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# 14
# How ideal was Ockham's universal mental language?

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Linguistic universality was a rising trend from the 1960s onwards among contemporary philosophers of language and of mind. Noam Chomsky and Jerry Fodor were among the main champions in this trend as systematic philosophers. Historians of philosophy of the analytic bend quickly noticed that William Ockham's theory of mental language resembles in many ways what was then known as a fashionable trend. That is, there was a clear medieval predecessor in philosophy of language and of mind for what seemed to be a very promising research paradigm.

There is, of course, something very tempting in the hypothesis that all humans are somehow "hard wired" to learn to speak understandable languages. That is, understandable to other humans, and as far as we know, in some extent to many pets as well. Even historical documents, like stories of bishop Anskar travelling among the Vikings in the 850s, or captain Antão Gonçalves and his crew capturing black West African slaves in the 1440s appear to show that it does not take long before people apparently not sharing anything in terms of a language start to understand each other linguistically. Once you learn a language, it won't take long to learn other languages too. There must thus be something universal in learning a language.

I never contributed anything to the contemporary discussion, if we leave aside teaching at the university level. I did, however, join the work of making contemporary philosophers know about Ockham as an important medieval predecessor of the universal language hypothesis. One paper deserves special mention here. In the year 1999 Panu Raatikainen organized at the philosophy department of the University

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of Helsinki a colloquium with the title *Universaalikieli* (in English, "Universal Language"), and I gave a talk there. Raatikainen's introduction in the resulting book discusses an impressive array of historical philosophers ranging from Raymond Lullus and Gottfried Wilhelm Leibniz to Gottlob Frege and Bertrand Russell, and further to Noam Chomsky and Jerry Fodor. As Raatikainen describes, they all put forward differing kinds of hypothesis about a universal language. My paper in that book discusses Ockham's theory of mental language as a universal language.

Disregarding the possibility that the topic might be outdated now, I wish to take it up again here. In a certain sense, Ockham clearly thought of his theory of mental language as a theory of a universal language. His claim was that all intellectual beings – humans and angels – think in this language. It is a universally shared language of thought. He quite obviously also thought that mental language is ideal in some sense. For example, he claims almost at the beginning of *Summa logicae* (Ockham 1967, 13; I, 3) that mental language does not have anything to correspond to the distinction of gender which Latin has, but which has no effect on truth values.

The substantial question I pose in this paper is how exactly we should think of Ockham's mental language as ideal. Being ideal may appear to come quite necessarily with so absolute universality as Ockham was positing for his mental language. However, being ideal is a different thing from being universal. For example, Fodor apparently thought that his mental language is universally shared by all humans, but it is based on the modularity in how the human brain works and as such based on the logically contingent developments of how the human brain became to be what it is. It is not based on transcendent logical necessity of the Kantian kind.

Here I discuss the way and extent in which Ockham's theory of universal mental language was a theory of an ideal language. I think this is not only fruitful to understand the possible universal characters of human languages, but also for seeing how the contemporary philosophical scene affects how we approach history of philosophy. The purely historical issue is how exactly we should understand what William Ockham was doing in his theorizing on mental language, and this issue has not been solved – and probably never will. Discussion on Ockham's logical and linguistic theory has of course moved on, and thus my look could be described as a retrospective account of one particular discussion in the history of philosophy. I have structured the discussion historiographically, to follow the development of the contemporary research on Ockham's theory over the last half century.

One interesting part of the story of Ockham interpretation is that it was not affected very much by the still ongoing work of producing critically edited texts from medieval manuscripts. For Ockham's *Summa logicae*, which is the crucial source here, was critically edited already in 1967. Desire for a complete and reliable translation was left waiting then, but in this case the mainlines of the development of the interpretation cannot be explained by new sources coming forward. The Latin of *Summa Logicae* was easy enough so that the edition was sufficient for what philosophers needed.

I start with presenting Ockham's theory in the crude form in which it was discussed after the critical edition of *Summa logicae* was published. Then I introduce

the complications added to the interpretation as they became recognized. They effectively brought on a controversy on whether the crude form could be taken as a simplification or whether it misses the picture altogether. The development of interpretations of Ockham's theory of mental language is of course continuing still, but predicting future turns of the development is beyond my powers.

Soon after the critical edition of *Summa logicae* came out John Trentman published in *Mind* a seminal paper "Ockham on Mental" (Trentman 1970). In the ensuing discussion the cue for understanding Ockham's theory of mental language was taken from the way formality in modern logic was understood at the time. The idea is simple: there are categorematic terms which work as the material parts of sentences, and syncategorematic terms which express the formal structure. In relation to the question of ideality this approach results in claiming that Ockham maintained that humans think in a mental language that is roughly as ideal as standard predicate calculus with model theoretical semantics is. And at that time analytic philosophers took it to be quite ideal. Bertrand Russell's paper "On Denoting" published in *Mind* early in the century (1905) was much appreciated. The strategy it offered for philosophizing was to get beyond the ambiguities and other annoying features of spoken languages by finding the underlying logical structure that could be expressed by predicate calculus.

For the subpart of Ockham's mental language that is needed in basic Aristotelian syllogistic, the comparison between Ockham's mental language and predicate calculus of the 1970s works fairly well. Logical form seems to separate from the material parts of the language quite nicely. For example, the sentence 'every donkey is an animal' contains two categorematic terms, 'donkey' and 'animal', and two syncategorematic terms, 'every' and 'is'. Each of the four words have their correlates in the mental language. We can ignore the article 'an', since Latin does not use articles and there is no reason to suppose Ockham would have thought anything like it to be needed in mental language. It indeed exemplifies nicely how spoken language compromises ideality. Because of the syncategorematic terms – the universal quantifier 'every' and the copula 'is' – the sentence is evaluated from the formal viewpoint as a universal affirmative predication, and because of the categorematic terms, it is about donkeys and animals.

As a nominalist, Ockham thought that the world consists of individuals and nothing more. Furthermore, he unambiguously thought that even when it is true to attribute a relation, there is no third individual to connect the related things. Equally, quantities are nothing apart or in addition to the things that have the quantity. Also, states of affairs are not existing things. Only individual substances (for example, donkeys) and their individual qualities (for example, colors of the donkeys) exist. This kind of world appears very suitable to be described with a simple ideal language having categorematic terms to determine which individuals are spoken of and syncategorematic terms to specify what is said about them.

If given such a straightforward interpretation, Ockham's mental language will have a simple theory of truth. The function of categorematic terms is to refer

to (in Ockham's terminology, to 'supposit for') individuals in the world, and the syncategorematic terms tell what exactly is claimed about those individuals. The semantics of such sentences could thus work with only one type of language–world relation: supposition. Alone, an absolute term signifies individuals, and in the sentential context this signification yields supposition for the terms. Thus, a simple sentence like 'a donkey is an animal' claims because of its syncategorematic terms sameness of the thing supposited by 'donkey' and the thing supposited by 'animal'. In other words, it will be true if and only if 'donkey' supposits for the same thing as 'animal'. This appears to be so if 'donkey' signifies donkeys and 'animal' signifies animals - and there exists at least one donkey available for supposition. With more syncategorematic terms, the logical structure becomes more complex, but the core idea remains derivable from sameness of supposition for affirmative sentences and difference of supposition for negative sentences.

For a more complex example, in the sentence 'Every donkey is an animal' the subject term 'donkey' has, in Ockham's Latin, *suppositio confusa et distributiva* ("confused and distributed supposition"), or supposits for all of the donkeys in a special conjunctive manner so that in order for the whole sentence to be true all the related singular predications must be true. That is, it must be so that it is true about each donkey to say that it is an animal, although all the donkeys together are not an individual animal. Also, the syncategorematic terms put the term 'animal' in the predicate position of a universal predication, and thus it supposits for the individuals that it signifies, but in a disjunctive manner that Ockham calls in Latin *confusa tantum* ("merely confused"). The sentence is true, because each thing supposited in this regularized manner by 'donkey' is identical with one or another of the things thus supposited by 'animal'.

The core hypothesis tested in the scholarly discussion was the assumption that Ockham thought of mental language as providing the logical form of any expression in an explicit manner. It seems clear that the theory works in the way described above for simple predications of standard Aristotelian syllogistic, but can it be expanded to cover everything that can be said in human languages? If Ockham was right that all spoken sentences have their mental correlates, one would thus need to ascertain that all mental sentences are in fact logical constructs of simple Aristotelian predications. But did Ockham think so?

In the early stages of the interpretative discussion after the critical edition of Ockham*'s Summa Logicae* was published it was thought that Ockham was indeed thinking that the mental correlates of spoken sentences do resemble formalizations. In the spirit of Russell's "On Denoting", Ockham's mental language was thus understood as an approach to analyze the perhaps misleading structures of spoken language. The ambiguities, synonymies, and opacities commonly found in spoken languages would be absent from the mental language. In this sense, mental language was looked at as being ideal in the same way as predicate calculus. Rendering a spoken sentence to mental language would make its logical form transparently visible. Also,

having a clear and simple theory truth would make assignment of truth values very straightforward (if the world is known in the relevant respects).

Ockham claims mental language to be natural. It was clear already in 1970s that Ockham's understanding of 'natural' in this context was the opposite of how modern logicians speak. Predicate calculus is called artificial and English natural. That Ockham calls mental language natural means that it is shared naturally by all intellectual beings, while spoken languages are artificial, or constructed by human language users differently in different contexts. From this viewpoint, Noam Chomsky's program of generative grammar and especially Jerry Fodor's hypothesis of language of thought forcefully defended in the monograph *The Language of Thought* (1975) provided clear twentieth century analogues to what Ockham theory was taken to be. Chomsky and Fodor too claimed that the fundaments of language are beyond human control as innate structures of the mind (or brain).

Considerable amount of scholarly discussion went into figuring out whether Ockham thought syncategorematic terms to be innate (like Chomskyan grammar) or somehow learnt. This discussion was more or less abandoned, since it was found out when more texts were published in critical editions in addition to *Summa Logicae* that Ockham himself was wavering on the topic. This was thus a clear difference from the modern theories of Chomskyan vein, but not really a very significant one. The issue was simply that Ockham did not manage to complete his theory. To some of us philosophers it happens that we get involved in political interests or other endeavors of human life, and do not find the time to solve all issues opening in our theories. As is well known, Ockham got called to the Pope's curia in 1324, was living tumultuous years after that, and in the end had to escape in the darkness of night to avoid imprisonment. After having found safety at the emperor's court, he turned to political philosophy. He never returned to his proper studies and never received his doctorate.

A theoretical difference in another direction is related to Fodor's position that many or perhaps even all concepts are innate. As an extreme example, the concept 'carburetor' has got stuck in the discussions concerning Fodor's theory, since it is quite difficult to believe that evolution has produced an innate capacity to think of carburetors. Ockham for his part claimed that there are no innate categorematic terms. All concepts are acquired. He had a relatively clear theory of how we learn basic categorematic vocabulary of mental language. The most basic categorematic terms (which he called absolute terms) are learnt when encountering a significate or significates of the term. Encountering a lion, for example, any human or angelic mind will have an act of understanding or thinking about a lion, and this act yields the capability to repeat another similar act of understanding later. That is, after learning the concept we can think about lions whenever we like. Ockham spells out this capability as acquiring the mental word 'lion' to one's mental vocabulary by encountering a lion.

For Fodor, the problem was of course more complex because he could not rely on basic Aristotelian metaphysics of natural kinds, and in the way suggested by Ockham

one can learn only the vocabulary for natural kinds. For Ockham, complications result from the fact that spoken human languages contain vast amounts of vocabulary that does not refer to entities that could be encountered in such a straightforward way as lions. Carburetor is one example of such a thing. It is not an Aristotelian natural kind. Not all carburetors look the same and it may be difficult to distinguish one by the looks of it. Here, though, Ockham has a clear solution. According to his account, artifacts are always signified by words that have a complex structure of meaning containing at least as a part signification of the function of the artifact. Such words are essentially complex. He calls them 'connotative terms' to distinguish them from what he calls 'absolute terms', which always signify in simple and equal manner whatever they signify. Connotative terms have nominal definitions which signify in an obviously complex manner everything that the term itself signifies in a possibly opaque manner. For example, 'saw' is nominally defined as 'metal thing with teeth used for cutting wood'. This definition makes it obvious that the term 'saw' signifies not only the metal teeth but also the human action of cutting wood. And primarily in its uses it of course means the whole tool as a tool.

Now, does mental language contain connotative terms that have such a complex structure in their signification? Interpreting Ockham's theory of mental language as a theory of an ideal universal language would suggest that there should be no connotative terms. Such terms are too messy for an ideal language. In an ideal language, each simple term signifies what it signifies in a simple and straightforward manner. In Ockham's mental language, that seems to be so for absolute terms signifying natural kinds, like 'lion'. But actual spoken languages contain vast vocabularies or terms of other types, in Ockham's terminology connotative terms.

The scholarly discussion soon noticed that Ockham makes the distinction between absolute and connotative terms in a chapter of his *Summa logicae* that belongs to the section describing the terms of mental language (Ockham 1967, 35–38; I, 10). This would not make sense if there were no connotative terms in mental language. So, the answer must be positive. There are mental connotative terms. 'Saw' may be a term in mental language and not only in English and some other spoken languages. For some time, the mainstream opinion appeared to be that connotative terms are like shorthand for their nominal definitions. That did not quite seem to work. So perhaps their analysis is in some other manner obvious? I myself suggested in a paper published 1997 that mental sentences with connotative terms need not be analyzed in a linear manner term by term, but that the sentences break into several sentences in the manner described by the medieval theory of *expositio*.

But let that be as it may. By thinking of Ockham's theory of language more from a semiotic angle, the Québécois philosopher Claude Panaccio, who had a bit more background in French philosophy, saw the theory of connotative terms differently. He claimed that mental language contains irreducible connotative terms which have one or more secondary significations despite being simple (cf. eg. Panaccio 1992, esp. 40–45). He encountered much skepticism among scholars who were approaching the problem with the hypothesis that Ockham aimed his theory of mental language

as a theory of an ideal logical language comparable to the predicate calculus. For simple connotative terms of the kind Panaccio envisaged could not be acquired in the way Ockham tells us to acquire absolute terms. Also, the theory of truth as terms supporting for the same fails to give a complete account of truth in any proposition where there is a simple connotative term. And to put it simply, having simple terms that have complex signification just does not sound ideal.

One of the leading early discussants, Paul Spade, addresses the interpretative problem quite extensively in his article 'William of Ockham' in the *Stanford Encyclopedia of Philosophy* (2002, revised 2024). He describes the main insight that he defended against Panaccio as follows: "On this interpretation, if anything can be truly said about the world, it can be said *only* using absolute and syncategorematic terms in mental language." That is, anything that could be said about the world can be said without connotative terms. That would make simple connotative terms superfluous and indeed Panaccio's position superfluous. Connotative terms would simply not be needed. Whatever way they are explained away, the expressive power of mental language would remain the same. But this is not how Panaccio understands Ockham. He does not think in any manner differently about Ockham's nominalist metaphysics, but he thinks that connotative terms are needed because we can make importantly true claims about the world even when there is nothing in the world to make them true, and that there is no way to make exactly these claims without connotative terms.

Let us take the simplest possible example, the term 'white' (*albus*). For Ockham, whitenesses are existing individual qualities (comparable to tropes as spoken of in metaphysics nowadays) and 'whiteness' (*albedo*) is an absolute term. But 'white' is connotative. It primarily signifies the thing having whiteness, and secondarily the whiteness. The nominal definition of 'white' is according to Ockham 'a thing having whiteness'. Ockham uses often the example 'Socrates is white'. The sentence can be called true because the terms 'Socrates' and 'white' supposit for the same, namely Socrates. But the complexity arises because the connotative term 'white' signifies whiteness too and could not supposit for Socrates if he did not have any whiteness as a separately existing quality. In order to arrive to the sameness of supposition we must take into account also the quality of whiteness inhering in Socrates. Thus, two separate real individuals (Socrates as a substance, and whiteness as a quality) are involved as truth makers although only one of them is supposited for. That is, sameness of supposition does not give a full account of truth.

But how exactly is the whiteness involved? It is not enough for the truth of 'Socrates is white' that the individual substance Socrates exists and the individual quality of whiteness exists. The relevant individual whiteness must also inhere in Socrates rather than for example Plato. As Ockham spells out the requirement, it can be formulated as a three-part conjunction 'Socrates exists, whiteness exists, and whiteness inheres in Socrates'. According to Ockham, this conjunction is equivalent with 'Socrates is white'. With some assembly work the truth of the two first conjuncts can be spelled out as sameness of supposition ('Socrates exists' is equivalent to

'Socrates is a being'), but the third one cannot. Indeed, according to Ockham 'whiteness inheres in Socrates' has two terms which supposit for different things, and a verb joining them. Thus, sameness of supposition does not work as a criterion of truth for that conjunct, and of course is not then a satisfactory theory of truth for it.

Ockham seems to be at least almost ready to admit that 'inheres' is a syncategorematic term in the same vein as 'is'. This would solve the problem partly for this simple example, although I expect logicians' eyebrows rise at the suggestion. The claim could then be understood as containing only absolute and syncategorematic terms, as Spade's interpretative statement puts it. But truth conditions would still not be reduced to sameness of supposition. Furthermore, there are more complex examples. In his recent Oxford UP monograph *Ockham's Nominalism*, Panaccio uses the sentence 'Mary is a mother' as an example (Panaccio 2023, 122), and that surely picks out a relation that is not syncategorematic.

In Panaccio's account, Ockham sticks to sameness of supposition as the sole criterion of truth in the sense that truth of any sentence depends on sameness of supposition (or suitable logical derivative of the principle). 'Mary is a mother' is true if and only if 'Mary' and 'mother' supposit for the same thing in the sentence. The complexity is in his view at the significations of these terms. For this reason, Panaccio apparently thinks that Ockham was not presenting a theory of an ideal language. Indeed, Panaccio appears to take quite explicitly the stance that Ockham was not even trying to build a theory of an ideal language. Panaccio seems to think that nominalist metaphysics was primary for Ockham, and thus revising metaphysics to achieve a semantically ideal theory of language was not acceptable.

For Ockham as described by Panaccio, supposition builds upon a complex structure of signification of the connotative term. Thus, 'mother' signifies a female individual having at least one child. As one could say, it signifies primarily and thus typically supposits for the thing that has a child, but the supposition is really due to the secondary signification, which requires a child. Crucially, it requires a special relation between the female individual and the younger individual, and that relation cannot according to Ockham exist as a thing. In case of complex relations, the situation becomes complex because of a plurality of complex secondary significations, but Ockham's metaphysics cannot yield a status for everything signified secondarily.

Perhaps Ockham would have given up what has been called the 'truthmaker principle', if he knew about it (Cf. Panaccio 2023, esp. 49-51). In Ockham's metaphysics, there cannot be enough truthmakers to make 'Mary is a mother' or even the simple sentence 'Socrates is white' true. The truth of these sentences depends on at least two things. The relevant things are Mary and a child, or Socrates and a whiteness. Both, respectively, must exist for the sentence to be true. In that sense, we might call them partial truthmakers. But their existence is not enough, since the sentence really claims also that the child is Mary's or that whiteness inheres in Socrates. And motherhood and inherence are relations, and according to Ockham relations do not exist, they are not things. For Ockham, states of affairs were not existent things either, although soon after Ockham some philosophers changed course and suggested metaphysical

existence for what they called *complexe significabile* (cf. eg. Gál 1977). Non-existents cannot be truthmakers, and thus there cannot be enough truthmakers to explain the truth of these sentences.

In the warm summer 2024 of the Italian city of Parma, at the XXIV European Symposium in Medieval Logic and Semantics with the title "Truth, Falsity, and Lying", I myself with Teemu Tauriainen and independently Milo Crimi turned out to have decided to talk about Ockham's criteria of truth for Latin sentences with terms in cases other than the nominative. For these sentences, Ockham is clear that sameness of supposition does not work as a criterion to truth. A prime example is the use of a genitive case used as expressing possession. The sentence 'this donkey is Plato's' requires, according to Ockham, that a donkey exists, that Plato exists, and that Plato owns the donkey. Ownership requires in Ockham's view that the owner and the object owned are not identical. As a good Franciscan, he rejected self-ownership. Thus, 'donkey' and 'Plato' must supposit for different things in this affirmative sentence for it to be true. However, this does not really give any criterion for truth, since Plato won't own everything other than himself, but only what he actually does own. Sameness of (or difference of) supposition is thus practically irrelevant to the truth of the sentence. Given that it is not at all difficult to find further examples in a wide variety of directions, we must judge that Ockham provides no clearcut criteria for truth for many or even most sentences, and Ockham appears to take that as no problem whatsoever.

It seems that I and Crimi would both agree with Panaccio's most important result in this respect and admit that Ockham thought that there aren't sufficient truthmakers for all true sentences. But more crucially for the purposes of this paper, it seems that the most recent work in Ockham's semantics has left behind the conception that Ockham's theory of mental language would be a theory of an ideal language. Ockham accepts serious complexities with open eyes without showing any sign of regret. Recent scholarship seems to have shown that quite clearly.

So, is Ockham's theory of mental language a theory of an ideal and universal language? It seems that there has not been serious questioning of the universality in the scholarship even though Ockham is clear about a relevant learning process. In his view, most intellectual beings only know a part of the vocabulary of the language, because they are familiar with only a part of the world. Thus, there may be intellectual beings who do not understand any given sentence of the language: Ockham even posits that as a limitation in angelic communication. In this sense, the language is not universal. But for all intellectual beings, the significations of the words that they do share are the same. And in this sense, the language is universal in his view.

At present, it seems that scholarly consensus appears to have come to accept that Ockham did not intend his theory of a mental language as a theory of an ideal language. There are indubitable aspects of ideality. As already mentioned, mental language does not contain certain aspects of spoken languages that are less than ideal. There is no gender in Ockham's mental language, for instance. As a general principle, he claims that there is nothing that has no effect on truth values. But we

have encountered other dimensions in which ideality is lacking. At least a subpart of connotative terms appears to be irreducible in such a way that their signification and behavior in sentences is not ideal. This is related to Ockham's open-eyed admittance of swaths of mental language that have no adequate theory of truth.

Problems with the 1970s insight that Ockham's theory of mental language aims at ideality and not only at universality could have in itself been sufficient to shift the focus in Ockham research from logically formal aspects of mental language towards metaphysical issues and issues related to the concept of truth. Such a shift has clearly happened. But it might also be that this shift is a result of what has happened in the scene of contemporary analytic philosophy. As the situation is now, there are few defenders of the view that a simple, logically ideal language could have enough expressive power for everything true.

Ockham's actual position in our contemporary questions is hard to decide mainly because he did not pose the exact questions that we now do. There are of course genuine problems of understanding the texts as well. No philosopher has managed to write in an ideal and universal language, not even Ockham. I think that we can nevertheless conclude that Ockham either was not optimistic about a theory of ideal and universal language, or maybe he did not even try to achieve anything like that.

So, what was Ockham trying to do in constructing a theory of mental language? Why did he adopt such a theory as the starting point in his course book in logic, *Summa logicae*? What did he actually think about the relations between language and metaphysics? I think that such questions are at the core of what we do as historians of philosophy, but they are not possible to put in any manner that would avoid all anachronism. "Mental language" does not mean for us the same as "*oratio mentalis*" meant for Ockham. Even "logic" means different things for us than "*logica*" meant for Ockham.

We can and must translate old philosophical texts, and we can and must interpret them from our viewpoints. But we cannot expect the exact theories we have at our contemporary scene to have occurred centuries earlier. At most, there are interesting similarities, but similarity is always a matter of vantage point. Or in other words, similarity is just a similarity, and as such it does not exclude differences. Scholars did find interesting similarities in Ockham when Chomsky and Fodor had success in claiming universality in human and mental languages. But as the success of the latter waned, it was realized that Ockham's idea wasn't quite the same either. It may be so for all history of philosophy. Questions change. Thus, every generation must find its own answers to what exactly the past philosophers were trying to do. It is best to find them in a way that is helpful to one's own contemporaries rather than trying to uncover some eternal philosophical truths.

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