal and necessary. He discusses this issue in the Prologue to his *Exposition of the Physics* and there agrees with Aristotle. But he interprets Aristotle's dictum as saying that science is about certain propositions with general (universal) terms in them; it is only in that sense that science deals with the universal. This of course does not mean that for Ockham our scientific knowledge can never get beyond the level of language to actual things. He
distinguishes various senses of ‘to know’ (*scire*, from which we get *scientia* or “science”):

- In one sense, to “know” is to know a proposition, or a term in that proposition. It is in this sense that the object of a science is universal, and this is what Aristotle had in mind.
- In another sense, we can be said to “know” what the proposition is about, what its terms have supposition for. What we “know” in that sense is always metaphysically individual, since for Ockham there isn’t anything else. This is not the sense in which Aristotle was speaking.

As described earlier, Ockham holds that we do not need to allow special entities in all ten of Aristotle's categories. In particular, we do not need them in the category of quantity. For Ockham, there is no need for real “mathematical” entities such as numbers, points, lines, and surfaces as distinct from individual substances and qualities. Apparent talk about such things can invariably be parsed away, via the theory of connotation or exposition, in favor of talk about substances and qualities (and, in certain theological contexts, a few relations). This Ockhamist move is illustrative of and influential on an important development in late medieval physics: the application of mathematics to non-mathematical things, culminating in Galileo's famous statement that the “book of nature” is written in the “language of mathematics.”

Such an application of mathematics violates a traditional Aristotelian prohibition against *metabasis eis allo genos*, grounded on quite reasonable considerations. The basic idea is that things cannot be legitimately compared in any respect in which they differ in species. Thus it makes little sense to ask whether the soprano's high C is higher or lower than Mount Everest—much less to ask (quantitatively) *how much* higher or lower it is. But for Aristotle, straight lines and curved lines belong to different species of lines. Hence they cannot be meaningfully compared or measured against one another. The same holds for rectilinear motion and circular motion.

Although the basic idea is reasonable enough, Ockham recognized that there are problems. The length of a coiled rope, for example, can straightforwardly be compared to the length of an uncoiled rope, and the one can meaningfully be said to be longer or shorter than, or equal in length to, the other. For that matter, a single rope surely stays the same length, whether it is coiled or extended full-length. Ockham's solution to these problems is to note that, on his ontology, straight lines and curved lines are not *really* different species of lines—because lines are not extra things in the first place. Talk about lines is simply a "manner of speaking" about substances and qualities.

Thus, to compare a “curved” (coiled) rope with a “straight” (uncoiled) one is not really to talk about the lengths of lines in two different species; it is to talk about two *ropes*, which *are* after all in the same species. To describe the one as curved (coiled) and the other as straight (uncoiled) is not to appeal to specifically different kinds of entities—curvature and straightness—but merely to describe the ropes in ways that can be expounded according to two different patterns. Since such talk does not have ontological implications that require specifically different kinds of entities, the Aristotelian prohibition of *metabasis* does not apply.

Once one realizes that we can appeal to connotation theory, and more generally the theory of exposition, without invoking new entities, the door is opened to applying mathematical analyses (all of which are exponible, for Ockham) to all kinds of things, and in particular to physical nature.

Ockham's contributions were by no means the only factor in the increasing mathematization of science in the fourteenth century. But they were important ones.[38]

6. Theory of Knowledge
Like most medieval accounts of knowledge, Ockham’s is not much concerned with answering skeptical doubts. He takes it for granted that humans not only can but frequently do know things, and focuses his attention instead on the “mechanisms” by which this knowledge comes about.

6.1 The Rejection of Species

Ockham’s theory of knowledge, like his natural philosophy, is broadly Aristotelian in form, although—again, like his natural philosophy—it is “Aristotelian” in its own way. For most Aristotelians of the day, knowledge involved the transmission of a “species” between the object and the mind. At the sensory level, this species may be compared to the more recent notion of a sense “impression.” More generally, we can think of it as the structure or configuration of the object, a structure or configuration that can be “encoded” in different ways and found isomorphically in a variety of contexts. One recent author, describing the theory as it occurs in Aquinas, puts it like this:

Consider, for example, blueprints. In a blueprint of a library, the configuration of the library itself, that is, the very configuration that will be in the finished library, is captured on paper but in such a way that it does not make the paper itself into a library. Rather, the configuration is imposed on the paper in a different sort of way from the way it is imposed on the materials of the library. What Aquinas thinks of as transferring and preserving a configuration we tend to consider as a way of encoding information.

The configuration of features found in the external object is also found in “encoded” form as a species in the organ that senses the object. (Depending on the sense modality, it may also be found in an intervening medium. For example, with vision and hearing, the species is transmitted through the air to the sense organ.) At the intellectual level, the so-called “agent intellect” goes to work on this species and somehow produces the universal concept that is the raw material of intellectual cognition.

Ockham rejected this entire theory of species. For him, species are unnecessary to a successful theory of cognition, and he dispenses with them. Moreover, he argues, the species theory is not supported by experience; introspection reveals no such species in our cognitive processes. This rejection of the species theory of cognition, which had been foreshadowed by several previous authors (such as Henry of Ghent in the thirteenth century), was an important development in late medieval epistemology.

6.2 Intuitive and Abstractive Cognition

One of the more intriguing features of late medieval epistemology in general, and of Ockham’s view in particular, is the development of a theory known as “intuitive and abstractive cognition.” The theory is found in authors as diverse as Duns Scotus, Peter Auriol, Walter Chatton, and Ockham. But their theories of intuitive and abstractive cognition are so different that it is hard to see any one thing they are all supposed to be theories of. Nevertheless, to a first approximation, intuitive cognition can be thought of as perception, whereas abstractive cognition is closer to imagination or remembering. The fit is not exact, however, since authors who had a theory of intuitive and abstractive cognition usually also allowed the distinction at the intellectual level as well.

It is important to note that abstractive cognition, in the sense of this theory, has nothing necessarily to do with “abstraction” in the sense of producing universal concepts from cognitive encounters with individuals. Instead, what abstractive cognition “abstracts” from is the question of the existence or non-existence of the object. By contrast, intuitive cognition is very much tied up with the existence or non-existence of the object. Here is how Ockham
For intuitive cognition of a thing is a cognition such that by virtue of it it can be known whether the thing exists or not, in such a way that if the thing does exist, the intellect at once judges it to exist and evidently knows it to exist … Likewise, intuitive cognition is such that when some things are known, one of which inheres in the other or the one is distant in place from the other or is related in another way to the other, it is at once known by virtue of the incomplext cognition of those things whether the thing inheres or does not inhere, whether it is distant or not distant, and so on for other contingent truths …

Abstractive cognition, however, is that by virtue of which it cannot be evidently known of the thing whether it exists or does not exist. And in this way abstractive cognition, as opposed to intuitive cognition, “abstracts” from existence and non-existence, because by it neither can it be evidently known of an existing thing that it exists, nor of a non-existent one that it does not exist.

Ockham's main point here is that an intuitive cognition naturally causes in the mind a number of true contingent judgements about the external thing(s) that caused this intuitive cognition; for example, that this thing exists, or that it is white, and so on. This does not prevent God from deceiving any particular creature if He wants to, even when an intuitive cognition is present, but in such a case, God would have to neutralize the natural causal effect of this intuitive cognition (this is something He can always do, according to Ockham) and directly cause instead a false judgement. Intuitive cognitions, on the other hand, can sometimes induce false beliefs, too, if the circumstances are abnormal (in cases of perceptual illusions in particular), but even then, they would still cause some true contingent judgements. The latter at any rate is their distinctive feature. Abstractive cognitions, by contrast, are not such as to naturally cause true judgements about contingent matters.

7. Ethics

Ockham's ethics combines a number of themes. For one, it is a will-based ethics in which intentions count for everything and external behavior or actions count for nothing. In themselves, all actions are morally neutral.

Again, there is a strong dose of divine command theory in Ockham's ethics. Certain things (i.e., in light of the previous point, certain intentions) becomes morally obligatory, permitted or forbidden simply because God decrees so. Thus, in Exodus, the Israelites' "spoiling the Egyptians" (or rather their intention to do so, which they carried out) was not a matter of theft or plunder, but was morally permissible and indeed obligatory—because God had commanded it.

Nevertheless, despite the divine command themes in Ockham's ethics, it is also clear that he wanted morality to be to some extent a matter of reason. There is even a sense in which one can find a kind of natural law theory in Ockham's ethics; one way in which God conveys his divine commands to us is by giving us the natures we have. Unlike Augustine, Ockham accepted the possibility of the “virtuous pagan”; moral virtue for Ockham does not depend on having access to revelation.

7.1 The Virtues

But while moral virtue is possible even for the pagan, moral virtue is not by itself enough for salvation. Salvation requires not just virtue (the opposite of which is moral vice) but merit (the opposite of which is sin), and merit requires grace, a free gift from God. In short, there is no necessary connection
between virtue—moral goodness—and salvation. Ockham repeatedly emphasizes that “God is a debtor to no one”; he does not owe us anything, no matter what we do.

For Ockham, acts of will are morally virtuous either extrinsically, i.e. derivatively, through their conformity to some more fundamental act of will, or intrinsically. On pain of infinite regress, therefore, extrinsically virtuous acts of will must ultimately lead back to an intrinsically virtuous act of will. That intrinsically virtuous act of will, for Ockham, is an act of “loving God above all else and for his own sake.”

In his early work, *On the Connection of the Virtues*, Ockham distinguishes five grades or stages of moral virtue, which have been the topic of considerable speculation in the secondary literature:

1. The first and lowest stage is found when someone wills to act in accordance with “right reason”—i.e., because it is “the right thing to do.”
2. The second stage adds moral “seriousness” to the picture. The agent is willing to act in accordance with right reason even in the face of contrary considerations, even—if necessary—at the cost of death.
3. The third stage adds a certain exclusivity to the motivation; one wills to act in this way only because right reason requires it. It is not enough to will to act in accordance with right reason, even heroically, if one does so on the basis of extraneous, non-moral motives.
4. At the fourth stage of moral virtue, one wills to act in this way “precisely for the love of God.” This stage “alone is the true and perfect moral virtue of which the Saints speak.”
5. The fifth and final stage can be built immediately on either the third or the fourth stage; thus one can have the fifth without the fourth stage. The fifth stage adds an element of extraordinary moral heroism that goes beyond even the “seriousness” of stage two.

The difficulty in understanding this hierarchy comes at the fourth stage, where it is not clear exactly what moral factor is added to the preceding three stages.

7.2 Moral Psychology

At the beginning of his *Nicomachean Ethics*, Aristotle remarked that “the good is that at which all things aim.” Each thing, therefore, aims at the good, according to the demands of its nature. In the Middle Ages, “Aristotelians” like Thomas Aquinas held that the good for human beings in particular is “happiness,” the enjoyment of the direct vision of God in the next life. And, whether they realize it or not, that is what all human beings are ultimately aiming at in their actions. For someone like Aquinas, therefore, the human will is “free” only in a certain restricted sense. We are not free to choose for or against our final end; that is built into us by nature. But we are free to choose various means to that end. All our choices, therefore, are made under the aspect of leading to that final goal. To be sure, sometimes we make the wrong choices, but when that occurs it is because of ignorance, distraction, self-deception, etc. In an important sense, then, someone like Aquinas accepts a version of the so called Socratic Paradox: No one knowingly and deliberately does evil.

Ockham's view is quite different. Although he is very suspicious of the notion of final causality (teleology) in general, he thinks it is quite appropriate for intelligent, voluntary agents such as human beings. Thus the frequent charge that Ockham severs ethics from metaphysics by denying teleology seems wrong. Nevertheless, while Ockham grants that human beings have a natural orientation, a tendency toward their own ultimate good, he does not think this restricts their choices.

For Ockham, as for Aristotle and Aquinas, I can choose the means to achieve my ultimate good. But in addition, for Ockham unlike Aristotle and Aquinas, I
can choose whether to *will* that ultimate good. The natural orientation and tendency toward that good is built in: I cannot do anything about that. But I *can* choose whether or not to *to act* to achieve that good. I might choose, for example, to do nothing at all, and I might choose this knowing full well what I am doing. But more: I can choose to act knowingly directly *against* my ultimate good, to *thwart* it. I can choose evil as *evil*.

For Ockham, this is required if I am going to be morally responsible for my actions. If I could not help but will to act to achieve my ultimate good, then it would not be morally praiseworthy of me to do so; moral “sins of omission” would be impossible (although of course I could be mistaken in the means I adopt). By the same token, moral “sins of commission” would be impossible if I could not knowingly *act against* my ultimate good. But for Ockham these conclusions are not just required by theory; they are confirmed by experience.

### 8. Political Philosophy

The divine command themes so prominent in Ockham's ethics are much more muted in his political theory, which on the contrary tends to be far more “natural” and “secular.” As sketched above, Ockham's political writings began at Avignon with a discussion of the issue of poverty. But later on the issues were generalized to include church/state relations more broadly. He was one of the first medieval authors to advocate a form of church/state separation, and was important for the early development of the notion of property rights.

The Franciscan Order at this time was divided into two parties, which came to be known as the “Conventuals” and the “Spirituals” (or “zealots”). The Spirituals, among whom were Ockham, Michael of Cesena, and the other exiles who joined them in fleeing Avignon, tried to preserve the original ideal of austere poverty practiced and advocated by St. Francis himself (c. 1181–1226). The Conventuals, on the other hand, while recognizing this ideal, were prepared to compromise in order to accommodate the practical needs of a large, organized religious order; they were by far the majority of the order. The issue between the two parties was never one of doctrine; neither side accused the other of heresy. Rather, the question was one of how to shape and run the order—in particular, whether the Franciscans should (or even could) renounce all property rights.

#### 8.1 The Ideal of Poverty

The ideal of poverty had been (and still is) a common one in religious communities. Typically, the idea is that the individual member of the order owns no property at all. If a member buys a car, for instance, it is not strictly his car, even though he may have exclusive use of it, and it was not bought with his money; he doesn't have any money of his own. Rather it belongs to the order.

The original Franciscan ideal went further. Not only did the individual friar have no property of his own, *neither did the order*. The Franciscans, therefore, were really supposed to be “mendicants,” to live by begging. Anything donated to the order, such as a house or a piece of land, strictly speaking remained the property of the original owner (who merely granted the *use* of it to the Franciscans). (Or, if that would not work—as, for example, in the case of a bequest in a will, after the original owner had died—the ownership would go to the Papacy.)

Both the Spirituals and the Conventuals thought this ideal of uncompromising poverty was exhibited by the life of Jesus and the Apostles, who—they said—had given up all property, both individually and collectively. St. Francis regarded this as the clear implication of several Scriptural passages: e.g., Matt. 6:24–34, 8:20, 19:21. In short, the Apostolic (and Franciscan) ideal was, “Live without a safety net.”
Of course, if everyone lived according to this ideal, so that no one owned any property either individually or collectively, then there would be no property at all. The Franciscan ideal, then, shared by Conventuals and Spirituals alike, entailed the total abolition of all property rights.

Not everyone shared this view. Outside the Franciscan order, most theoreticians agreed that Jesus and the Apostles lived without individual property, but thought they did share property collectively. Nevertheless, Pope Nicholas III, in 1279, had officially approved the Franciscan view, not just as a view about how to organize the Franciscan order, but about the interpretation of the Scriptural passages concerning Jesus and the Apostles. His approval did not mean he was endorsing the Franciscan reading as the correct interpretation of Scripture, but only that it was a permissible one, that there was nothing doctrinally suspect about it.[54]

Nevertheless, this interpretation was a clear reproach to the Papacy, which at Avignon was wallowing in wealth to a degree it had never seen before. The clear implication of the Franciscan view, therefore, was that the Avignon Popes were conspicuously not living their lives as an “imitation of Christ.” Whether for this reason or another, the Avignon Pope John XXII decided to reopen discussion of the question of Apostolic poverty and to come to some resolution of the matter. But, as Mollat [1963] puts it (perhaps not without some taking of sides):[55]

> When discussions began at Avignon, conflicting opinions were freely put forward. Meanwhile, Michael of Cesena, acting with insolent audacity, did not await the Holy See's decision: on 30 May 1322 the chapter-general [of the Franciscan order] at Perugia declared itself convinced of the absolute poverty of Christ and the Apostles.

It was this act that provoked John XXII to issue his first contribution to the dispute, his bull *Ad conditorem* in 1322. There he put the whole matter in a legal framework.

### 8.2 The Legal Issues

According to Roman law, as formulated in the Code of Justinian, “ownership” and “legitimate use” cannot be permanently separated. For example, it is one thing for me to own a book but to let you use it for a while. Ownership in that case means that I can recall the book, and even if I do not do so, you should return it to me when you are done with it. But it is quite another matter for me to own the book but to grant you *permanent* use of it, to agree not to recall it as long as you want to keep it, and to agree that you have no obligation to give it back ever. John XXII points out that, from the point of view of Roman law, the latter case makes no sense. There is no practical difference in that case between your having the use of the book and your owning it; for all intents and purposes, it is yours.

Notice the criticism here. It is a legal argument against the claim that the Papacy as an institution can own something and yet the Franciscans as an order, collectively, have a permanent right to use it. The complaint is not against the notion that an individual friar might have a right to use something until he dies, at which time use reverts to the order (or as the Franciscans would have it, to the Papacy). This would still allow some distinction between ownership and mere use. Rather the complaint is against the notion that the order would not own anything outright, but would nevertheless have permanent use of it that goes beyond the life or death of any individual friar, so that the ownership somehow remained permanently with the Papacy, even though the Pope could not reclaim it, use it, or do anything at all with it. John XXII argues that this simply abolishes the distinction between use and ownership.

### 8.3 Property Rights
Special problems arise if the property involved is such that the use of it involves consuming it—e.g., food. In that case, it appears that there is no real
difference between ownership and even temporary use. For things like food, using them amounts for practical purposes to owning them; they cannot be
recalled after they are used. In short, for John XXII, it follows that it is impossible fully to live the life of absolute poverty, even for the individual person
(much less for a permanent institution like the Franciscan order). The institution of property, and property “rights,” therefore began in the Garden of Eden,
the first time Adam or Eve ate something. These property rights are not “natural” rights; on the contrary, they are established by a kind of positive law by
God, who gave everything in the Garden to Adam and Eve.

Ockham disagreed. For him, there was no “property” in the Garden of Eden. Instead, Adam and Eve there had a natural right to use anything at hand. This
natural right did not amount to a property right, however, since it could not have been used as the basis of any kind of legal claim. Both John XXII and
Ockham seem to agree in requiring that “property” (ownership) be a matter of positive law, not simply of natural law. But John says there was such property
in the Garden of Eden, whereas Ockham claims there was not; there was only a natural right, so that Adam and Eve's use of the goods there was legitimate.
For Ockham, “property” first emerged only after the Fall when, by a kind of divine permission, people began to set up special positive legal arrangements
assigning the legal right to use certain things to certain people (the owners), to the exclusion of anyone else's having a legal right to them. The owners can
then give permission to others to use what the owners own, but that permission does not amount to giving them a legal right they could appeal to in a court of
law; it can be revoked at any time. For Ockham, this is the way the Franciscans operate. Their benefactors and donors do not give them any legal rights to use
the things donated to them—i.e., no right they could appeal to in a court of law. Rather the donation amounts only to a kind of permission that restores the
original natural (not legal) right of use in the Garden of Eden.[56]

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**Secondary Literature**

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Related Entries


Acknowledgments

For the update to this entry published in the summer of 2011, Claude Panaccio has become a co-author, having made significant revisions to Sections 3.3, 4.2, 4.3, 6.1, and 6.2. He will continue maintain and keep the entry current.

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Library of Congress Catalog Data: ISSN 1095-5054