WILLIAM CRATHORN ON PREDICATION AND MENTAL LANGUAGE

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The fourteenth-century philosopher and theologian William Crathorn is well known for his provocative views on many important issues.[1] For instance, while he was a Dominican at Oxford, he frequently criticized Thomas Aquinas's doctrine.[2] Not only did he attack the main authority of his religious Order, but he also challenges his Oxonian fellows Henry of Harclay – the Chancellor of the University in 1312 – Walter Chatton, Robert Holcot and William of Ockham about the nature of cognition[3] and language, and also about ontological reductionism[4] and physics.[5] Our Dominican can be considered to be a radical nominalist:[6] there is no universal in reality but only singular things; categories are only classes of names signifying singular entities; the truth of propositions has to be analyzed through the semantics of terms. But unlike

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1   For an overview of his philosophy, see my presentation in"William Crathorn", *Stanford Encyclopaedia of Philosophy*, http://plato.stanford.edu/entries/crathorn/

2   Cf. Krauss 1933.

3   For a presentation of Crathorn's theory of cognition and representation, cf. Tachau 1988, III, ix, pp. 255-274; and Pasnau 1997, 2.1, pp. 64-67 and 3.1, pp. 89-101.

4   As an example of his originality, in his commentary on Peter Lombard's *Sentences* written around 1330 – the only text that has survived – Crathorn refuses Aristotle's doctrine of the ten categories Cf. Crathorn 1988, q. XVIII, p. 476: "Quarta conclusio ex praedictis sequitur quod eadem res numero est substantia, quantitas, qualitas et similitudo (…)."

5   Indeed, he is an atomist. Cf. Robert 2009.

6   I have tried to examine precisely the differences between Crathorn's and Ockham's nominalism in Robert (forthcoming).

Ockham, he does not accept the Augustinian idea that there is a natural and universal mental language comprised of natural representations perfectly shared by the whole community of human beings.[7] According to Crathorn, the semantical properties of terms in the human mental language are purely conventionnal.

Our aim in this paper is to understand this original theory of language, and more precisely, its epistemological constraints. The best way to begin is to investigate the nature of basic predicative propositions, such as "*x* is *F*". Indeed, it is worth considering how difficult it may be for such a radical nominalist program to explain predication. How can there be something like mental predication in the mind if there is no natural mental language? Since we cannot deal with all the difficulties raised by such a theory, we will focus our remarks on two distinct but related issues. The first concerns the nature of a mental proposition: what kind of mental act corresponds to the formation of a proposition of the type "*x* is *F*"? In other words, what happens in the mind when we think that *x* is *F*? Second, we will try to understand the semantical properties of terms in different propositional contexts corresponding to sentences such as "*x* is *F*". Indeed, in medieval terminist logic one has to explain the semantical properties that the subject, the predicate and the copula may have in different propositionnal contexts. This kind of semantical property is called "*suppositio*". Ockham says, for instance, that a term has primarily a signification (*significatio*) in itself, independently of the propositions in which it can occur, but it also has a *suppositio*, it can supposit (*supponere*) for different things depending on the propositional context in which it occurs. A word can well supposit for its significates, but also for itself and for all the occurrences of this word (for example in "man is a name"), or for the concept to which the word is subordinated ("man is a concept"). This is supposed to solve many semantical ambiguities, but as we shall see, it is difficult for Crathorn to explain the different semantical features of a term in different propositional contexts. His difficulty is understanding the nature of the *suppositio simplex* (when a term stands for a concept, for instance the subject-term of the proposition "horse is a concept") and the *suppositio materialis* (when the term stands for itself or for an occurrence of this term, as in "horse is a name"). We will argue that Crathorn's interpretation of language, and in particular his refusal of Ockham's theory of mental language, makes such a contextual analysis impossible.

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7   Crathorn's theory of mental language has already been studied, but from a very general point of view. Cf. Perler 1997; Panaccio 1996; Robert 2009a.

Before analyzing Crathorn's answers to these two questions, it is necessary to outline the basic principles of his epistemology, since it is not possible to understand his philosophy of language without his cognitive theory.

Evident knowledge and the possibility of science

The theory of knowledge occupies mainly the first question of Crathorn's commentary on the *Sentences*, where he asks the traditional question: can the wayfarer have a natural and evident knowledge of the articles of faith? As long as we cannot have any experience of what the articles of faith teach us, what kind of epistemological status is to be given to the propositions of Scripture? As it is usually the case in the Oxonian commentaries on the *Sentences* of the first decades of the fourteenth century, the author gives his answer concerning the articles of faith in the very last lines, whereas the rest is devoted to evident knowledge in general and to the possibility of acquiring new scientific knowledge.

Crathorn's principal target here is Ockham, who defined evident knowledge as cognition of a true complex proposition sufficiently caused by an incomplex cognition of its terms.[8] This is not a satisfactory definition according to Crathorn, because not all our evident knowledge is complex. When one sees colours or when the Blessed see God face to face, it implies some evident knowledge of the colour's existence or God's existence without any propositional content.[9] In both cases, the evident knowledge is not caused by the cognition of terms and/or propositions, but by the cognition of the thing itself. One might respond that at least in the case of propositions *per se notae* such as "a whole is greater than its parts" the cognition of the terms is

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8   Ockham 1967, Prologus, q. 1, p. 5: "(...) notitia evidens est cognitio alicuius veri complexi, ex notitia terminorum incomplexa immediata vel mediata nata sufficienter causari." The best presentation of Ockham's theory of evident knowledge is Perini-Santos 2006.

9   Crathorn, 1988, q. 1, p. 68: "Non omnis notitia evidens est notitia complexi, etc. (...) Antecedens probo, quia notitia intuitiva, qua Deus videtur a beato, est notitia evidens, et tamen non causatur nec est nata causaru ab aliqua notitia incomplexa aliquorum terminorum. Similiter notitia intuitiva colorum nobis possibilis naturaliter est notitia evidens, et tamen non est notitia alicuius complexi (...)." We will see below that the case of colours is not as simple as it appears here.

sufficient to cause an evident knowledge of the truth of the proposition. Anyone who knows the nominal definitions of the terms in such a proposition also knows evidently that it is true. But Crathorn affirms that even in the case of what we would call analytical judgments after Kant, the cognition of terms is never sufficient, because the evident knowledge of the truth of a *per se nota* proposition as "a whole is greater than its part" always depends on the intuitive cognition (past or present) of the things signified by the terms. Someone who never had any kind of natural and direct acquaintance with a particular whole or with a particular part of a whole cannot know evidently the truth of the proposition "a whole is greater than its parts".[10]

At first sight, it seems difficult to understand this attack against Ockham, for this latter would certainly agree with Crathorn that intuitive cognition is required in the process of forming the terms, which can be later the objects of evident knowledge.[11] Indeed, Ockham even defines intuitive cognition, in comparison with abstractive cognition, by the fact that the first causes evident knowledge of the existence of the cognized thing while the second does not. Intuitive cognition also causes evident knowledge of some contingent singular propositions. For instance, when I intuitively cognize Socrates, I have an evident knowledge that "Socrates exists" and if I also cognize his whiteness, I get an evident knowledge that "Socrates is white".[12] In these cases, at least, intuitive cognition of the significates of terms causes evident knowledge of some propositions. Intuitive cognition is also at the centre of Ockham's epistemology and it is a major element in the explanation of evident knowledge. Paradoxically enough, it seems that Crathorn reproaches Ockham precisely for having treated evident knowledge coming from

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10   Crathorn 1988, q. 1, p. 68: "Notitia incomplexa terminorum alicuius propositionis non potest esse causa sufficiens notitiae eiusdem propositionis, cuius oppositum innuit iste. Assumptum probo, quia si notitia alicuius propositionis posset causari sufficienter ex notitia incomplexa terminorum eiusdem propositionis, hoc maxime foret verum de propositionibus per se notis. Sed notitia propositionis per se notae, cuius est ista 'omne totum est maius sua parte' et consimiles, non potest causari sufficienter ex notitia incomplexa terminorum eiusdem propositionis. Igitur nec notitia aliarum propositionum potest causari sufficienter ex notitia incomplexa earundem propositionum. Minorem probo, quia notita evidens istius propositionis 'omne totum etc.' dependet ex notitia intuitiva rerum significatarum per istos terminos 'totum' et 'pars'. Si enim aliquis intuitive nunquam cognovisset aliquod totum nec aliquam partem, quantumcumque proponerentur sibi isti termini 'totum' et 'pars', nunquam evidenter cognosceret istam 'omne totum est maius sua parte'."

11   See, for example, Panaccio 1992.

12   Ockham 1967, Prologus, q. 1, p. 31.

intuitive cognition at the same level as evident knowledge caused by the apprehension of the terms of a proposition. According to Crathorn, the cognition of a thing and the cognition of a sign must be more clearly distinguished.

Like Ockham, our Dominican distinguishes intuitive and abstractive cognition, but unlike Ockham, he asserts that they are not different kinds of acts regarding the same thing, nor are they distinguished by the kind of assent they confer. What we call "intuitive cognition" is the cognition of the thing itself, and not of a representation or a sign of it, whereas we call the very same kind of cognition "abstractive" when our cognitive power cognizes only a representation, an image or a sign of this same thing. In this last case, Crathorn considers that the same cognition is abstractive with regard to the thing itself and intuitive with regard to the representation or the sign.[13] In other words, abstractive cognition is nothing but an intuitive cognition of a representation or a sign, without direct intuition of the represented thing or the significate of the sign. There is only one kind of cognitive act that can be directed at different objects.

Now it is easier to understand why, according to Crathorn, cognizing the terms of a proposition is not enough for having an evident knowledge of this proposition. For it is logically possible to cognize intuitively some signs in a language (in fact a *notitia abstractiva*) without having any actual intuition of their significates. Since, as we shall see below in considerable detail, all the terms we can use in a language are conventional, and someone can cognize the terms of a *per se nota* proposition in Japanese without being able to give his assent to it. Indeed, if he does not know to which things the terms correspond, he cannot be said to have some knowledge of real things. This is why Crathorn frequently insists that the object of knowledge is

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13   Crathorn 1988, q. 1, p. 132: "Sed videtur mihi quod notitia intuitiva et abstractiva non sunt duae notitiae specie distinctae nec etiam numero, sed eadem res omnino, quia notitia intuitiva est ipsa potentia cognitiva et similiter ipsa notitia abstractiva, ita quod eadem res numero vocatur intuitiva et abstractiva respectu eiusdem obiecti diversimode cogniti. Dicitur enim ipsa potentia cognitiva intuitiva vel intuens respectu obiecti realiter existentis et praesentis ipsi potentiae cognoscentis, quando scilicet aliqua res secundum seipsam praesentatur et obicitur ipsi potentiae et non solum secundum imaginem et similitudinem suam. Et illa eadem potentia cognitiva vocatur notitia abstractiva vel abstrahens respectu eiusdem rei, quando secundum seipsam non est praesens nec obiecta ipsi potentiae cognoscenti, sed ipsi potentiae cognitivae praesentatur et obicitur ipsius similitudo vel imago vel aliquid quod est ipsius signum ad placitum, respectu cuius similitudinis vel imaginis vel signi ad placitum ipsa potentia dicitur intuitiva vel intuens (…)."

not a proposition but what is signified by a proposition.[14] If someone knows that every mixed thing is corruptible, he does not know only the proposition "every mixed thing is corruptible"; he must have also experience of what is signified by the proposition. Crathorn sums up his position as follows:

> One must therefore understand the proposition "intellect is about principles, science about conclusions", which is found and cited among philosophers, as this proposition: "intellect is about the things signified by principles, and science is about the things signified by conclusions". Indeed, philosophers and other doctors, in speaking thus, do not distinguish the signs from the significates, and because of that they occasionally defend an error and attack the truth. One must know that because we can neither cognize the significates of the propositions in themselves, nor natural concepts of them – for we use syllogisms for a lot of things which are neither cognized in themselves nor in natural concepts, but only in signs conventionally instituted – therefore we use signs in place of their significates.[15]

Crathorn concludes his q. 1 with a suggestion: it may be necessary to enlarge the definition of evidence to all the cases for which our knowledge is "clear" – as opposed to "obscure" – be it simple and intuitive as in the case of cognition of colours or complex and propositional in the case of abstractive cognition of terms.[16] If the notion of clarity reminds us Descartes's clear

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14   Cf. Nuchelmans 1973, pp. 212-217 and Tachau 1987.

15   Crathorn 1988, q. 3, p. 271: "Ideo per istam propositionem, quae habetur a philosophis et allegatur: 'intellectus est principiorum et scientia conclusionum', debet intelligi ista propositio sic: intellectus est istorum quae significantur per principia, et scientia est istorum quae significantur per conclusiones. Philosophi enim et alii doctores in loquendo non distinxerunt inter signa et significata, et hac de causa occasionaliter defendunt errores et impugnant veritatem. Sciendum quod quia non possumus ipsa significata propositionum in se cognoscere nec in conceptibus naturalibus eorundem, quia de multis sillogisamus, quae nec in se nec suis conceptibus naturalibus a nobis cognoscuntur sed tantum in eorum signis ad placitum institutis, ideo utimur signis vice significatorum."

16   William Crathorn, *Sent.* I, q. 1, p. 69-70: "Dico igitur quod notitia evidens est notitia manifesta sive clara non obscura; iste terminus 'evidens' importat negationem obscuritatis. Unde omnis notita, quae non est obscura sive complexi sive non, sive sit intuitiva sive sit abstractiva, est notitia evidens. Unde notita evidentissima nobis possibilis, sive in via sive in patria, est notitia simplex et intuitiva et non abstractiva nec respectu alicuius complexi."

and distinct ideas, our Dominican's theory more closely resembles empiricism: at every stage of cognition, evidence is ultimately based on an immediate intuitive cognition of some singular things, even in the case of propositions *per se notae*.

At this point of the argumentation, Crathorn has to explain the process of natural cognition – intuitive and abstractive – as well as the nature of terms, propositions and reasoning.

Cognition and the multiplication of species

It is well known that Ockham denies the existence of *species* in the medium and in the mind.[17] Singular things act directly on the human soul without any intermediate being. On the contrary, Crathorn defends with enthusiasm a theory of the multiplication of *species* similar in many respects with Roger Bacon's own theory as it is developed in the *De multiplicatione specierum*.[18] According to Bacon, a thing multiplies itself in the medium all around (in the air for instance) and these doubles can act at a distance on other things if they are well disposed to receive this action. The physical rules of such a multiplication are experienced thanks to optics, where the propagation of light is considered as a multiplication of a *species* of light through a medium. If optics makes these rules visible in the case of light, every kind of action at a distance – even invisible to us – functions according to the same physical rules according to Roger Bacon.[19] How does this work? The *species* can act on distant things and cause the same effects as the material thing itself because they share the same nature and the same definition.[20] For instance, the *species* of a substance is itself a substance, the *species* of an accident is an accident,

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17   Cf. Tachau 1988, pp. 130-135.

18   Cf. Tachau 1988, pp. 255-274; and Pasnau 1997, pp. 64-67 and pp. 89-101.

19   On the whole theory, cf. Lindberg 1983.

20   Roger Bacon, *De multiplicatione specierum*, I, 1, éd. D.C. Lindberg (in: Lindberg 1983), p. 2:"Aliter sumitur virtus pro effectu primo virtutis iam dicte propter similitudinem eius ad hanc virtutem, et in essentia et in operatione, quia similis est ei diffinitione et in essentia specifica ; et per consequens est similis in operatione, quia illa que sunt similis essentie habent similes operationes. Et hec virtus secunda habet multa nomina, vocatur enim similitudo agentis et ymago et species et ydolum et simulacrum et fantasma et forma et intentio et passio et impressio et umbra philosophorum apud auctores de aspectibus."

so on and so forth.[21] They are categorically identical, but they do not have the same mode of being. If they did, would there not be an infinity of Aurélien Roberts around me? It is not the case, for the *species*, Bacon asserts, have a lesser degree of ontological existence that mostly depends on the patient in which it is received.[22]

Crathorn accepts all the implications of such a theory and gives an even more materialist account of the *species*, to the point of affirming that the soul becomes white when it receives the *species* of whiteness.[23] In Crathorn's interpretation, when the soul cognizes a *species* arriving directly from the thing through sensation it is called an intuitive cognition, as we have seen earlier, because both the thing and its *species* exist simultaneously and are cognized together. When our mind cognizes the *species* stored in memory or in imagination, and if the thing is no longer present, then this is called an abstractive cognition relative to the thing itself. In this case the *species* becomes a sign of the thing. But what kinds of species are received in the human soul? Indeed, if they are of the same ontological nature as the thing itself, how can the soul receive a *species* of a substance, which is itself, a substance? Or a species of a quantity? This point was widely discussed in the thirteenth and fourteenth century[24] and Crathorn's solution is very

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21   Roger Bacon, *De multiplicatione specierum*, I, 2, p. 42: "Ex dictis in hoc capitulo patet quod cum queritur universaliter de omni specie in medio an sit substantia vel accidens, nulla est questio, et similiter an species sit quidam compositum vel simplex, et an universale vel singulare. Nam species substantiae est substantia, et species accidentis est accidens, et species compositi est composita, et species simplicis est simplex, ut materie species est materia, et forme est forma, et species rei universalis est universalis, et rei singularis est singularis; quia breviter dicendum quod sicut se habet accidens ad substantiam se habet species accidentis ad speciem substantiae et species materie ad speciem formae et species rei universalis ad speciem singularis, quod nullum earum est sine sua socia."

22   Roger Bacon, *De multiplicatione specierum*, I, 1, p. 10: "Si igitur contra hoc obiciatur quod tunc species solis erit sol et species hominis erit homo, et sic de omnibus rebus, quod omnino absurdum est, dicendum quod ista nomina homo et sol et asinus et planta et huiusmodi imponuntur rebus in esse completo, et ideo non dicuntur de illis quae habent esse incompletum, quamvis sint eiusdem essentiae (…). Similiter vero dicimur de specie hominis, que est similitudo eius facta in aere ab eo, non enim est homo, quia habet esse incompletissimum quod potest inveniri in specie hominis (…)."

23   See the comments on this by Pasnau 1997, pp. 64-69.

24   See for example Robert 2008 and 2010.

clear: the human soul cognizes only *species* of qualities and no *species* of substances,[25] because only qualities can inhere in the mind. Following Bacon's theory of the univocal multiplication of *species*, these qualities in the soul have the very same nature as the qualities outside the soul.[26]

The first conclusion concerning evident knowledge is the following: as we do not have *species* of substances in our mind, i.e. no intuitive cognition of material substances; therefore we cannot have an evident knowledge of propositions as "Socrates exists" or "Socrates is white", contrarily to what Ockham affirmed in his own commentary on the *Sentences*.[27] Indeed, this kind of knowledge would require an intuitive cognition of Socrates' substance, which is impossible to the human mind in its present state of a wayfarer, and not only a cognition of the terms "Socrates", "is" and "white". Generally speaking, we have no evident knowledge that there are substances outside the soul. Therefore, we have no evident knowledge of propositions such as "a stone exists" or "bread exists".[28] The only evident knowledge we may have concerning substances is about our own substance, because nobody normally equipped and normally disposed should have doubt regarding his own existence. Therefore, as Augustine already noticed, the

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25   Crathorn 1988, q. 1, p. 121: "Ad quintum dicendum quod Philosophus vocat speciem lapidis similitudinem accidentis lapidis, scilicet coloris vel caloris vel alicuius alterius accidentis, non autem similitudinem substantiae lapidis, quia nulla talis est in anima humana pro statu isto."

26   Crathorn 1988, q. 1, p. 117: "Alia conclusio est quod illa qualitas, quae est verbum et similitudo naturalis rei cognitae existentis extra animam, est eiusdem speciei cum re illa, cuius est similitudo."

27   Crathorn 1988, *Sent.* I, q. 1, p. 133-134: "Minor etiam rationes suae [Ockham] est falsa quoad unam partem, quia intellectus noster pro statu isto non potest habere cognitionem evidentem de isto complexo 'Sortes est albus', ex hoc solo quod videt Sortem et albedinem, quod patet ex hoc quod pro statu isto non potest homo habere cognitionem intuitivam substantiae Sortis, nec ex aliquo effectu nobis evidenter cognito possumus evidenter probare Sortem esse et per consequens pro statu isto non habemus evidentem cognitionem istius complexi 'Sortes est' (…)." For Ockham's text, cf. Ockham 1967, q. 1, p. 3-75 and Ockham 1979, V, q. 5-6, pp. 495-503.

28   Crathorn 1988, q. 1, p. 122: "Alia conclusio probanda est ista: quod pro statu isto non poterimus habere cognitionem naturalem evidentem et omnino infaillibilem de huiusmodi complexis: 'lapis est', 'panis est', 'aqua est', 'ignis est' et sic de aliis ex cognitione quacumque sensibili. (...) Igitur viator per existentiam accidentium non potest infaillibiliter cognoscere aliquam substantiam corporalem esse; sed cognitionem naturalem de existentia substantiae corporalis non habet viator nisi per cognitionem accidentium; substantia enim per propriam speciem non cognoscitur pro statu isto."

proposition "I am" can be evidently known to the person who is actually thinking,[29] even if, Crathorn says, it is always possible to find someone who says that he is dead, because of some illness of the soul. Crathorn says that he himself met someone who even denied the truth of some mathematical axioms.[30]

If we cannot have an evident knowledge of the existence of substances outside the soul, can we know evidently that qualities exist outside the soul? Not directly, Crathorn contends, because *species* are ontologically identical with external qualities in such a way that we cannot distinguish them from real and external qualities. We never know directly that what we cognize is inside or outside our soul.[31] Indeed, the *species* can subsist in the soul – in imagination or memory – without any real thing corresponding to it outside the soul. In such a situation, we have only an abstractive cognition of the thing (i.e. an intuitive cognition of its representation) and the only immediate evidence I can get from this cognition is that "I am seeing a colour" or "I am hearing a sound" or "a whiteness is something" are true propositions.[32] The only way for us to have an evident knowledge of the existence of qualities outside the soul is inferential. Not only in the sense that we have to infer from the *species* what is represented by it, but in the more strict sense of a conceptual or linguistic inference, since according to Crathorn we have to use linguistic signs, propositions and syllogisms in order to conclude that there must be something outside the soul. Thanks to the *per se nota* proposition "God does nothing in vain and super-naturally in order to induce men in error" (*Deus vel prima causa nihil agit frustra et supernatu-*

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29 Crathorn 1988, q. 1, p. 129: "(…) si quis dubitet de aliqua propositione puta de ista 'ego sum', sequitur ipsum esse, qui sequitur 'dubito me esse, igitur sum', quia qui non est non dubitat. Igitur nullus potest dubitare de ista propositione 'ego sum'."

30 Crathorn 1988, q. 1, pp. 129-130.

31 Crathorn 1988, q. 1, p. 123: "Nona conclusio est ista: quod ex cognitione sensitiva non potest viator habere cognitionem certam et omnino infaillibilem de existentia cuiuscumque accidentis extra animam. Et istam conclusionem intelligo quod viator pro statu isto non potest cognoscere evidenter et infaillibiliter huius-modi complexa: aliqua albedo, aliquis color, aliquis odor, aliquis sonus est vel fuit extra sentientem, et sic de aliis. (...) Videns albedinem simul et indistincte videt albedinem et speciem albedinis, nec potest ex hoc solo quod videt distinguere inter albedinem et speciem albedinis."

32 Crathorn 1988, q. 1, p. 125: "Alia conclusio est scilicet quod videns albedinem potest habere notitiam evidentem et omnino infaillibilem de huiusmodi complexis: 'video albedinem', 'albedo est aliquid', 'illud quod video est aliquid', 'audio sonum' (…)."

raliter ad inducendum homines in errorem), we can infer that God cannot want to deceive us and maintain *species* in the soul without any thing corresponding to it in extra mental reality.[33] Of course, it is difficult to understand why such a proposition "God does nothing in vain, etc." would be evidently known as a true proposition and how we can be certain that God is not a deceptive God.[34]

However that may be, the conditions for having evident knowledge are very strict. Of course, it is not necessary to argue, each time we encounter some qualities, in order to know whether they exist outside the soul or not. But, leaving aside the existence of these qualities, we have no immediate evidence that substances exist, that God exists, that there is only one God, that there is one supreme good or that an actual infinity exists.[35] All the things that are not the object of intuitive cognition are cognized through signs. It can be a *species* of a natural quality as whiteness, but it can be also *species* of linguistic terms, propositions and syllogisms, which are cases of abstractive cognitions. But if we do not have an intuitive cognition of their significates, we have no evident knowledge of a proposition, be it a *per se nota* proposition or the conclusion of a demonstrative syllogism.

Now it becomes clearer why it is so important for Crathorn to develop a well-grounded philosophy of language that is able to explain how signs and propositions can play their role with such a drastic view on natural cognition.

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33   Crathorn 1988, q. 1, p. 126: "Duodecima conclusio est ista: quod licet ex sola cognitione sensitiva non possit habere cognitionem evidentem et omnino infaillibilem quod tales qualitates sensatae sint extra viden-tem, tamen ex cognitione sensitiva et isto complexo per se noto: 'Deus vel prima causa nihil agit frustra et supernaturaliter ad inducendum homines in errorem', potest evidenter concludere tales res sensatas esse, quia conservatio specierum ita generalis scilicet quod homo per totam vitam suam nihil videret nisi tales qualitates existentes in vidente, foret miraculosa et vana et effectiva errorum multorum, qualem actionem quilibet sanae mentis iudicat divinae bonitati repugnare."

34   On the nature of this principle, cf. Crathorn 1988, q. 1, p. 150-151. On the general solution to skepticism, cf. Perler 2006, pp. 179-188.

35   For all these cases, cf. Crathorn 1988, q. 4, pp. 269-306.

Spoken, written and mental language

In Ockham's philosophy of language, all the terms we use in a particular language are subordinated to concepts in the mind that are natural signs of extra-mental things. The sum of these signs constitutes a natural and universal mental language shared by all human beings.[36] Spoken and written words are no more the signs of our mental affections, as Aristotle claimed in his *De anima*, they are rather signs of extra-mental things. This semantical property, the *significatio*, comes from the subordination of spoken and written words to mental terms, which are themselves, signs of extra-mental things. In his mature theory of mental language,[37] concepts or mental signs are said to be the cognitive acts themselves. Simple singular terms correspond to the intuitive acts of cognition; complex singular terms, simple and complex universal terms correspond to simple or complex abstractive acts of cognition. Mental acts are supposed to be natural signs of what they are cognition of, because these things naturally cause them and/or because they are similitudes of these things. This is one of the reason why an intuitive cognition of Socrates and his whiteness immediately causes the formation of a mental proposition equivalent to "Socrates is white", because the mental proposition is formed by this very act of intuitive cognition of Socrates and by the abstractive act of cognition of whiteness immediately caused by the intuition of this whiteness.

William Crathorn cannot support the same view of mental language. Indeed, the problem for Crathorn is that the human mind can only have an intuitive cognition of qualities, external or internal. As a consequence, if the terms of our mental language were our mental acts of cognition themselves or the objects of these acts, there would be only natural signs of qualities in it. Intuitive and abstractive acts can only be caused by qualities and, as a consequence of the theory of *species*, they are only similitudes of qualities. The only way for *species* in the mind to be signs of something else than qualities is conventional signification. This is what Crathorn tries to show in the q. 2 of his commentary on the *Sentences*: natural representations of qualities cannot explain the signification of all the terms one would expect to find in a mental language naturally and universally shared by the whole community of humans. For example, we cannot

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36   For a detailed explanation of Ockham's theory of concepts and mental language, see Panaccio 2004.

37   It is now well-known that Ockham changed his mind concerning the nature of concepts in mental language. For an overview, cf. Karger 1994. In his first theory of concepts, Ockham considered that concepts are not the cognitive acts, but their objects, which are called *ficta*, i.e. entities created by the mind.

have natural signs of substances as we have seen, but neither of God. Nor can we form natural signs corresponding to syncategorems (as "some", "all", "therefore", etc.), nor to very general terms as "being" (*ens*), because we have no representations of what they signify.[38] What would be a representation of being? of a quantifier?

Ockham has developed an alternative solution, because he has refused the theory of *species*. Crathorn, on the contrary, is forced to restrict the category of natural sign to qualities, since he explains representation by a shared property. His solution is therefore quite simple: every thing that is not directly cognized through intuitive cognition (be it a thing or a *species*) is known through signs, the signification of which is not natural but conventional (*ad placitum*). How can we form conventional signs in our mind? We only assign some conventional signification to the *species* in the mind. For, according to Crathorn, the only mental language is made of representations (*species*) of words and propositions of a particular language, as French, Portuguese or English. Indeed, spoken and written words can be considered as qualities outside the soul (at least they have some qualities); therefore we can have qualitatively identical *species* in the mind representing them.[39] For example, we can recite prayers or songs to ourselves without producing a sound or without writing something. These *species* are natural signs of the spoken and written words, but they can also have the same conventional signification as spoken and written words have. Crathorn has reversed Ockham's subordination of words to concepts: mental words take their signification from spoken and written words and not the contrary.

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38   Crathorn 1988, q. 2, p. 168: "[Contra Ockham] Dicit enim quod terminus mentalis vel conceptus et terminus vocalis sunt signa subordinata habentia idem significatum. Igitur sicut hoc nomen vocale 'ens' significat omnem rem ad placitum, sic terminus mentalis sibi correspondens significat omnem rem naturaliter et est naturale signum omnium rerum. Igitur in mente cuiuscumque formantis propositionem mentalem correspondentem isti vocali 'ens est unum' foret una qualitas, quae esset signum naturale omnium rerum. Consequens est falsum et impossibile (...). Sed impossibile est quod aliqua qualitas in anima sit effectus omnium rerum vel causa vel similitudo. Igitur impossibile quod aliqua qualitas in anima sit naturale signum omnium rerum." For the other examples, cf. Perler 1997 and Robert 2009a.

39   Crathorn 1988, q. 2, p. 154-155: "Prima [conclusio] est quod praeter propositiones scriptas vel vocales oportet ponere propositiones conceptas vel intelligibiles, quas alii vocant mentales, et probo hoc sic: sicut ex visione coloris gignitur in vidente speciem coloris, videlicet ex visione albedinis existentis species albedinis, quae est verbum et similitudo albedinis, sic ex auditu propositionis vocalis auditae generatur in audiente species propositionis vocalis, quae est verbum et similitudo propositionis vocalis, et hoc naturaliter."

Of course, if we follow this argumentation up to its conclusion, Crathorn should have said that we have something as real written words and sounds in our soul, which could be read or heard if someone could enter it, just as we have real whitenesses in us when we think of whiteness. In the same way, he should have said that it is not possible for us to immediately distinguish written and spoken words from their representations in us without the mediation of some argumentation based on the proposition "God cannot let us hear or see some propositions without any real words corresponding to them". But he does not seem conscious of such consequences.

Whatever that may be, it is worth noticing that he does not say that we have no natural representations at all. We have natural representations of qualities, and we can even combine them in our memory or in the imagination in order to think about things we have never experienced. In the same way, representations of words and propositions are natural, and all human beings can acquire them through a purely natural process if they see or hear propositions in French, Portuguese or English for example. But natural signification cannot explain the richness of a language. Therefore, mental terms must have exactly the same conventional (*ad placitum*) meaning as the words have in spoken or written languages.[40] As a consequence, Crathorn clearly says that our mental language belongs to the same idiom as our spoken and written language: we always think in French, Portuguese or any other particular language, at least for the linguistic part of our thoughts.[41]

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40   Crathorn 1988, q. 2, p. 159: "Septima conclusio est quod nullum verbum mentale, quod est vel natum est esse pars propositionis mentalis, quae generatur a propositione prolata, est signum naturale rerum, quae res specie differunt a propositione prolata et a partibus propositionis prolatae, sed tantum est signum talium rerum ad placitum, sicut nomen prolatum, cuius est similitudo, sicut hoc nomen 'homo' non est naturale signum Sortis et Platonis et aliorum hominum, sed ad placitum. Sed terminus mentalis correspondens isti termino prolato vel consimili differenti a primo solo numero signat easdem res ad placitum quas signat iste terminus homo, et non naturaliter (...)."

41   Crathorn 1988, q. 2, p. 171: "Quando vero dicit beatus Augustinus, quod verba mentalia sunt illa quae nullius sunt linguae, intelligit de verbis rerum significatarum, que non sunt propositiones vel termini propositionum, et non de omnibus verbis terminorum vocalium vel scriptorum significativorum; illa enim qualitas mentalis, quae est verbum albedinis, nullius linguae est. Sed ista qualitas mentalis, quae est similitudo istius nominis albedo, est eiusdem linguae et idiomatis, cuius est hoc nomen vocale 'albedo'."

Does it mean that spoken or written propositions are always prior to mental ones? This is initially the case; because spoken or written words must be formed prior to mental ones in order for us to cognize them and get a *species* of them in the mind. But subsequently our mind can combine the representations of French words for example and form new propositions deep down in itself[42]. Indeed, like other *species*, mental representations of words are stored in memory and can be used whenever one wants.

Now that we have a general overview of Crathorn's epistemology and philosophy of language, it is easier to understand why he suggests amending Ockham's theory of evident knowledge. If someone does not know the meaning of some propositions in a particular language, he cannot know its truth evidently, since he does not intuitively cognize the things to which they refer in reality. This is the reason why Crathorn insists on the necessity, in some cases, of knowing both the proposition and the things signified by its terms at the same time, because even in mental language some knowledge about the signfication of the terms belonging to a particular language is required. The counterpart is that an Englishman and a Greek can have the same knowledge without having the same mental propositions,[43] since the object of knowledge is not a proposition but what is signified by a proposition.

We can now turn to our initial question: how predication works in such a theory of mental language?

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42   Crathorn 1988, q. 2, p. 155: "Secundo sic: Quilibet bene dispositus potest experiri in seipso quod antequam loquitur vel scribat, formantur in seipso propositiones et similitudines naturales propositionibus prolatis vel proferendis et in quolibet idiomate sibi noto. Igitur praeter propositiones extrinsecas oportet ponere propositiones intrinsecas cognoscenti vel loquenti." and p. 178: "Ad quartum dicendum quod cuilibet propositioni vocali formabili ab intelligente non distracto potest correspondere similis in mente prius tempore formata ante prolationem propositionis vocalis."

43   Crathorn 1988, q. 2, p. 270: "Tertio sic: Unum et idem potest sciri a duobus, qui non communicant in aliqua propositione mentali vel vocali, sicut patet de anglico et graeco, quorum uterque potest scire quod certo die sol eclipsabatur ; igitur non omne quod potest sciri scientia proprie dicta est propositio mentalis vel vocalis." This is precisely what Robert Holcot will regret about Crathorn's theory. Cf. Schepers 1970 and 1972.

The nature of predicative sentences in mental language

Mental language has exactly the same structure as spoken and written ones according to Crathorn, which means that for the written proposition "a man is an animal" there corresponds a mental proposition equivalent to "a man is an animal", composed with representations (*species*) of the subject, the copula and the predicate.[44] The first problem we would like to raise concerns the institution of signification. Crathorn never says how human communities institute the signification of spoken and written words. For example, how can a term like "human" in English be able to signify a natural species of substances, since the human mind does not have natural representations of material substances? We can imagine that someone simply decides to impose the following signification for the word "human": this word will signify all the natural substances belonging to the same species as this exemplar that I am pointing out. But two explanations are still possible. First, even if we do not have a simple and natural representation of these substances, we can impose the signification of the word in accordance with a series of qualitative representations, as Locke will suggests some centuries later. We see that a collection of qualities is always linked with this kind of thing, and we decide to call these things *humans* or *humains* or *homines* depending on the language we are using. Thus Crathorn could have maintained a kind of priority for non-linguistic representations over linguistic signification. But he is never explicit on this point. Second, we can also imagine that the collection of qualities does not matter for the signification of terms and that it only serves for us to recognize human beings in the street. Crathorn may think that the signification does not depend at all on mental representations since it is purely conventional. But, again, no elements of an externalist theory of meaning can be found in his commentary on the *Sentences*. Whatever may be his implicit solution, the case of transcendentals, syncategorems or verbs would have probably resisted it.

How is the signification of the copula in a simple predicative sentence as "a man is an animal" determined? Crathorn seems to suggest that it is purely conventional and that it has nothing to do with some special kind of mental operation. When he speaks about the mental copula, he simply affirms that it is a representation of a spoken or written copula, with exactly

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44   Crathorn 1988, q. 2, p. 160: "Unde sicut haec propositio: 'homo est animal' componitur ex tribus terminis scilicet subiecto, praedicato et copula, sic propositio mentalis sibi correspondens componitur ex tribus qualitatibus, quarum una est species et verbum naturale subiecti, alia species praedicati, alia species copulae."

the same meaning,[45] but he does not explain more thoroughly how it can play its role of a copula. Generally speaking, even if we always have some representations in the mind when we think with complex propositions, the meaning of the words is not directly derived from them.[46] For example, when we formulate a proposition (spoken, written or mental) about whiteness, our representation of whiteness is not a part of the proposition but only accompanies the proposition we are using to tell something about it. This is the only example one can find in Crathorn's work, and it is not surprising since we only have representations of qualities according to him. It is then tempting to think that Crathorn considers – in a pre-Wittgensteinian style – that the meaning of words is given by their use in ordinary communication, but unfortunately he never goes so far.

Let us approach the problem from a different angle. When our mind receives the *species* of conventional words and propositions, how can we distinguish the meaning of the copula from the meaning of the subject and the predicate? What does it mean to understand a predicative proposition in a given language? The first remark to be made is that this operation must be the same for the three types of language. We understand a spoken, a written or a mental word of a particular language in the very same way since they are identical from both an ontological

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45   Crathorn 1988, q. 2, p. 179: "Ad sextum dicendum quod copula mentalis est naturalis similitudo copulae vocalis et non alterius rei, ut ratio supponit."

46   Crathorn 1988, q. 2, p. 201: "Secundo probo quod tale verbum mentis vel quod talis conceptus mentis non est universale per praedicationem nec pars propositionis mentalis, et hoc probo sic: formatio propositionis mentalis et partium eius praesupponit duratione vel natura cognitionem actualem rei, de qua formatur. Sed illud quod primo intelligitur et primo terminat actum intelligendi, est verbum mentis vel conceptus mentis. Igitur formatio propositionis mentalis vel partium eius, quia propositio mentalis non est aliud quam partes eius, praesupponit tempore vel natura formationem verbi mentalis illius rei, de qua formatur. Igitur verbum mentis, quod est similitudo rei, quae non est propositio nec pars propositionis, sed id de quo propositio formatur, non est propositio mentalis nec pars eius. Maiorem probo: si aliquis debeat intelligibiliter formare propositionem vel vocalem vel mentalem de albedine, necesse est quod prius tempore vel natura intelligat albedinem, in qua intellectione id quo primo intelligitur est verbum mentale albedinis, et per consequens posito tali verbo potest sequi formatio propositionis mentalis et vocalis et partium earundem. Secundo sic: posita una intellectione tantum albedinis et per consequens uno solo verbo albedinis, quod est naturalis similitudo albedinis, potest intelligens albedinem formare plures propositiones vocales et mentales, quarum sunt plura distincta subiecta et praedicata. Igitur tales propositiones mentales, quas intelligens format de albedine, non fiunt ex tali verbo albedinis, nec sicut ex subiectis, nec sicut ex praedicatis."

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and a semantical point of view. Even in the case of rather simple predicative sentences as "all dogs are not stupid", I need to cognize more than the things signified by the subject and the predicate in order to understand and to know the truth of the proposition. I need to understand the meaning of negation, of the copula and of the quantifier. Here, intuitive cognition of the significate does not help because it is simply not possible to cognize the significate. Mental representations also do not help much, because Crathorn clearly asserts that there are no representations corresponding to syncategorems or copulas except the representations of spoken or written syncategorems and copulas. One solution could be to enrich the theory of mental acts, and to add to intuitive and abstractive acts of cognition other types of acts corresponding to the negation, the copula and the quantifier. But again, Crathorn never talks of such acts. The only mental acts he mentions are intuitive and abstractive cognition. And the subject, the predicate, the syncategorems and the copula are cognized by the same kind of mental acts.

Nevertheless, we can gather some elements of Crathorn's solution to this question in a passage where he criticizes Hughes of Lawton's opinion. Indeed, his fellow Dominican at Oxford, Hugh of Lawton, defends an even more reductionist theory of mental language, for he says that there is no mental language at all.[47] Thinking is simply not linguistic according to Lawton. The only existing languages are spoken and written ones. They both agree that natural representations cannot explain the signification of many necessary parts of discourse, but Lawton adds that no mental representation can supposit for something else, i.e. it cannot have a *suppositio* corresponding to the different semantical properties a term can have in different propositional contexts. If a mental representation had a *suppositio*, it would only be able to supposit for itself according to Lawton. Without this semantical property, it makes no sense to speak of a mental language.

More generally, the main line of Lawton's critiques against Ockham consists in denying the homology and simultaneity of mental and spoken/written languages. For if every spoken or written proposition had an equivalent proposition in the mind, it would be impossible to tell a lie, i.e. say something that I do not think, because my propositions could not be subordinated to

47   We do not have Lawton's texts; what he says about mental language is only known through Crathorn's critique. Cf. Crathorn 1988, q. 2, pp. 172-182. Some of his arguments have been analyzed in Gelber 1984 and Panaccio 1996.

mental propositions with a different meaning. Among the several arguments Lawton gives to support his position, the first three ones concern what we may call the ontology of propositions. If there were a natural mental language, how could we form propositions such as "Socrates is an animal"? What kind of mental acts are required in this case? Before giving Lawton's answer, we must remind that he attacks a certain type of theory according to which mental propositions really exist inside the mind as in a subject (*subiective*) and not only as objects of thought (*obiective*), possibly outside the mind, as it is the case in Walter Burley's theory for example.[48] According to Lawton, the mind can take spoken or written words as its objects, but this does not mean that this kind of cognition can be considered as linguistic in the mind.

Lawton then begins by showing that if there were natural mental terms existing *subiectum* in the mind, one cannot give an account of the formation of mental propositions. For if a proposition were to exist in the intellect as in a subject, it would be composed of parts. For example, the mental proposition "a man is an animal" would be composed of at least three parts (subject-copula-predicate). What kind of mental act corresponds to the formation of this complex proposition? It cannot be an act of self-composition (*actus componens se*), because it makes no sense. It cannot be said that one part (the copula) composes the others. Therefore, there must be a mental act distinct from the three parts of the predicative proposition. Lawton asks whether this act is simple or complex. If it is complex, then we should ask what act composes it, so on *ad infinitum* ; if it is simple, it must be an act of apprehension – and then parts of the proposition are considered *obiective* – but then every act by which several things are apprehended could be called a proposition, which is false. Lawton concludes that we cannot give an account of the process of forming mental predicative propositions.[49]

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48   On this debate, cf. Cesalli 2007.

49   Crathorn 1988, q. 2, p. 172: "Arguit [Lawton] primo sic: Supponendo quod propositio mentalis, si sit compositum ex partibus, non sit actus componens se nec quod eius una pars componat aliam, sed quod componatur per actum intellectus componentem, quo supposito quaerit de illo actu intellectus componente, aut sit compositus et complexus vel simplex et incomplexus. Si dicitur quod est actus compositus et non simplex, cum non componat se nec pars partem, tunc eadem ratione per omnem simplicem intelligentiam fieret compositio, quod est falsum. Si dicitur quod actus componens sit formaliter et intrinsece simplex, dicitur tamen componens, quia est plurium, contra: si sit componere sic propositiones in mente constituere subiective, tunc sequeretur eadem ratione quod plures res extra simul intellectae essent propositio mentalis et subiective existerent in intellectu, quod falsum est."

The second argument endeavours to test the hypothesis that an act of composition may be distinct from the parts of the mental proposition. Lawton then tries to show that a simulta-neous intellection of different things does not create any kind of composition in the things, for either the composition already exists and it is a mere apprehension, which cannot be considered as a proposition; or composition does not already exist in the things, but this mental act cannot produce it, since an act of intellection does not have this power.[50]

The third argument is the following: if a mental proposition corresponds to a simple mental act, it cannot be composed of parts. But this is not the case according to those who de-fend the existence of a mental language existing in the mind as in a subject (*subiective*). Indeed, they say that a proposition is composed of several mental acts. But if it is a complex act, then none of its parts can be called an act of composition for the same reasons as he developed in the first argument.[51] All of Lawton's attacks point to the same problem: it is impossible to determine the nature of the mental act corresponding to the formation of the proposition in the mind.

Let us now turn to Crathorn's response to Lawton. In his reply to the first argument, Cra-thorn distinguishes spoken and written propositions, their *species* stored in memory and the *verba* corresponding to them in the intellect. The efficient cause of a mental proposition in the intellect (the *verba*) is a spoken, a written or a memorized proposition. Crathorn concludes that a mental proposition corresponds to a unique complex mental act of apprehension, which is not the ef-ficient cause of the composition of the proposition.[52] This act can take spoken, written or mental

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50   Crathorn 1988, q. 2, p. 172: "(...) per hoc quod aliqua simul intelliguntur, non est in eis maior compositio quam prius (...)."

51   Crathorn 1988, q. 2, p. 172: "Tertio arguit sic: si propositio mentalis sit vere unus actus numero, igitur non componitur ex diversis. Consequens falsum et contra ponentes propositiones mentales existere subiective in anima, quia ponunt eas componi ex diversis. (...) Si dicatur quod propositio non est vere unus actus numero, igitur sequitur quod nullus intellectus sit componens vel compositus."

52   Crathorn 1988, q. 2, p. 175-176: "Ad primum istorum dicendum quod propositio mentalis correspondens vocali non est aliud quam verbum propositionis vocalis, cuius verbi generatio in mente intelligentis similis est generationi verborum aliarum rerum. (...) Unde cum ab eodem propositio mentalis generetur et componatur, dicendum est, quod propositio mentalis componitur per propositionem vel speciem propositionis vocalis. Sed haec praepositio 'per' notat circumstantiam causae efficientis; componitur autem materialiter ex partibus suis sicut quodlibet aliud. Dicendum igitur quod propositio mentalis est actus quidam intellectus realiter composi-tus ex partibus; nec est actus componens se, nec una pars componit aliam, nec componitur per aliquem actum

propositions as its objects. The complexity of mental propositions is nothing else than the complexity of the series of representations of words in the mind. To put it another way: the complex act corresponding to the formation of a mental proposition is nothing else than the single act of apprehension thanks to which the parts of a spoken, written or memorized proposition are apprehended. The only active part of this process concerns the role of the will, which is able to direct its attention toward this or that proposition, even if Crathorn seems to consider that the will and the intellect are ontologically identical.[53] The rest of the process is purely passive. The intellectual apprehension of a proposition is a kind of mental act of reading or hearing a spoken, written or memorized proposition of a particular language. Why does Crathorn say that such an act of intellection is complex? It is indeed a simple act, but it is called complex because this unique mental act applies three times to three distinct words in the case of a predicative sentence such as "x is F".

> To the third argument, one must respond that a mental proposition corresponds to numerically one act, just as a spoken proposition is numerically one thing, by a unity of composition in time (…). To the seventh argument, one must respond that parts of a mental proposition are not at the same time in the intellect, just as parts of a spoken proposition are not in the intellect at the same time, and as parts of a spoken proposition do not exist at the same time in reality.[54]

Linguistic thoughts not only have the same structure as spoken and written propositions, they also take time to be formulated. As a consequence, from the point of view of gnoseology, noetics and ontology, it is impossible to distinguish what makes an intellectual act the under-

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intellectus, si haec praepositio notet efficientiam. Sed componitur isto modo sicut et efficitur vel per propositionem vocalem auditam vel per speciem propositionis vocalis conservatam in memoria (...)."

53 Crathorn 1988, q. 2, p. 177: "Requiritur tamen ad hoc quod propositio mentalis generetur in potentia intellectiva applicatio ipsius potentiae ad praedictam speciem intelligibilem propositionis, quae quidem applicatio est aliquando a voluntate et per consequens a potentia intellectiva, quia ista nomina 'potentia intellectiva' et 'voluntas' supponunt pro eadem re."

54 William Crathorn, *Sent.* I, q. 2, p. 178: "Ad tertium dicendum quod propositio mentalis est unus actus numero, sicut propositio vocalis est una res numero, scilicet unitate compositionis temporalis." et p. 179: "Ad septimum dicendum quod partes propositionis mentalis non sunt simul in intellectu, sicut nec partes vocales sunt simul in intellectu, sicut nec partes vocales sunt simul in re."

standing of a subject, a predicate or a copula. They all are mental qualities of the same kind, and they are apprehended as such. Their meaning is conventional and there is no difference between our understanding of words of a particular language and our understanding of the concepts corresponding to them. As a consequence, the explanation of the meaning of the copula and the analysis of predication rest on conventions and institutions. But as we have shown earlier, Crathorn never developed a real theory of conventional meaning. One may contend that there must be some cognitive function that allows us to understand the conventional meaning of those words, but this point remains a blind alley, since Crathorn never says what it is. In the same way, one may say that there must be some cognitive function in the intellect that enables us to understand how the very same term can change its meaning in different propositional contexts. Again, Crathorn's has some difficulties to explain this kind of semantical feature of terms.

Simple and material supposition in mental language

As recalled earlier, medieval logicians used to distinguish the signification of terms and their supposition, i.e. the fact that they can supposit or stand for something else than their ordinary significates in some particular propositional contexts. For example, one and the same term, like "homo" for example, can stand for its significates in the proposition "homo est animal", or for itself and the other occurrences of the word in the proposition "homo is a name", or for the concept of human in the sentence "homo est conceptus". Indeed, if this were not possible, these propositions could not be analyzed as true in the relevant contexts according to medieval terminist logic. William of Ockham, who is the main source for Crathorn's own analysis of semantics, called *suppositio materialis* the semantical property of a term when it stands for the occurrence of the word itself, and *suppositio simplex* the property acquired by a term in a proposition when it stands for the concept. When a term supposits for its significates, it is called a *suppositio personalis*.[55] What is particular for the *suppositio simplex* and the *suppositio materialis* is that they are not significative semantical properties, i.e. they do not refer to the significates of the word.

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55   The vocabulary sometimes vary among medieval logicians, but Crathorn, following Ockham, agrees with this threefold distinction.

In Crathorn's theory, the supposition of terms depends on human institution (*ad placitum*) in the same way as their signification does. Therefore, in response to Lawton's argument according to which a mental representation cannot have this kind of semantical property, Crathorn answers that it is not possible for the representation of whiteness for example, since it is not linguistic, but it is possible for the representation of a spoken or a written word. In the same manner as signification, a mental term can supposit for something else than its significates by a kind of reversed subordination thanks to which the mental term will acquire the same supposition as the term it represents. So, if we take a mental term and call it "*a*", it can supposit for the same thing as the spoken or written word corresponding to it.

> To the twelfth argument, one must answer that a mental term does not supposit naturally for something, but it supposits conventionally for the same thing for which the spoken word supposits. Just as these propositions "homo est substantia" and "homo est qualitas" are both true depending on whether this term "homo" has a personal or a material supposition, these ones are also true "a est substantia" and "a est qualitas" depending on whether it can supposit personally or materially.[56]

Crathorn is not very explicit about the meaning of such a reversed subordination for the *suppositio* of terms. For it can mean either that there is a kind of second convention according to which "*homo*" can stand for a concept or a word, or that only the context makes us understand that the terms does not stand for its significates. No matter what his position is, Crathorn should hold that the same modes of supposition are found in the spoken, written and mental languages. Nevertheless, the simple and the material suppositions evidently raise some problems.

Let us consider the following written proposition: "Horse is the concept of a natural species". In order for this sentence to be true and to be understood properly, the subject-term must have a simple supposition and stand for the concept of a horse. But what concept could it be?

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56   Crathorn 1988, q. 2, p. 180: "Ad duodecimum dicendum quod terminus mentalis non supponit naturaliter pro aliquo, sed supponit ad placitum pro eodem, pro quo supponit terminus vocalis. Et sicut istae propositiones sunt verae: 'Homo est substantia', 'homo est qualitas', secundum quod iste terminus vocalis 'homo' habet suppositionem personalem vel materialem, sic erunt istae verae: 'a est substantia', 'a est qualitas', secundum quod potest supponere personaliter vel materialiter."

Ockham is quite clear on this point : on one hand, when a spoken or a written term has a simple supposition it stands for the concept of the person who is presently thinking this proposition, at a time *t*, but it also stands for all the occurrences of this concept to which it could have been subordinated ; on the other hand, a mental term has a *suppositio simplex* when it stands for itself and only for itself. In the same way, a spoken or a written term has a material supposition when it stands for all the material occurrences of the word and not only for this particular occurrence. In mental language, a term is taken in *suppositio materialis* when it stands for the spoken or written words subordinated to it. Therefore, there are some differences between spoken, written and mental supposition. Ockham's distinctions raised many questions among contemporary commentators,[57] but it is now generally agreed that according to Ockham there must be some kind of pre-propositional relationship between the terms and their possible *supposita*, which ensures a natural foundation of these semantical properties. There is a natural relationship between a word and its occurrences – they are formally and materially similar – and there is also a natural relation between a word and the concept to which it corresponds – i.e. subordination. It cannot work this way in Crathorn's theory since *suppositio* is always purely conventional.

What is problematic in Crathorn's theory is that we do not have a concept of a horse different from the representation of the word "horse" – except perhaps a collection of representations of qualities always found together in our cognition of horses. Crathorn should say that in the spoken – or written – proposition "horse is the concept of a natural species", the term "horse" stands for the *species* of the word in the mind. But as this *species* is identical ontologically and semantically with the written word, it becomes difficult to distinguish it from material supposition, since it must count as an occurrence of the written word as well.

A hint at a solution can be found in the conclusion 15 of the q. 2, where Crathorn explicitly states that in the proposition "homo est species" the subject-term supposts for itself and not for something else (neither for all its occurrences, nor for its significates).[58] Crathorn affirms as

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57   For an overview of the debate and a clear cut solution, Cf. Panaccio and Perini-Santos 2004.

58   Crathorn 1988, q. 2, p. 165: "Decima quinta conclusio est quod in omni propositione vera, in qua subiectum supponit simpliciter, supponit pro seipso et non pro aliquo alio in illa propositione, sicut patet in ista propositione: 'homo est species' loquendo de praedicato logice, sicut Porphyrius loquitur de specie. Quod autem haec sit vera: 'homo est species' secundum quod subiectum supponit pro seipso, probo, quia hoc nomen 'species' est nomen intentionis secundae impositum ad significandum et supponendum pro pluribus differ-

a general rule that a term never has a simple supposition when it supposits for something else than itself.[59] At first sight, one would be inclined to think that this general rule only holds for mental propositions, as was the case in Ockham's theory. If not, then simple supposition does not correspond to the cases in which a term stands for the concept. But Crathorn never restricts this rule to mental language. In fact, he cannot do so, since mental terms must have the same supposition as spoken and written words in the corresponding propositions. How could he distinguish simple from material supposition? One may say that a spoken or a written term has a material supposition when it stands for all the occurrences of the term and not only for itself, but nowhere Crathorn does assume this. Another passage is even more confusing, because Crathorn explicitly asserts that the subject-term of the mental proposition "animal est genus" has a simple supposition and stands for itself, but he immediately adds that it can also supposit for the spoken word to which it is subordinated because they are equivalent.[60] Here, Crathorn is arguing against those realists who considered that a term has simple supposition when it stands for a common nature or for a real universal. According to him, there are only singular things, and in this kind of case a term stands for another term, which is predicable of a subject, and not for a thing. So it can stand for itself or for an equivalent term similar to it. Therefore, it could also be called *suppositio materialis*.

In question 8, dedicated to the proposition "Deus genuit Deum", Crathorn endeavours to expose and correct Aquinas's and Ockham's positions regarding this classical problem of Trinitarian logic. Indeed, the proposition "Deus genuit Deum" is difficult to examine from a

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entibus numero. Tale nomen est signum praedictae propositionis; igitur praedicta propositio potest verificari secundum quod subiectum propositionis potest supponere simpliciter et supponere pro seipso."

59   Crathorn 1988, q. 2, p. 165: "Et probo aliam partem conclusionis scilicet quod nunquam est suppositio simplex quando terminus subicitur vel supponitur pro alio (...). Quando subiectum in propositione stat pro aliquo alio, est suppositio personalis vel suponit personaliter, igitur non simpliciter."

60   Crathorn 1988, q. 2, p. 182: "Ad quartodecimum dicendum quod subiectum propositionis mentalis, quae correspondet isti: 'Animal est genus', supponit pro seipso et praedicatum pro subiecto, sicut in ista vocali 'Animal est <genus>'. Potest etiam supponere pro termino vocali, cuius est similitudo, qui quidem terminus vocalis est ita communis sicut terminus mentalis sibi correspondens et econverso; et ideo in propositione mentali affirmativa, quae correspondet isti vocali: 'Animal est genus', termini non supponunut pro rebus, que non sunt communes, sed tantum pro illis, que sunt communes et praedicabiles de multis, et ideo ratio, ut patet, accipit falsum."

logical point of view since it could be true if one means that the Father engenders the Son, but it could be false if one means the Son generates another person of the Trinity in God. Ockham's solution in the q. 4 of the distinction I of his *Ordinatio* consists in using the theory of *suppositio* and the distinction between concrete and abstract terms. In a proposition where the subject-term is a concrete term with a personal supposition, it can supposit personally for the subject of some form, as "white" supposits *in recto* for the white thing and *in obliquo* for the whiteness. The abstract term "whiteness" only supposits for whitenesses. The same is true for "Deus" and "Dei-tas", in such a way that "Deus" can supposit for one of the three persons depending on the context. In this text, Ockham seems to say that the use of words and a more general context help to clarify this kind of sentence.

In his own answer to this problem, Crathorn quotes Ockham's text verbatim and begins by accepting the main lines of the distinctions suggested in it. Nonetheless, he notes that his definition of the *suppositio simplex* must be modified. It is interesting since the *suppositio simplex* is not used in Ockham's argument, but is only mentioned when he explains the different modes of supposition. Crathorn repeats that a term has a *suppositio simplex* when it supposits for itself, and affirms that if a term stands for a concept, it cannot stand for something else than the similitude of the term in the mind. But, in this case, it is necessary to consider that it has a personal supposition since it supposits for something else than itself, i.e. for its similitude in the mind.[61] This attack on Ockham's theory seems to lead him towards certain nonsense, for either simple supposition is only possible in mental language, or Crathorn must abandon the idea that

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61   Crathorn, q. 8, p. 353-354: "In istis dictis aliqua continentur, quae non sunt vera. Primum est istud: suppositio simplex est etc., quia suppositio simplex est, quando terminus supponit pro seipso significative accepto, nec potest iste terminus 'homo' respectu illius praedicati 'species', ut est nomen secundae intentionis, in propositione vera supponere pro aliquo conceptu nisi vocando conceptum eundem vel consimilem vel verbum mentale alicuius termini consimilis vocalis. Sed si in ista vocali 'homo est species', subiectum supponat pro verbo mentali eiusdem subiecti, tunc in ista vocali 'homo est species' iste terminus 'homo' non supponit simpliciter sed personaliter pro illo termino [p. 354] mentali, prout ille terminus mentalis supponit vel natus est supponere personaliter. Similiter si iste terminus 'homo' supponeretur alicui alteri termino vocali, qui est species, ut isti termino 'asinus', tunc in ista 'homo est species', si intelligatur quod subiectum supponat pro isto termino 'asinus', non supponit simpliciter sed personaliter quia pro isto termino 'asinus' ut iste terminus natus est supponere personaliter. Et tunc esset intellectus istius propositionis 'homo est species', id est: iste terminus 'asinus' est species, id est signum impositum, ut possit supponere pro pluribus solo numero differentibus. Unde generaliter quando terminus non supponit pro se sed pro alio, est suppositio personalis."

simple supposition means that a term stands for the concept in a spoken or written proposition. Moreover, if a word in a spoken or written language supposits for itself, it would not be a case of material supposition, but of simple supposition. On the other hand, material supposition cannot be defined as the property of a term when it supposits for all of its occurrences, because in this case it would be a personal supposition according to Crathorn's criteria. A possible solution would consist in asserting that simple and material suppositions are one and the same semantical property. We talk of simple supposition for mental terms, whereas material supposition is restricted to spoken or written ones. The same semantical properties would be found in the three types of languages, but the distinction between material and simple supposition would disappear, and it would be no longer possible to analyze the difference between the two propositions "human is a name" and "human is a species".

Conclusion

We have tried to show that William Crathorn defended one of the most original philosophies of language in the fourteenth century. His main aim was to criticize the idea of a natural and universal mental language and to reduce the semantical properties of terms and propositions to conventional institutions. Human beings can share some natural representations limited to sensible qualities. Beyond those qualities, the other objects of knowledge are cognized through signs, propositions and syllogisms. We can think about God, matter, and the infinite without any clear and distinct representation of them in the mind. When we discover something by way of syllogisms, we can impose a name on this thing that will signify it directly. But we will never have natural and immediate evidence about the existence and nature of such objects. One has evident knowledge when he has or has had a direct acquaintance with the thing itself, and not when he cognizes something through mere signs, propositions and syllogisms. The reason for this is precisely that all the signs we use to think linguistically are conventional. All human beings equally equipped, with a normal sensitive power, imagination, memory and intellect, can form representations of the words we use in our different conventional languages, but only those who know that such and such a term signify this or that thing can have some clear and evident knowledge of those things. In order to know that a term T signifes X, one must be aware of the linguistic conventions in use in the community using this particular language.

The main problem we intended to underscore in this paper is that there is no real theory of the institution of the meaning of words in Crathorn, while this seems absolutely necessary for such a philosophy of language. We could say that it is not necessary to develop it in the context of a commentary on the *Sentences*, because the main problem Crathorn discussed was the limits of our natural knowledge and the possibility of knowing something about God. It is then enough to affirm that there is no natural mental language and that the major part of our cognition is based on human conventions. This does not mean that all our conventions are purely arbitrary, for we can decide to use many words to designate the things for which we have no clear and distinct representations, but which are logically deduced from what we cognize directly and intuitively. But we have raised a second problem: many parts of spoken and written conventional languages do not correspond to names or words that designate things. Syncategorems, copulas, quantifiers and all the necessary tools for the most basic sentences of a language, like predicative propositions, neither correspond to representations in the mind nor to things outside the mind. They should correspond to specific mental acts, but Crathorn's theory is unable to say what kinds of acts these are. Moreover, even for names, subjects and predicates, one should expect an explanation of the possibility of changing semantical properties in different propositional contexts. Again, such a conventionalism raises more problems than it solves. William Crathorn's original and provocative views on language are singular in the history of medieval philosophy, but clearly show how difficult the adoption of a purely conventionalist view on language for a fourteenth-century philosopher is.

RESUMO

Guilherme de Crathorn é bem conhecido por suas posições provocativas sobre vários importantes temas de filosofia e de teologia de seu tempo. O presente artigo aborda a teoria nominalista de Crathorn sobre a linguagem mental com o intuito de mostrar que ela se encaixa em sua teoria do conhecimento mais geral e sistemática, mas também que ela traz problemas que dizem respeito à natureza da predicação mental. Com efeito, contrariando Guilherme de Ockham, Crathorn afirma que não há uma linguem mental natural. Seres humanos podem possuir representações naturais, mas seus pensamentos linguísticos têm sempre um sentido convencional

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proveniente de linguagens convencionais. Após ter inventado palavras escritas e faladas em numa linguagem particular, a mente humana é capaz de formar algumas representações naturais dessas palavras. Mas essas representações não significam o que elas representam, mas o que é significado pelas palavras que elas represen-tam. Nós evidenciamos dois problemas fundamentais nessa teoria: 1) ela é incapaz de oferecer uma explicação coerente das diferenças entre os termos mentais que correspondem ao sujeito, à cópula e ao predicado; 2) ela não pode explicar como palavras podem estar por diferentes coisas em vários contextos proposicionais (a suppositio dos termos). De fato, Crathorn não pode manter a distinção entre suposição simples e material, isto é, as situa-ções nais quais um termos está por um conceitos ou por uma ocorrência material da palavra, como se dá com o termo-sujeito nas seguintes proposições: "cavalo é um conceito" e "cavalo é uma palavra".

Palavras-chave: Guilherme de Crathorn, Guilherme de Ockham, linguagem mental, predicação, nomi-nalismo, teoria da cognição, teoria da suposição.

ABSTRACT

William Crathorn is well known for his provocative views on many important philosophical and theological issues of his time. This paper focusses on Crathorn's nominalist theory of mental language, in order to show that it enters in his more general and systematic theory of knowledge, but also that it raises some problems concerning the nature of mental predication. Indeed, contrary to William of Ockham, he affirms that there is no natural mental language. Human beings may have natural representations, but their linguistic thoughts always have a conventional meaning coming from conventional languages. After having invented spoken and written words in a particular language, the human mind is able to form some natural representations of theses words. But these representations do not mean what they represent, but what is signified by the words they represent. We argue that there are two major problems with this theory: 1) it cannot give a coherent account of the differences between the mental terms corresponding to the subject, the copula and the predicate; 2) it cannot explain how words can stand for different things in various propositional contexts (the suppositio of terms). Indeed, Crathorn cannot maintain the distinction between material and simple supposition, i.e. the situations where a term stands for a concept or for an material occurrence of the word, such as the subject term in the following propositions: "horse is a concept" and "horse is a word".

Keywords: William Crathorn, William of Ockham, mental language, predication, nominalism, cognitive theory, supposition theory.

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