

SOME ASPECTS OF THE EPISTEMOLOGY OF WILLIAM OF OCKHAM

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ABSTRACT

The background section of the article deals with Aquinas's and Scotus's definition of the relation between intellect and senses. It is shown that Aquinas postulated a species intermediary between the two, while Scotus only postulated it for abstractive cognition. Ockham removes the intelligible species altogether, stressing the reliability of intuitive cognition as the basis of certitude about present situations, while perfect intuitive cognition is the basis of certitude about past situation. Ockham's theories of the habitus are discussed as seeming to contradict the principle of the razor, but are demonstrated not to involve external intermediaries. Ockham's epistemology safeguards the intrinsic psychological unity of man and allows a more direct knowledge of the world, in that it derives universals from particulars and does away with Aquinas's unwieldy theories of illumination and abstraction. Because all knowledge begins with intuitive cognition, an empirical scientific method is for the first time justified. The article concludes with a short discussion of Ockham's theories of signification and conceptualism, which together with his emphasis on empiricism clear the way for the systematic development of logic.

In the following account my purpose is to provide a short exposition of Ockham's theory of knowledge, having related this briefly to previous cognitive theories, and to suggest some consequences.

Background

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Ockham departed from many of his predecessors in approaching the question of knowledge, whether of singulars or of universals, by starting with the singular object rather than with the universal and enquiring how universals could be known from singular objects.

Thomas Aquinas had had to come to terms with the observations that the human intellect does know material objects (in the sense of being aware of them), and that sense impressions are the primary means of knowledge. His problem was partly to define the relation between intellect and senses, as the former was held to be immaterial and the latter were material sense organs activated by the objects sensed. In other words, how was he to bridge the 'gap' seemingly inherent in the Aristotelian 'axiom', 'Intellectus est universalium, sensus autem particularium'? In fact Aquinas held that the intellect cannot know particulars directly, but only universals. He argued this point in three premisses: the principle of singularity in material things is matter; our intellect understands by abstracting the intelligible species from such matter; that which is thus abstracted is the universal (Day, 1947:26,27).

The Thomistic (and Scotistic) theory of knowledge was based on that which was thought to be Aristotle's, in which universal knowledge is the most perfect form of knowledge, and nothing is in the intellect which was not first in the senses. Particular (material) objects are represented in the mind by the 'species sensibilis', which is illuminated by the light of the active intellect, and thereby made immaterial and so intelligible. This illumination is then the abstraction of which Aquinas talks (Day, 1947:115). The theory of abstraction clearly depends heavily on the Aristotelian (and ultimately Platonic) assumption that individual things possess some sort of universal essence which can be disengaged from them and known by the intellect: there is said to be a dichotomy between material and immaterial things. But it seems to me that the dichotomy is hardly solved by the postulation of such a species, for the fact that the species has to be 'illuminated' before it acquires immateriality suggests that it is a material entity.

In any case, it is precisely this principle of the abstraction of a species which causes Ockham to reconsider: both because abstraction is held to be the only way in which the mind knows intellectually, and because a species has to be postulated as that which is abstracted. For him this principle limits the ways in which the intellect knows, increases the distance between the mind and what is perceived, and is uneconomical. Even for Aquinas the intellect does know particulars, though indirectly, as Day points out (1947:28).

It appears to me that the principle of abstraction is mainly a device aimed at preventing direct contact between the mind and matter, and ends in a circular argument: the mind, it is assumed, understands by abstraction. But one cannot abstract nothing, therefore a species is postulated to be abstracted. This species is universal, otherwise it could not be abstracted. For the mind to understand it, it must be abstracted from singular matter. And so forth. This theory assumes, therefore, that one must begin with the universal concept, not the particular.

Even if it is granted that the mind understands material particulars indirectly, the precise nature of this comprehension must still be demonstrated; so it would be easier to show that the intellect actually knows material particulars directly. Then the problem falls away. And some later scholastics attempted just this, positing both an immediate intellectual apprehension of singulars (material ones too, in dependence on the senses) as existing and present for the observer, and an immediate apprehension of particulars which abstracts from these data. Only then, according to them, does the mind begin to form concepts about universals.

These two immediate cognitions (the first termed intuitive, the second abstractive) are postulated by both Scotus and Ockham in an attempt to describe in psychological terms what actually happens, so avoiding the difficulties outlined above. Scotus distinguishes between two such acts of the intellect, a distinction which is, however, only applicable on the level of simple apprehension. For him, abstractive cognition is an intellectual (but simple apprehensive) act which regards an object, com-

pletely indifferent as to whether that object is present or even in existence, while intuitive cognition regards an object of our knowledge which is both existing and present (Day, 1947:34,35).

The former cognition is for Scotus a matter of common experience, as for example the case where I can have a mental image of, say, Winston Churchill, though he is neither present nor existing. But intuitive cognition is not so certainly experienced, so Scotus attempts to prove its existence (Day, 1947:52-54), even if not on earth, then certainly in heaven, where there will be direct knowledge of God. A little later, implicitly rebutting the Aristotelian 'axiom', Scotus declares that the distinction between intellect and sense should be understood not as a distinction between different faculties, but as the difference between a superior cognitive faculty and one subordinate to it, but nonetheless cognitive. In other words, the intellect can know any object under any aspect - in any mode of cognition - but the (external) senses are limited to one mode (intuitive cognition); then can only know an object 'sub ratione existentis' (quoted in Day, 1947:60).

Scotus continues to distinguish precisely between the two cognitions (Day, 1947:67), and argues the fact of abstractive knowledge (one of his proofs being common experience, as was noted above) and the possibility of intuitive knowledge (inter alia, from the hope of heaven). From the Oxoniense, II, d.3, q.9, n.6 (Day, 1947:72) it may be seen that the distinction lies not in what is known, but in how it is known: intuitive lays hold of what abstractive knowledge does not, the actual existence and presence of an object.

In Book III of the same work Scotus further distinguishes between perfect and imperfect intuitive cognition: the latter 'est opinio de futuro vel memoria de praeterito'; the former 'est de objecto praesentialiter existens' (Day, 1947:78). Imperfect intuitive cognition is thus to Scotus the act of remembering or anticipation; perfect intuitive cognition, however, 'co-operates' with the intellect in producing a habit in the intellect, which results in a habitual (or imperfect) intuitive cognition in the (intellective) memory. (This definition and Scotus's other theories here

will be important when we come to Ockham's development of Scotus.) And perfect intuitive cognition knows the singular as such ('ut hoc') and as existing ('existens est', Day 1947:82). This theory has a clear epistemological import which was fully recognized as such by Scotus: it provides a basis for certitude. However, imperfect intuitive cognition, it seems to me, does not know the individual in itself, but rather knows it by something which encapsulates the object, either a past memory or a future 'opinion'. Hence Scotus has not disposed of the intermediate species entirely.

In Book IV of the *Oxoniense* Scotus again adduces evidence in support of the theory of intuitive cognition and its importance for certitude about our interior acts: 'Si non haberemus ... cognitionem sic] intuitivam, non sciremus de actibus nostris ... vel non certitudinaliter' (Day, 1947:87). The implication is clearly that intuitive cognition is possible in this life, not merely in the next. Finally, in this same Book Scotus observes that the two cognitions are specifically distinct, because the partial causes of abstractive cognition are the species and the intellect, but those of intuitive cognition are the '*res praesens in se*' (Day, 1947:89; my italicization) and the intellect.

With regard to Aquinas's postulation of a species as intermediary between intellect and senses, it is important to know Scotus's views. As Day observes (1947:105) there is critical disagreement over whether Scotus's conception of intuitive knowledge necessitates a species. However, Scotus himself clearly states, 'Sed ista cognitio (intuitive) non est per aliquam speciem, vel habitum, qui possit esse de re non existente' in Book II of the *Oxoniense* (Day, 1947:109). Where he does mention a species he is most likely referring to abstraction or abstractive cognition, although he does not always distinguish between the two kinds of cognition.

Proceeding in this fashion Scotus removes the difficulties posed by the 'axiom' of Aristotle to our knowledge of singulars and, in his insistence on the difference between the two kinds of knowledge and the concomitant immediacy of intuitive cognition, which no longer needed an intermediary species, paved the way for Ockham's treatment of the same theme; Day

(1947:143-5) lists several occasions where the latter acknowledges his debt to the former.

Ockham's contribution

Ockham removes the intelligible species altogether from the scene, even from abstractive cognition. Scotus tended to stress the differences of the two kinds of simple apprehensive knowledge; Ockham sees intuitive cognition as forming the foundation on which abstractive knowledge (and hence all other more complex forms of knowledge) rests.

He begins with the basic query, 'Utrum sit possibile intellectum viatoris habere notitiam evidentem ...?' (*Opera Theologica*, I, 1967:Prologue, q.1, p.3, heading; thereafter cited simply as OT, 1967:page number; line number). But this is a theological rather than a philosophical query, for he ends it with the words, '... de veritatibus theologiae'. He answers his own question by declaring that he will assume certain presuppositions, such as that God exists, has intuitive knowledge of himself, and is omnipotent - therefore by virtue of his absolute power could create in man a knowledge of a non-existent thing. This last assumption caused much trouble for Ockham in that he was accused of heresy; his accusers failed to perceive that Ockham also declared that God normally exercises only his ordained power, and is therefore not really a deceiver. The *Quodlibet* 6 (Leff, 1965:16) makes clear that God's ordained power acts within the limits of the laws God himself instituted.

Ockham observes that evident knowledge (which of course is his basic concern) 'est cognitio alicuius veri complexi, ex notitia terminorum incomplexa' (OT, 1967: 5; 19f). This statement and its context suggest that evident knowledge depends on the way in which the terms of a proposition are known; furthermore, evident knowledge is more comprehensive than any other knowledge, even wisdom (OT, 1967:6; 5-6); it can know contingent propositions too (OT, 1967: 6; 6-7). He asserts that there are two kinds of knowledge, complex and incomplex; and this incomplex knowledge is itself of two kinds (Day, 1947:146): 'duas notitias incomplexas specie distinctas quarum una ... intuitive et alia abstractive'

(OT, 1967:15; 15-17). It will be noted that this formula echoes Scotus's ideas, though it was not necessarily derived from him.

To have such evident knowledge of the terms of a contingent proposition, it is necessary to possess intuitive cognition (OT, 1967:15; 10-12). hence, in this (later) work of his Ockham locates intuitive cognition at the centre of the problem of certitude, as Day notes (1947:148). Ockham then notes that there are two acts of the intellect to be considered, an 'actus apprehensivus' which apprehends everything, whether complex or not, and an 'actus iudicativus' by which assent or dissent only to a complex proposition is given (OT, 1967: 16; 6-18). Apprehension precedes this act of judgment (OT, 1967:17; 15-17) and is itself composed of two kinds of simple knowledge of terms ('incomplexa') of a proposition - Scotus's intuitive and abstractive cognition.

As with his predecessor, Ockham wishes to show that these are distinct, and proves this point by a characteristic appeal to experience ('sicut per experientiam patet', OT, 1967: 23; 4f). A non-complex cognition of both Socrates and whiteness is not an evident knowledge of whether Socrates is white or not. But there is another knowledge by which the intellect can know evidently that Socrates is white, if he is white (Ockham, 1957:20). These results of the two cognitions are so disparate that there must exist two distinct kinds of knowledge: one can cause evident knowledge, one cannot (OT, 1967: 23; 7-10).

Thus far Ockham has discussed only objects which can be sensed, but the distinction between the two cognitions also applies to un-sensable objects, because 'everyone experiences in himself that he understands, loves, is pleased, is sad' (Ockham, 1957: 21 and OT, 1967: 28; 14-16). These are contingent facts, therefore knowledge about them cannot be obtained from necessary propositions, for contingent facts are never necessary. Of the three alternative solutions to this problem, Ockham declares that the second way of obtaining knowledge about such propositions is the best: 'Si detur secundum, habetur propositum, quod sola notitia incomplexa terminorum mere intelligibilium sufficit ad notitiam evidentem talis veritatis contingentis' (OT, 1967: 29; 3-5).

Ockham maintains, therefore, that there are two ways of knowing something non-complex: one abstractive, the other intuitive (Ockham, 1957:22); the first never causing evident assent, but the second doing so. And this is really what he had intended to prove (OT, 1967: 30; 8-11).

Abstractive cognition can be taken in two senses: as cognition of a universal which can be abstracted from many things (OT, 1967: 30; 12-15), or - which is the sense Ockham will use - it 'abstrahit ab existentia et non existentia et ab aliis condicionibus quae contingenter accidunt rei vel praedicantur de re' (OT, 1967: 31; 4-6). Abstractive cognition is not, therefore, concerned with the actual existence of a thing, while the distinguishing feature of intuitive cognition is precisely that it 'enables us to know whether the thing exists or does not exist' (Ockham, 1957:23), and also gives us knowledge of the relations between things. Indeed, 'generally speaking, any non-complex cognition of one or more terms or things, is an intuitive cognition, if it enables us to know a contingent truth, especially about present facts' (Ockham, 1957:23). Once again Ockham's stress on directness and economy is apparent.

As with Scotus, for Ockham abstractive cognition is indifferent to existence or non-existence (Ockham, 1957:23). Yet, since we do apprehend existential truths, there must be another kind of cognition concerned with existence, unlike abstractive; 'et illa erit intuitive' (OT, 1967:23; 20, and see whole paragraph).

Thus far Ockham has been reproducing Scotus; now he begins to differ. For Scotus the 'res praesens in se' was one of the causes of intuitive cognition; Ockham says this need not at all be the case, giving as his reason the first article of the Creed - for, he declares in the *Quodlibeta*, this implies that 'anything is to be attributed to the divine power, when it does not contain a manifest contradiction. But that this (i.e. cognition of a non-existent object) should be produced by the power of God, does not contain a contradiction' (Ockham, 1957:25). It is interesting to note that this would appear to be a theological as much as a logical application of the principle of economy: God as first cause needs

no secondary causes, indeed the fewer the better. It is also worth nothing that the insistence of God's not contradicting himself is again a logical as much as a theological point. Ockham is equally theologian and philosopher.

What Ockham has just said is an apparent contradiction, for did he not stress that intuitive cognition is only concerned with actually existing things? But he goes on to make it clear that he is here talking about supernatural causes: So far as natural causes are in question, an intuitive cognition cannot be caused or preserved if the object does not exist' (Ockham, 1957:26).

Normally, therefore, when God does not exercise his absolute power, intuitive cognition guarantees certitude about existential propositions (see also Day, 1947:14). Clearly Ockham's aim is to cover all possibilities in his definition of what can be really evident (to God as well as to men) - even if, to put it crudely, the possibilities are as unlikely as man seeing something that is not there. As Boehner (1943:230) observes, to Ockham there is no contradiction involved because 'Deus habet notitiam intuitivam omnium, sive sint, sive non sint'. And there can be no rational proof of this; either one accepts that there is a mystery surrounding God's knowledge - if he exists - or one does not. This type of presupposition is unarguable.

In fact Ockham points out that were God to cause us to believe that something is present when it is absent, such a belief 'erit abstractiva, non intuitiva. Per talum actum fidei potest apparere res esse presens quando est absens, non tamen per actum evidentem' (Quodlibeta V, q.5; Leff, 1975:21). Again Ockham safeguards the reliability of intuitive cognition as applied to actual existence or non-existence. It is important to note, though, that one could be intuitively certain that something does not exist, in which case of course intuitive cognition does produce certainty about existence (Day, 1947:175 and Boehner, 1943: 229-231). This is not the same as being aware of an object that actually does not exist. As with Scotus, Ockham insists that both cognitions are species of simple apprehension only, so intuitive cognition is not a judgment that a thing

exists (which would be a 'cognitio complexa') but rather something that enables us to evaluate a judgment about that thing's existence (Boehner, 1943: 248 and Day, 1947: 173).

Ockham has now argued the certitude guaranteed by intuitive cognition for immediate knowledge, but has a most important further step to take. In view of the 'axiom' quoted at the beginning of this essay, it is crucial that he prove that our intellects do possess this immediate knowledge, or else the barrier between intellect and senses has not been demolished. Aquinas also took exception to the 'axiom', but postulated a species to bridge the awkward gap, while Scotus removed the species, but only from intuitive cognition.

Ockham simply points out that this 'principle' is too rigid: our intellect does not know only the universal, and does not always abstract from the here and now of existence. Our intellect does know singulars, 'quod est hic et quod est nunc' (Day, 1947:170): if it did not know them thus existentially, we could not make judgments about contingent facts. But since we do thus judge, intuitive cognition must exist.

This argument is neat, but to my mind the reasoning is faulty. Ockham wishes to be absolutely sure about our knowledge of existent facts, so, from experience, he observes that we do have this knowledge of things around us; and claims that because we have it, such knowledge must be certain.

In any case, intuitive cognition is now established as the cornerstone of Ockham's theory of human knowledge, at least as far as he is concerned, and as far as present situations are in question. Where past existence is concerned, he follows Scotus in distinguishing between perfect and imperfect intuitive cognition, the second of which he also calls 'cognitio recordativa' and which is defined as that (simple) knowledge enabling one to assent to a judgment (not, as Day says, 1947: 181, to make a judgment) about a thing's past existence; and about its future, though Ockham does not develop this aspect and nor did Scotus. The question arises, how does perfect intuitive cognition produce this knowledge?

The answer is bound up with Ockham's use of the idea of 'habitus'. Day points out (1947:182f) that the very definition of the two cognitions demands the postulation of something other than either to explain our knowledge of the past in the present, for abstractive cognition cannot be concerned with present existence, and intuitive cognition is only concerned with it; this 'something else' is a habitus, which is an inclination of the mind towards performing an act of memory, of imperfect intuitive cognition.

Reportatio II, where Ockham introduces this idea, is textually of interest as it represents an earlier and unrevised stage of his thought (Ockham, 1957:1v and Boehmer, 1943:228f). At some stage Ockham's theories of the universal underwent a change from the earliest theory of the 'fictum', where the fictum is the object of the act of thinking (Read, 1977:26), to the 'intellectio' theory, in terms of which the universal itself is purely a mental act. As I intend to show, the habitus theory, though an improvement on the species theory, leaves something to be desired, and it is tempting to think that, had he been able to revise the Reportatio, Ockham might have abandoned it altogether.

In the Reportatio itself Ockham actually offers two views:

firstly, that along with an intuitive cognition there is a simultaneous abstractive one, 'et illa ... est causa partialis concurrans cum intellectu ad generandum habitum inclinantem ad cognitionem intuitivam imperfectum' (Boehner, 1943:250); secondly, that (perfect) intuitive cognition itself causes a habitus which produces 'cognitionem abstractivam sive intuitivam imperfectam' (Day, 1947: 181; Boehner, 1943: 252). While Leff is unconvinced by Boehner's and Day's arguments as to the chronological priority of one or the other, he believes that the first view was that eventually preferred by Ockham (1975: 30f).

I see snags in both these views: the first view seems to favour a more immediate and economical approach to memory, with two stages instead of three; but an imperfect intuitive cognition, being by definition not concerned with the actual existence of the object then and there, is in a sense already an abstractive cognition; it is not clear then why there

needs to be simultaneity of two acts, one intuitive, one abstractive. As Fuchs points out (1952:35), imperfect intuitive cognition is not pure abstractive cognition because it is not indifferent to existence, even if only in the past.

The second view of habitus, however, assures the absolute (chronological) priority of the role of intuitive cognition, with its concomitant degree of certainty, in knowledge of the past, but is not so true to psychological experience, which is usually aware of immediate memory rather than of a process. But in both cases habits are postulated as a link explaining habitual knowledge (Fuchs, 1952:28). It would seem then, as though habits, just like species, contradict the principle of economy (and indeed it is in an early work that they do appear), but it should be noted that they are simply dispositions of the mind towards remembering the past - purely psychological rather than both in the mind and in things, like the species (Read, 1977:22).

It is thought that Ockham adhered finally to the first theory (Day, 1947: 182 and Leff, 1975: 30; cf. Boehner, 1943: 226f, who for some reason says it is the second theory). If so, then he ended up declaring that perfect intuitive cognition of an object is the partial cause of (concurrent) abstractive knowledge of the same object, which abstractive knowledge is in turn the partial cause in respect of a habit of 'cognitionem abstractivam incomplexam' (or imperfect intuitive cognition); when the intellect forms the proposition that 'this thing existed' (i.e., no longer exists), the intellect is inclined by the habit to knowledge of the thing's past existence (Boehner, 1943: 251; Day, 1947: 186; Leff, 1975:33). So the role of intuitive cognition is once again fundamental, both in helping to form the first abstractive cognition, and in constituting the habit of second abstractive cognition which leads to knowledge of past experience. (The paragraph from which I quoted above (G) is, according to Boehner, 1943: 226, 244, a later addition made by Ockham to strengthen his preferred position.)

Granted the reasons why Ockham postulated the habitus (to safeguard knowledge of the past as well as the present), why should a habitus,

precisely, and not something else, be called for? Ockham is most likely following Scotus or Scotistic thought here (Day, 1947:188), in which case his conception of habitus probably draws on that of the 'species intelligibilis'. Though Ockham's habitus is not external to the mind as is Scotus's species, it is nevertheless an extra quality and would seem to weaken Ockham's denial of intermediaries, especially species. But where Scotus had said that the active intellect and the object are the sufficient cause of the species (Day, 1947:189) Ockham, using practically the same formula, does add that the active intellect and the object are the sufficient agent of the said (i.e. intuitive) cognition (Boehner, 1943:254; paragraph O). Furthermore, he declares, there is no 'ratio certa procedens ex per se notis vel experientia certa' (ibid.). In other words, Ockham refuses to admit theories not based on experience or on self-evident (not merely evident) principles, such as the metaphysical ones held by the proponents of the 'axiom' with which this essay began. His point is, therefore, that since all knowledge, whether abstractive or not, is based ultimately on perfect intuitive cognition, in which there is definitely no intermediary between intellect and object (not even a habitus), there is no external intermediary in any kind of knowledge.

Pausing and taking stock, we find that Ockham has begun with two desires: to attain certitude about knowledge, and to do away with unnecessary hypothetical barriers to such certainty. He has adopted Scotus's distinction between intuitive and abstractive knowledge, agreeing with Scotus that no species of any sort is required for intuitive cognition and, by basing his theory of abstractive cognition on the prior or at least simultaneous occurrence of intuitive cognition, has done away with the species there. Certainly there is an object present to the intellect (which is a reminder that this theory was held before Ockham posited the 'intellectio' theory exclusively), but it cannot be a species: if the object is purely mental, it will have been caused by an act of cognition; if the object is physically present, there will be an immediate cognition of it anyway (Boehner, 1943: 268, paragraph MM, which is in direct answer to Scotus).

In the place of the species, however, Ockham has left us with a habitus, something intrinsic, not extrinsic, to the mind, in the case of the second abstractive cognition which takes place in the actual act of recollection (the first being concurrent with the initial act of perfect intuitive cognition). Hence - in this unrevised work - Ockham achieves certainty about external affairs at the expense of an internal lack of economy. At least the habitus follows any acts, unlike the species, which 'autem (actus) non sequitur sed precedit' (Boehner, 1943: 255, paragraph R; Leff, 1975: 36). It cannot therefore have any influence on such mental acts.

Ockham's conclusions then are that for (sensitive) intuitive cognition all that is required is the corporeal power (the senses) and the object without any species; for intellectual cognition the object and the intellect suffice. For primary abstractive cognition, which co-exists ('stat') with intuitive cognition, (perfect) intuitive cognition and the intellect suffice, but for secondary abstractive cognition a habit is required as well (Boehner, 1943:270; paragraph PP).

Consequences

No longer is there a gap between the intellect and the senses, but they are shown to co-operate closely; the intrinsic psychological unity of man is thus safeguarded. Secondly, our knowledge of present particulars becomes more immediate (not in the sense of a flash of insight but in the sense that the object known is present to the mind; Day, 1947:208). In other words, particulars are no longer at a second remove, though the habitus theory would suggest at least a mental distance from our past. But this is evident from experience: our past is not physically accessible to us, and the earlier an event has occurred in the past, the more difficult it is to recall.

Thirdly, since those individuals before us do not have some abstractable essence extra to their being, or which gives them their being, our derivation of universals will also begin with individuals and not the other way about. Fourthly, since there is nothing to abstract, there need be

no theory of abstraction as in Aquinas, with its accompanying unwieldy theory of illumination. Ockham has moved quite a distance from Aristotelianism in this respect.

Fifthly, since all knowledge begins with intuitive cognition, an empirical scientific method is justified for the first time - one now begins with evidence about data and, reasoning from there, arrives at scientific theories. And sixthly, by the same token, knowledge even of oneself is certain: not that a theory of the nature of one's being is intuitively known, but that intuitive cognition does inform one of the (emotional) state of one's mind and that it is 'my' mind. Appropriate analysis of these states will provide information about the nature of one's being and other beings, which can lead to a proof for the existence of God (Day, 1947:212f).

Moreover, the doctrine of the two cognitions has implications for Ockham's teaching on signification and his conceptualism, which I shall explore briefly here. To understand a proposition one has to have understood its terms with the help of the two cognitions (Boehner, 1943:224). Since Ockham calls everything which makes something (different from itself) known a sign, not just sensible facts (Boehner, 1958:202), terms signify through signs, and signs alone. Because we are interested chiefly in those sentences which are true or false, i.e. propositions or declarations, we are interested in the (language-) signs found in such sentences (Boehner, 1958:211).

While signs in general lead only to a secondary or abstractive knowledge on the basis of habit derived from a primary cognition (Boehner, 1958:213; see also 203), this limitation does not apply to mental language signs or concepts, which make a knowledge known which is obtained by intuitive cognition: they are acts of thought by which something is conceived, at any rate according to the intellectio theory (Boehner, 1958:215). If they conceive a singular thing, we speak of singular concepts; but if they conceive of many things equally and signify them indiscriminately, we speak of universal concepts (Boehner, 1958:216).

It is this ability to have meaning - to signify - which enables mental language signs to be used in propositions.

Mental language signs correspond with spoken language signs which signify them and are therefore subordinated to them (Boehner, 1958:219), i.e. spoken signs cannot signify without there being mental ones associated with them, or to put it in another way, words are conventional signs imposed to signify what is already naturally known in the soul as a concept (Leff, 1975:125). By 'signify' Ockham generally means (of language signs) that a sign is used or can be used in a proposition relating to past, present and future, and in such a way that it takes the place of what is signified if a proposition is formulated (Boehner, 1958:231).

Mental language signs are thus the basis for the terms of any proposition which is uttered or formulated in spoken or written language signs, i.e. the basis of any proposition whatsoever. Since they signify a natural knowledge which is obtained by intuitive cognition, whether this intuitive cognition is perfect or imperfect, one has a basis of certitude to work from in determining the truth or falsity of propositions; the meaning of conventional terms - written or spoken language signs - could however change. Leff (1975:101) remarks that for Ockham mental language signs are not mere mental pictures, since they do have representational significance; he is correct if he means that these signs are not static but play an active role, unlike the *fictum* - concepts have real meaning in standing for something which exists outside the mind.

Ockham, it will be noted, does not distinguish between knowing a concept and knowing a thing. This raises difficulties: is the concept not then a definite object, a *fictum*, if the sign is known before the thing signified? Or, if the thing signified is known directly, then there will be no difference between knowing a concept and intuitive cognition of what is known. Both these alternatives, however, undercut Ockham's theories and the only solution is to admit the dual nature of a sign, both as the subject of an act of knowledge and as something known in the mind; for unless a sign is known, it cannot signify (Loux, 1974:50).

Conclusion

Ockham's epistemology begins with the 'hic et nunc' and has psychological implications insofar as it examines what we know of ourselves and objects outside of ourselves; it also stresses the unity of mind and body. Though he mentions future knowledge, like his predecessor Scotus he pays little attention to it; while he breaks away almost completely from the limitations of the Aristotelian 'axiom' with which we began, as Aquinas and Scotus also attempted to do, he follows the latter two only partly, insisting more strongly than they on the necessity for definite and immediate certitude with no barriers interposed. His epistemology thus also has important implications for an empirical approach to science and knowledge in general,¹ and clears the way for a systematic development of logic in that it provides more certainty about being able to know the terms of propositions, which are signified by signs, which are known by intuitive cognition.

¹ It should be clear from my argument in this essay that I would regard statements such as the following, which are not uncommon, with less than enthusiasm: '(Scientific) knowledge was severely limited. For Ockham, it is not that we cannot know in some sense anything about the natural world so much as we cannot know anything about the natural world with absolute certainty. This follows from the absolute power of God' (Sagal, 1982:90).

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