**Putting Skeptics in Their Place vs. Stopping Them in Their Tracks:
Two Anti-skeptical Strategies**

0. Introduction: putting skeptics in their place vs. stopping them in their tracks

For reasons that I hope will soon become clear, I would like to begin this paper with somewhat irresponsibly entertaining the idea that my esteemed friend and colleague, John Greco, is a philosophical descendant of John Buridan, *via* the Scottish common sense philosopher Thomas Reid and his Cambridge-descendant, G. E. Moore. In these musings, I will confine myself to establishing a sufficiently intriguing *family resemblance*, without exploring the *historically* more intriguing actual *genealogical ties* (although John Greco himself quite conveniently pointed out the important connections between Moore's, Reid's and his own epistemology). But in this paper I will rather be after certain *philosophically* intriguing connections, for which showing the *family resemblance* of their characteristic principles, methods, and conclusions will suffice. As I will try to show, given their common, typical approach, these philosophers are all committed to handling skeptics, as John Greco put it, by "putting them in their place". I believe that the philosophical importance of this approach is that it is justified, and works in its own way, *only after* already significant concessions have been made to the skeptics. After all, you need to put them in their place, *only* if they are already cavorting all over the place. But, as I will also try show, this approach of "putting skeptics in their place", could in principle be replaced by a much more effective policy of "stopping them in their tracks" in the first place. In fact, I will argue that the "putting-them-in-their-place" policy historically became necessitated only after the (mostly implicit) "stopping-them-in-their-tracks" policy came to be discarded, on account of the allegedly unacceptable ontological commitments it carried.

Therefore, the plan for this paper is as follows. In the first section I will try to identify those common epistemological and methodological principles at work in Buridan, Reid, Moore and Greco which, so I shall argue, these authors all rely on in their efforts to "put skeptics in their place". In the second section I will elaborate on the issue of exactly how Buridan uses these principles in meeting contemporary skeptical challenges. In the third section I will compare Buridan's anti-skeptical strategy with what I take to be the earlier (mostly implicit) strategy, embedded, as it were, in a broader metaphysical framework that "automatically stopped skeptics in their tracks". This comparison will then enable us in the concluding section to draw some general conclusions concerning the relationships between epistemology and metaphysics.

1. The principles needed for "putting skeptics in their place"

In my earlier investigations into Buridan's anti-skepticism,[1] I identified four principles that Buridan regularly relies on when he addresses skeptical challenges. Of these four, the

[1] Klima, G., "The Essentialist Nominalism of John Buridan", *The Review of Metaphysics*, 58(2005), pp. 301-315; Klima, G., "John Buridan on the Acquisition of Simple Substantial Concepts", in *John Buridan and Beyond: Topics in the Language Sciences 1300-1700*, eds. R. L. Friedmann – S. Ebbesen, Copenhagen: The Royal Danish Academy of Sciences and Letters, 2004, pp. 17-32.

first two principles, which I dubbed "the principle of the activity of the intellect" and "the principle of substantial content of sensory information", respectively, serve as the underpinnings of Buridan's essentialism in his epistemology, which, in turn, is the foundation of his theory of induction or valid scientific generalization.

The systematic significance of these principles in Buridan's philosophy is that they enable him to endorse a credible empiricist account of valid scientific generalizations, consistent with his nominalist ontology and semantics.[2] For, in the first place, on the basis of the principle of the activity of the intellect, he can claim that the intellect is capable of extracting content from sensory information carried by the senses that the senses are unable to extract from this information (just like a spectrometer is capable of extracting content from the optical information carried by a telescope that is not extractible from this information by the telescope on its own). On the other hand, on the basis of the principle of substantial content of sensory information, Buridan is able to claim that the sensory information carried by the senses *does* contain content about substances, even if the senses *per se* can only perceive their sensible qualities. Thus, since the senses do carry this substantial content, and the intellect is able to extract it in the form of its substantial concepts, the terms subordinated to these concepts will be true essential predicates of the substances that these concepts naturally represent. But once we have essential predicates, we do have valid generalizations, for such terms *necessarily* apply to *all* individuals that fall under them as long as these individuals exist. As can be seen, this account is provided in purely empiricist and nominalistic terms, without any need to invoke either any sort of "extra-sensory" input (whether in the form of pre-natal, innate, or infused ideas or some form of divine illumination) or any sort of universal entities or quasi-entities objectively existing in our minds as the direct, immediate objects of our intellective acts.

These principles, therefore, allow at least the *general possibility* of valid scientific generalizations, and thereby reliable scientific knowledge, *within* a broadly empiricist, nominalist framework. But they do not provide us with any *specific grounds for the reliability* of any *particular* scientific generalization, which is to be based on *reliable empirical sources*. This is the task of the other two principles I identified in my earlier work.[3]

The "principle of primacy and multiplicity of scientific principles" advances the idea that scientific demonstrations rely on principles that are themselves indemonstrable, and that, since in any demonstration the premises outnumber the conclusions, there are at least as many such principles as there are conclusions. Indeed, since there are infinitely many

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[2] Although, as I have also argued in "The Essentialist Nominalism of John Buridan", the abstractionism required by this account in Buridan's cognitive psychology is committed to attributing a representative function to substantial concepts that he denies to them in his semantics.

[3] In particular, in Klima, G., "Tracing the *Via Buridani* in Scotland", unpublished paper presented at the meeting *From Medieval to Early Modem Thought: The Historical Routes of Transmission*, June 6-8, 2002, *Catholic University of Nijmegen*, the Netherlands, available online:
http://www.fordham.edu/gsas/phil/klima/FILES/Nijmegen-Rome/The%20via%20Buridani%20in%20Scotland.doc

scientific conclusions, from this Buridan can conclude that there have to be infinitely many scientific principles as well.[4]

But how can we be certain about these principles, if they are not demonstrable? If they are self-evident, does this mean that their denial would be contradictory? This is certainly not the case for Buridan. The principle I dubbed the "principle of gradation of the certainty of scientific principles" stipulates that the infinity of scientific principles needed for scientific demonstrations come in various degrees of certainty, depending on their subject matter, generality, and confirmation in our experience. As Buridan states,

> (1) … the evident cognition of principles is neither innate to us (2) nor is it acquired by teaching in the strict sense, (3) but it is acquired by the intellect's natural inclination to assent to them, along with the previous assistance of the senses, memory, or experience. (4) For some principles become evident to our intellect by the nature of the intellect only on the basis of previous sensation, but some on the basis of previous sensation and memory without experience, and some on the basis of memory and experience. (5) And some of these principles are singular propositions, some common; and of the ones that are common, some are particular or indefinite, and some are universal. (6) And the singular ones are manifest from experience by example, the particular or indefinite ones by the abstraction of a common concept from the singular concept, and the universal ones by induction.[5]

Thus, when Buridan explicitly discusses the various degrees of certainty we can have for our various sorts of first principles, he lists without hesitation among the first principles of scientific demonstration ordinary judgments of perception, such as 'This piece of coal is hot' or 'This donkey is eating'.[6]

It is at this point that I believe it will be instructive to observe the "family resemblance"' between these principles of Buridan's epistemology and those approvingly identified by John Greco in Reid. As John Greco writes:

> Reid's theory of evidence may be described as a moderate and broad foundationalism. The theory is "moderate" in the sense that Reid does not require infallibility for knowledge. Neither does he require indefeasibility or irrevisability, or some other high-powered epistemic property. It is "broad" in the sense that Reid allows a wide variety of sources of both foundational and nonfoundational knowledge. For Reid, introspective

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[4] "(1) There is, however, no one single first and indemonstrable principle, but several. (2) Indeed, there are not many more demonstrable conclusions than there are indemonstrable principles. (3) Therefore, there are infinitely many such principles, for there are infinitely many demonstrable conclusions." – "(1) Non est autem unicum primum principium et indemonstrabile, sed sunt plura. (2) Immo non sunt conclusiones demonstrabiles multo plures quam principia indemonstrabilia. (3) Ideo infinita sunt talia principia, quia infinitae sunt **[T84vb]** conclusiones demonstrabiles." John Buridan, *Summulae de Dialectica*, an annotated translation with a philosophical introduction by Gyula Klima; New Haven: Yale University Press, 2001 (Henceforth: SD) 8.5.2, p. 712.

[5] "(1) Evidens ergo notitia principiorum nec est nobis innata (2) nec per doctrinam proprie dictam acquisita, **[E109va]** (3) sed per naturalem intellectus inclinationem ad assentiendum eis, cum ministerio tamen praevio sensus, memoriae vel experientiae. (4) Fiunt enim quaedam principia intellectui nostro evidentia per naturam intellectus, praevia sensatione solum, quaedam autem, praevia sensatione et memoria, sine experientia, et quaedam praevia sensatione, memoria et experientia. (5) Et sunt horum principiorum quaedam propositiones singulares, quaedam communes; et communium quaedam particulares vel indefinitae, et quaedam universales. (6) Et sunt singulares ex experientia manifestae per exemplum, et particulares vel indefinitae per abstractionem conceptus communis a conceptu singulari, et universalis per inductionem." SD 8.5.4, p. 720.

[6] SD, p. 723, p. 719.

consciousness, perception, memory, testimony, deductive reasoning, and inductive reasoning are all sources of evidence and knowledge.[7]

In particular, this means that, just like Buridan, Reid explicitly denies that there could be just one first principle, say, the principle of non-contradiction, and that he is operating with the idea that different principles come with different degrees of certainty, along with the unabashed affirmation of the *natural reliability* of the cognitive sources from which these principles derive.

Thus, in his first move against the skeptic, Reid consistently points to the variety and natural reliability of our cognitive resources, as opposed to the skeptic's narrow conception of evidence, demanding a proof of everything. As Reid remarks:

> Reason, says the sceptic, is the only judge of truth, and you ought to throw off every opinion and every belief that is not grounded on reason. Why, Sir, should I believe the faculty of reason more than that of perception; they came both out of the same shop, and were made by the same artist; and if he puts one piece of false ware into my hands, what should hinder him from putting another? (IHM VI.xx: 169)[8]

In the second place, Reid would point to the different degrees of certainty one can obtain from these different sources. Again, as Reid put it with regard to the different sorts of evidence stemming from these different sources:

> They seem to me to agree only in this, that they are all fitted by Nature to produce belief in the human mind, some of them in the highest degree, which we call certainty, others in various degrees according to circumstances. (EIP II.xx: 229)[9]

Thus, on John Greco's analysis, Reid's epistemic principles can be characterized as amounting to a

> "proper function" faculty reliabilism. According to Reid, our cognitive faculties give us knowledge so long as they are part of our natural constitution and "not fallacious." Put another way, knowledge arises from the proper functioning of our natural, nonfallacious (i.e., reliable) cognitive faculties.[10]

John Greco finds similar ideas at work in G. E. Moore's famous "proof of an external world",[11] which he also happily embraces in his book, characteristically titled "Putting Skeptics in Their Place".[12]

2. How are these principles supposed to work?

So, how is the procedure of "putting skeptics in their place" supposed to work on the basis of these reliabilist principles?

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[7] Greco, J., "Reid's Reply to the Skeptic," in *The Cambridge Companion to Reid*, Terence Cuneo and René van Woudenberg, eds., Cambridge: Cambridge University Press, 2004, pp. 134-155; p. 148.

[8] Ibid. p. 149.

[9] Ibid. p. 150.

[10] Ibid. p. 150.

[11] Greco, J., "How to Reid Moore," *Philosophical Quarterly* 52, 209 (2002), pp. 544-563. Reprinted in *The Philosophy of Thomas Reid*, John Haldane and Stephen Read, eds., Oxford: Blackwell, 2003.

[12] Greco, J., *Putting Skeptics in Their Place: The Nature of Skeptical Arguments and Their Role in Philosophical Inquiry*, Cambridge: Cambridge University Press, 2000.

The skeptical doubts these authors are all addressing primarily concern the possibility of our knowledge of an external reality. Their respective skeptical opponents have no doubts about the certainty of self-awareness. Nor do they doubt the validity of the principle of non-contradiction or anything directly reducible to that principle. Their basis for doubts about external reality is *the impossibility of a valid inference* from known facts of self-awareness to the existence of any corresponding external object. John Greco reconstructs the corresponding skeptical argument, which he dubs the "No Good Inference" (NGI) argument, in the following way:

> 1. All knowledge is either immediate (not inferred from evidence) or mediate (inferred from immediate knowledge that serves as its evidence).
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> 2. All immediate knowledge is about our ideas or sensations.
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> Therefore,
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> 3. If we are to have knowledge of external objects, it must be by means of an adequate inference from knowledge of our ideas and sensations. (1,2)
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> 4. But there is no adequate inference from knowledge of our ideas and sensations to our beliefs about external objects.
>
> Therefore,
>
> We can have no knowledge of external objects.[13]

The importance of this argument, as John Greco correctly observes, is that it does not depend on the representationalism of the theory of ideas that Reid attacks (which is the reason for the disjunctive formulation of premise 2 in terms of "ideas or sensation"). For regardless of whether we take ideas to be our cognitive acts themselves or their direct objects, a distinction Reid carefully draws at one point,[14] the "No Good Inference" argument applies. Therefore, despite popular belief to the contrary, which may well have originated with Reid,[15] skepticism concerning the knowability of external reality is *not* necessarily tied to the contrast between "representationalism" and "direct realism".[16]

In fact, when George Berkley presents the argument, he makes a point of formulating it in such a way that renders it independent from the particular theory of ideas he advocates:

> But, though it were possible that solid, figured, movable substances may exist without the mind, corresponding to the ideas we have of bodies, yet how is it possible for us to know

[13] Greco, J., "Reid's Reply to the Skeptic," in *The Cambridge Companion to Reid*, Terence Cuneo and René van Woudenberg, eds., Cambridge: Cambridge University Press, 2004, pp. 134-155; p. 143.

[14] "To prevent mistakes, the reader must again be reminded, that if by ideas are meant only the acts or operations of our minds in perceiving, remembering, or imagining objects, I am far from calling in question the existence of those acts; we are conscious of them every day and every hour of our life. . . . The ideas, of whose existence I require the proof, are not the operations of any mind, but the supposed objects of those operations. They are not perception, remembrance, or conception, but things that are said to be perceived, or remembered, or imagined." (EIP ll.xiv: 171)

[15] John Greco very carefully points out that Reid quite mistakenly believed that the theory of ideas was both a necessary and a sufficient condition for the emergence of this type of skepticism, and thus incorrectly believed that getting rid of this theory at once eliminates skepticism. Greco, J., "Reid's Reply to the Skeptic," in *The Cambridge Companion to Reid*, Terence Cuneo and René van Woudenberg, eds., Cambridge: Cambridge University Press, 2004, pp. 134-155; p. 142.

[16] See the exchange I had with Bob Pasnau on Aquinas' doctrine of "the identity of the knower and the known" at the 1996 APA convention in Chicago, posted on my web site: http://www.fordham.edu/gsas/phil/klima/APAPasnau.htm; http://www.fordham.edu/gsas/phil/klima/APA.htm

this? Either we must know it by sense or by reason. As for our senses, by them *we have the knowledge only of our sensations, ideas, or those things that are immediately perceived by sense, call them what you will* [note the disjunctive formulation again! – GK]: but they do not inform us that things exist without the mind, or unperceived, like to those which are perceived. This the materialists themselves acknowledge. It remains therefore that if we have any knowledge at all of external things, it must be by reason, inferring their existence from what is immediately perceived by sense. But what reason can induce us to believe the existence of bodies without the mind, from what we perceive, since the very patrons of Matter themselves do not pretend there is any necessary connexion betwixt them and our ideas? I say it is granted on all hands (and what happens in dreams, phrensies, and the like, puts it beyond dispute) that *it is possible we might be affected with all the ideas we have now, though there were no bodies existing without resembling them.* Hence, it is evident the supposition of external bodies is not necessary for the producing [of] our ideas; since it is granted they are produced sometimes, and might possibly be produced always in the same order we see them in at present without their concurrence.[17]

So, from the point of view of this argument, it does not matter at all whether its "background theory" assumes any putative intermediaries between our cognitive acts and their (ultimate) objects: what matters simply is that the relationship between these acts (or their necessary immediate objects) and their (ultimate) objects is logically contingent, for that is precisely what renders the inference from the existence of the act to the existence of the (ultimate) object invalid.

Indeed, this point was brought out most clearly already by Nicholas of Autrecourt's version of the argument in his famous (or infamous, if you will) First Letter to Bernard of Arezzo:

> … in a certain report of the lectures that you have delivered in the school of the Friars Minor and released as authentic to whomever wished to have it, I read the following propositions. The first (which is set forth by you in your commentary on the first Book of the Sentences, dist. 3, q. 4) is this: (1) Clear intuitive cognition is that by which we judge a thing to be, whether it is or is not. Your second proposition (which is laid down in the place mentioned above) runs as follows: (2) The inference 'The object is not; therefore it is not seen' is not valid, nor does this hold 'This is seen; therefore it is'. What is more, there is a fallacy in either of them, just as in these inferences 'Caesar is thought of; therefore Caesar is', 'Caesar is not: therefore Caesar is not thought of. The third proposition (put forward in the same place) is this: (3) Intuitive cognition does not necessarily require something existent.[18]

From the invalidity of this inference, based on the possibility of the existence of an intuitive act of cognition without the corresponding ultimate object, Nicholas does not

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[17] Berkeley, G. *A Treatise Concerning the Principles of Human Knowledge*, Hackett, 1982, part 1, n. 18, pp. 30-31.

[18] "Legi enim in quadam scriptura quam in scolis Fratrum minorum legistis et pro vera omni volenti habere concessistis, propositiones que sequuntur. (1) Prima, que ponitur a vobis primo Sententiarum, dist. 3, q. 4, est ista: Notitia intuitiva clara est per quam iudicamus rem esse, sive sit sive non sit. (2) Secunda propositio vestra, que ponitur ubi supra, est talis: 'Obiectum non est; igitur nou videtur'; non valet consequentia; nec ista: 'hoc videtur; ergo hoc est'. Ymo utrobique est fallacia, sicut in hiis consequentiis: 'Cesar est in opinione; igitur Cesar est'; 'Cesar non est; igitur Cesar non est in opinione'. (3)Tertia propositio, ibidem posita, est ista: Notitia intuitiva non requirit necessario rem existentem." Nicholas of Autrecourt, *His Correspondence with Master Giles and Bernard of Arezzo*, A critical edition from the two Parisian manuscripts with an introduction. English Translation. Explanatory Notes and Indexes by L. M. De Rijk, E.J. Brill, 1994, Leiden-New York-Köln, p. 47.

hesitate to draw the final skeptical conclusion concerning the knowability of external reality:

> From these propositions I infer a fourth one saying (4) Every impression we have of the existence of objects outside our minds can be false, since, according to you, it can exist, whether or not the object is. And still another proposition, which is the fifth one and runs as follows: (5) In the natural light we cannot be certain *when* our awareness of the existence of external objects is true or false, because, as you say, no matter whether a thing is or is not, it represents it as being in one and the same manner. And, thus, since anyone who posits the antecedent must also posit the consequent that, by formal implication, is inferred from that antecedent, it follows that because you do not have evidential certitude as to the existence of external objects, you must also concede anything that follows therefrom. That you do not have evident certitude of the existence of sensorial objects is clear, because no one has certitude of any consequent through an inference in which manifestly a fallacy is committed. Now, such is the case here, for, according to you, there is a fallacy here: 'Whiteness is seen; therefore there is whiteness.'[19]

Now, given that the force of the argument hinges on the invalidity of this inference, one would expect that a critic of the argument would try to establish its validity at least for certain cases. But this is precisely the kind of reply that Nicholas deftly demolishes in his subsequent remark.

> But perhaps you want to say, as it seems to me you wished to suggest in a certain disputation at the Black Friars', that although from the act of seeing it cannot be inferred that the object seen exists when the seeing has been produced or is conserved by a supernatural cause, even so, when it has been produced by causes that are purely natural, with <only> the general influence of the First Agent concurring, — then it can be inferred.

> But to the contrary: When from some antecedent, if produced by some agent, a certain consequent could not be inferred by a formal and evident implication, then from that antecedent, no matter by what other <agent> it be produced, that consequent could not be inferred either […] because the antecedent as such does not vary according as the respective agents vary, nor does the state of affairs signified by the antecedent.[20]

Indeed, Nicholas' contention here perfectly squares with Buridan's in the latter's *Sophismata*, where Buridan correctly establishes that the invalidity of a certain inference

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[19] "Ex istis infero unam propositionem quartam quod (4) Omnis apparentia nostra quam habemus de existentia obiectorum extra, potest esse falsa, ex quo, per vos, potest esse, sive obiectum sit sive non sit. Et unam aliam propositionem, que quinta est; et est talis:(5) In lumine naturali non possumus esse certi quando apparentia nostra de existentia obiectorum extra sit vera vel falsa, quia uniformiter, ut dicitis, representat rem esse, sive sit sive non sit. Et ita, cum quicumque ponat antecedens habeat ponere consequens quod formali consequentia infertur ex illo antecedente, sequitur quod <quia> vos non habetis certitudinem evidentie de existentia obiectorum extra, et etiam habetis omnia que ad illa sequuntur concedere. Quod non habetis certitudinem evidentie de existentia obiectorum sensus patet quia: Nullus habet certitudinem de aliquo consequente virtute alicuius consequentie in qua manifeste committitur fallacia. Sed sic est hic, nam, per vos, hic est fallacia: 'albedo videtur; ergo albedo est'. <Igitur>" Ibid. p. 47.

[20] "Sed forsan dicetis, prout, <ut> michi videtur, volebatis innuere in quadam disputatione apud Predicatores - quod, licet ex visione non possit inferri (obiectum visum esse quando, visio ponitur in esse a causa supernaturali vel conservatur ab ipsa, tamen quando posita est in esse a causis naturalibus precise, concurrente influentia generali Primi Agentis, tunc potest inferri. Contra: Quando ex aliquo antecedente, si esset positum in esse ab aliquo agente, non potest inferri consequentia formali et evidenti aliquod consequens, nec ex illo antecedente poterit inferri illud consequens, a quocumque fuerit positum in esse[. Patet ista propositio exemplo et ratione. Exemplo: Sicuti si albedo esset posita in esse ab agente A et non posset formaliter inferri 'albedo est; igitur color est', ita nec posset, a quocumque agente esset posita in esse. Patet etiam ratione,] quia antecedens in se non est propter hoc variatum, a quocumquc sit positum in esse, nec res significata per antecedens. Ibid. p. 49.

is not affected by no matter what additional circumstances we stipulate, if they are not stated in the antecedent.[21] But what if we do state them in the antecedent? Nicholas has his answer:

> Since from that antecedent it cannot be inferred evidently by way of intuitive cognition 'therefore there is whiteness', one must add, then, something to the antecedent, namely what you suggested above, viz. that the whiteness has not been produced or conserved supernaturally. But from this it is clear that I have proved my point. For: When somebody is certain of some consequent only in virtue of some antecedent of which he is not evidently certain whether or not the case is such as <the antecedent> states <it to be> — because that antecedent is not known by the meaning of its terms, nor by experience, nor deduced from such knowledge, but is only believed —, such a person is not evidently certain of the consequent. <Now>, this is the case, if that antecedent is considered together with its modification, as is clear to everybody. Therefore etc.[22]

So, Nicholas correctly concedes that even if from the original premise in and of itself the conclusion does not follow by means of a formally valid inference, the same conclusion can validly follow by means of the addition of another premise. In fact, just any invalid inference can be turned into a valid instance of *modus ponens* by adding a conditional whose antecedent is the original premise and whose consequent is the intended conclusion. But then the evidentness of the conclusion will hinge on the evidentness of the conditional, which, Nicholas contends, lacks evidentness just as well as the original invalid consequence.

And Buridan would certainly agree. As he writes in his *Treatise on Demonstrations*:

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[21] "… you can say, assert, or propound at will any proposition you please, and yet a necessary consequence will never become not necessary (or conversely), as a result of such an action of yours; therefore, the sophism posited in this way is false. Because of the arguments, however, we should know that in one way a proposition can be posited or conceded or stated absolutely, as a proposition taken in itself, and then the truth or falsity of other propositions or consequences is irrelevant to it. In another way we posit a proposition as the antecedent or part of an antecedent so as to infer another, and then it is indeed necessary to see whether the proposed conclusion follows from it with the addition of others. For example, if in this case you posit absolutely that every man is a donkey, then, because of this, the consequence posited in the sophism will become neither more nor less valid. But if you posit that every man is a donkey as an antecedent to infer some conclusion, I would immediately say that it does indeed follow that 'therefore, some man is a donkey'. And if you posited this proposition as a part of an antecedent with 'Every man runs' as the other part, then I say that it does indeed follow that 'therefore, a donkey runs'. And this is how the arguments proceeded." – "tu potes dicere vel asserere vel ponere quamcumque propositionem placet et numquam propter talem actum tuum consequentia necessaria fiet non necessaria vel e converso; ideo sophisma sic positum est falsum. Sed tamen propter argumenta sciendum est quod aliqua propositio potest poni vel concedi vel dici simpliciter tamquam una propositio per se sumpta, et tunc nihil est ad propositum de aliis propositionibus vel consequentiis an sint verae vel falsae. Alio modo solemus ponere propositionem tamquam antecedens vel partem antecedentis ad aliud inferendum, et tunc oportet bene videre utrum sequatur conclusio proposita ex illo posito cum aliis appositis vel non. Verbi gratia, in proposito si tu ponis simpliciter quod omnis homo est asinus, non propter hoc fit melior vel peior consequentia illa quae ponebatur in sophismate. Sed si tu ponas per modum antecedentis ad inferendum aliquam conclusionem quod omnis homo est asinus, statim dicam quod bene sequitur 'ergo aliquis homo est asinus'. Et si tu dictam propositionem ponas per modum partis antecedentis cum ista alia parte antecedentis 'omnis homo currit', tunc dico quod bene sequitur 'ergo asinus currit'. Et sic procedunt rationes." [SD, Sophismata, c. 8, 3rd sophism, p. 959.]

[22] "Item. Ex quo ex illo antecedente mediante notitia intuitiva non potest inferri evidenter 'igitur albedo est', tunc oportet aliquid addere ad antecedens, scilicet illud quod supra innuistis, scilicet quod albedo non est supernaturaliter in esse posita aut conservata. Sed ex hoc manifeste habetur propositum. Nam: Quando aliquis non est certus de aliquo consequente nisi mediante aliquo antecedente de quo an ita sit sicut significat, non est certus evidenter — quia nec illud est notum ex terminis nec experientia nec ex talibus deductum sed tantum est creditum — talis non est evidenter certus de consequente. Sic est, si consideretur illud antecedens cum sua modificatione, ut clarum est cuilibet. Igitur etc." Autrecourt, op. cit., p. 50.

> … in the demonstrations of these conclusions, not only are two first principles required, namely, the two premises, but also several others, for a demonstration requires not only the evidentness of the premises but also the evidentness of the consequence. But that consequence is a proposition, albeit a hypothetical one. And so, if the consequence is evident in itself, then it is an indemonstrable principle; and if it is not evident in itself, then it needs to be demonstrated by evident principles.[23]

But what if we simply *cannot* have a self-evident conditional premise that is self-evident by reduction to the first principle – as seems to be precisely the case when the antecedent claims the existence of an effect, and the consequent claims the existence of its natural cause, while the effect can be produced supernaturally, without the existence of the natural cause?

It is at this point that Buridan's principle of the gradation of the certainty of scientific principles kicks in. In what might be regarded as a direct response to Nicholas' argument,[24] he says the following:

> […] these objections are solved on the basis of bk. 2 of the *Metaphysics*. For there Aristotle says: "mathematical exactitude is not to be demanded in all cases, but only in the case of those things that do not have matter; for this reason this is not the method of natural science". And consequently the Commentator remarks on this passage that one need not demand the kind of belief in natural demonstrations as in mathematics. We shall therefore declare that there are many diverse kinds of certainty and evidentness.[25]

Accordingly, in the subsequent discussion in which he distinguishes the different degrees of certainty appropriate to different fields, Buridan simply declares that the skeptic demanding the evidentness and certitude of the principle of non-contradiction in all fields

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[23] "Sed ego dico quod in harum conclusionum demonstrationibus non solum requiruntur **[V115ra]** duo principia prima, quae sunt illae duae praemissae, immo plura alia, quia ad demonstrandum conclusionem non solum requiritur evidentia praemissarum, immo etiam evidentia consequentiae. Consequentia autem est propositio una, licet hypothetica. Et ita, si consequentia est de se evidens, ipsa est unum principium indemonstrabile; et si non est de se evidens, indiget quod demonstretur per principia evidentia." SD 8.5.2. pp. 714-715.

[24] In Buridan's reconstruction, the argument runs as follows: "It is true that, because of the above-mentioned requirements demanded by the concept [*ratio*] of knowledge, some people, wanting to do theology, denied that we could have knowledge about natural and moral [phenomena]. For example, we could not know that the sky is moving, that the sun is bright and that fire is hot, because these are not evident. For God could annihilate all these, and it is not evident to you whether He wills to annihilate them or not; and thus it is not evident to you whether they exist. Or God could even put the sky to rest or remove light from the sun or heat from fire. And finally they say that it is not evident to you concerning the stone you see as white that it is such that it is white, for even without the whiteness and the stone God can create in your eye an image [*species*] entirely similar to the one you have now from the object; and thus you would judge the same as you do now, namely, that there is a white stone here. And the judgment would be false, whence it would not be certain and evident; and, consequently, it would not be evident even now, for it is not evident to you whether God wills it so or not." SD 8.4.4, pp. 706-711.

[25] "Sed haec dicta solvuntur ex secundo Metaphysicae. Nam dicit Aristoteles quod "acribologia mathematica non est in omnibus expetenda, sed in non habentibus materiam, propter quod non naturalis est modus". Et consequenter Commentator dicit super hoc quod non oportet hominem quaerere ut modus fidei in demonstrationibus naturalibus sit sicut modus fidei in mathematicis. Dicemus ergo quod multi sunt et diversi modi certitudinis et evidentiae." SD 8.4.4, pp. 706-711. Indeed, in the relevant question of his *Questions on the Metaphysics* (*Quaestiones in Aristotelis Metaphysicam: Kommentar zur Aristotelischen Metaphysik*, Paris, 1518; reprint, Frankfurt am Main: Minerva, 1964, henceforth: QM, lb. 2, q. 1) Buridan handles the problem in exactly the same way: "… if God operates simply miraculously, it should be concluded that He can; and so this is only evidence on an assumption, and as was previously said, it is sufficient for natural science." – "… si vero Deus simpliciter miraculose operetur, concludendum est quod potest; ideo non est evidentia sed solum ex suppositione, sicut ante dictum fuit, quae est sufficiens ad scientiam naturalem."

is simply demanding something impossible. Indeed, it is the skeptical argument itself that shows why the skeptic is demanding the impossible. As Buridan remarks:

> … one sort of certainty is that which pertains to a proposition so firmly true that it, or one similar it, can by no power be falsified. And in this way we should certainly concede, as they have argued, that it is impossible for us to have such certainty about an assertoric categorical affirmative proposition, unless it consists of terms suppositing for God, or, perhaps, if we admit natural supposition […] But this sort of certainty is not required for natural sciences or metaphysics, nor even in the arts or morality [prudentia]. Another sort of human certainty on the part of the proposition, however, is that of a true proposition that cannot be falsified by any natural power and by any manner of natural operation, although it can be falsified by a supernatural power and in a miraculous way. And such certainty suffices for natural sciences. And thus I truly know by natural knowledge that the heavens are moved and that the sun is bright.[26]

So Buridan does not hesitate to concede the possibility of divine deception, and thus the less-than-absolute evidentness and certainty of the consequence that our knowledge of an external world demands. But, he contends, this is *all* we can have, and this is *all* we need:

> Accordingly, it seems to me to be possible to conclude as a corollary that supernaturally it is possible for my [act of] knowledge, while it remains the same, to be converted into non-knowledge. For as long as the sun and the sky are moving in accordance with all their natural ways, the assent by which I firmly and with certainty assent to the proposition 'The sun is bright' is true, evident, and certain natural knowledge [*scientia*], endowed with the evidentness and certainty appropriate to natural science [*scientia*]. I posit, then, that if this [act of] assent, which is knowledge at the present time, remains in me for the whole day, and at nine o'clock God removes light from the sun without my knowing this, then that [act of] assent of mine will no longer be knowledge after nine o'clock, for it will no longer be true, nor will it have a true proposition as its object.

> An analogous distinction can be made concerning evidentness as well as concerning certainty. For some human evidentness is such that in accordance with it the cognitive power is compelled either by its own nature or by some evident argument to assent to a truth or a true proposition that cannot be falsified by any power; but this is not required for natural science. Another [type of evidentness] is such that in accordance with it the cognitive power is compelled either by its own nature [or by some evident argument] to assent to a truth or a true proposition that cannot be falsified naturally, although it could be falsified supernaturally. And this is what is required for natural science.[27]

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[26] "ex parte propositionis certitudo una est quia est propositio sic firmiter vera quod ipsa, vel talis, per nullam potentiam potest fieri falsa. Et sic bene concedendum est, sicut illi arguebant, quod impossibile est nos habere talem certitudinem de propositione categorica affirmativa de inesse nisi sit constituta ex terminis pro ipso Deo supponentibus, vel forte nisi ponatur suppositio naturalis, de qua alias dictum est. Sed haec certitudo non requiritur ad scientias naturales vel metaphysicas, vel etiam ad artes vel prudentias. Alia vero est certitudo humana ex parte propositionis, quia est propositio vera et per nullam potentiam naturalem et <nullum> modum agendi naturaliter talis propositio potest fieri falsa, licet per potentiam supernaturalem et modo miraculoso posset fieri falsa. Et talis certitudo sufficit ad scientias naturales. Et ita vere scio, scientia naturali, quod caelum movetur vel quod sol est lucidus." SD 8.4.4, p. 709.

[27] "Et secundum hoc videtur mihi posse corollarie concludi corollarium quod possibile est supernaturaliter scientiam meam, manentem eandem, verti in non-scientiam. Quamdiu enim sol et caelum moveantur secundum omnes suos modos naturales, assensus quo firmiter et certe assentio huic propositioni 'sol est lucidus', est vera naturalis scientia evidens et certa, evidentia et certitudine requisitis ad scientiam naturalem. Pono ergo quod ille assensus qui modo est scientia, maneat mihi per totam diem et quod hora nona Deus removeat lucem a sole, me hoc nesciente, ille assensus meus post nonam non erit amplius scientia, quia nec verus **[K164ra]** nec propositionis verae. Proportionabili modo distinguitur de evidentia sicut de certitudine. Nam evidentia quaedam humana est secundum quam virtus cognoscitiva ex eius natura vel per rationem evidentem determinatur ad assentiendum veritati seu propositioni verae, non possibili falsificari per aliquam potentiam; et ista non requiritur ad scientiam naturalem. Alia est secundum quam virtus cognoscitiva determinatur ex natura sua <vel per rationem evidentem> ad assentiendum veritati seu propositioni verae,

Thus, Buridan's application of the principle of gradation of certainty "puts the skeptic in his place", by pointing out the unreasonably high demand for certainty the skeptic places on ordinary or scientific knowledge claims about external reality. Precisely because the skeptic's argument shows that our cognitive faculties are not absolutely infallible concerning external reality, yet reliable enough, provided things behave in accordance with the common course of nature without supernatural intervention, we have an absolutely good reason to accept this diminished, conditional certainty, to which the demands of absolute certainty do not apply. In a parallel passage in the *Questions on the Metaphysics* Buridan also alludes to the even weaker requirement of moral or legal certainty, reasonably applied in courts of law, where, dealing with singular events of the past, even the scientific certainty of natural science cannot be demanded.[28] But then, one may certainly argue that if in matters of life and death we reasonably allow less than absolute certainty, why should we demand absolute certainty in theoretical matters, in which our cognitive faculties are more reliable, but are demonstrably not infallible?

Indeed, the unreasonable character of the skeptic's demand is brought out by Buridan also with reference to ordinary ways of speaking, according to which it would be preposterous to claim ignorance on account of the possibility of divine intervention. As he says:

> But then you would ask whether, when I clearly see Socrates running, I know that Socrates is running or whether I merely opine this. And I reply that then I do not opine this, but I know. For everybody speaks in this way: 'I know that this iron is hot, for I clearly

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non possibili falsificari naturaliter, licet falsificari <posset> supernaturaliter. Et haec requiritur ad scientiam naturalem." Ibid. pp. 709-710.

[28] "… there is still another, weaker type of evidentness, which suffices for acting morally well; for when all circumstances have been regarded and inquired into which a man can inquire into with diligence in judging according to the exigencies of this kind of circumstance, the judgment will be evident with evidence sufficient for acting morally well, even though the judgment should be false because of the invincible ignorance of some circumstance. For instance, it is possible that a magistrate should act well and meritoriously in hanging a saintly man because through witnesses and other documents in accordance with the law it appeared sufficiently to him that the good man was guilty of homicide. Hence the conclusion is reached which certain wicked ones wishing to destroy the natural and moral sciences proclaim, that in many of the principles and conclusions of those sciences there is no simple evidentness, but they can be falsified through cases supernaturally possible. However, absolute evidentness is not required for such sciences; the previously mentioned relative evidentness or evidentness on assumption suffices. Hence Aristotle says it well in Book II of this work that mathematical exactitude is not to be sought in all sciences. And since it has appeared that in all the aforesaid ways firmness of truth and firmness of assent are possible to us, the question should be answered that the comprehension of truth with certitude is possible for us." – "immo est adhuc alia, debilior evidentia, quae sufficit ad bene agendum moraliter, scilicet quando visis et inquisitis omnibus circumstantiis factis quas homo cum diligentia potest inquirere, si iudicet secundum exigentiam huiusmodi circumstantiarum illud iudicium erit evidentia sufficiente ad bene agendum moraliter, etiam licet iudicium sit falsum propter invicibilem ignorantiam alicuius circumstantiae: verbi gratia, possibile esset quod praepositus bene et meritorie ageret suspendendo unum sanctum hominem quia per testes et alia documenta secundum iura sufficienter apparet ipsi quod ille bonus homo esset malus homicida. Ideo conclusum est correlarie quod aliqui valde mali dicunt volentes interimere scientias naturales et morales eo quod in pluribus earum principiis et conclusionibus non est evidentia simplex, sed possunt falsificari per casus supernaturaliter possibiles, quamvis non requiritur ad tales scientias evidentia simpliciter, sed sufficiunt praedictae evidentiae secundum quid sive ex suppositione; ideo Aristoteles bene dicit in secundo huius quod non in omnibus scientiis mathematica acribologia est expetenda; et quia iam apparuit quod omnibus praedictis modis firmitas veritatis et firmitas assensus sunt nobis possibiles, ideo concludendum est quod quaerebatur, scilicet nobis est possibilis comprehensio veritatis cum certitudine." QM, lb. 2, q. 1.

feel that it is hot,' and 'I certainly know that Socrates was running yesterday, for I saw him running.'[29]

It seems that Buridan is absolutely right. Certainly nobody, including the skeptic, would claim ignorance about the heat of a piece of red hot iron, were he to hold it in his hand, arguing that all this might be just an elaborate illusion created by an omnipotent deceiver. Indeed, the skeptic would rather immediately get off his epistemic high horse, and would provide screaming testimony to his knowledge of what is happening to him, despite the remote possibility that he might be deceived. So, it seems that Buridan's down-to-earth epistemology achieves precisely what John Greco wanted: putting the skeptic in his place.

3. Putting the skeptic in his place vs. stopping him in his tracks

But will the skeptic stay there? Recovering from his burns, couldn't he claim that despite all the intensity of the experience, it might have been absolutely unreal? After all, Buridan himself does not deny this possibility. And if Buridan concedes this much concerning this experience, shouldn't he concede the same concerning all experiences? Well, in fact, Buridan does make this concession, but at the same time he claims that at least generally such experiences are reliable, and it is only the slim chance of some omnipotent intervention that makes him allow this possibility, which, however, should not prevent anyone from saying that the skeptic *knew* what happened, even if he *could not infallibly know* it.

But then, doesn't Buridan, along with the modern advocates of this "epistemology of lowered expectations", merely take here the stance of someone who is simply willing to call something "knowledge" that may not *really* be *knowledge*, and "reality" that may not be *reality* at all? No matter how reasonable Buridan's position may sound in practical terms, isn't he just taking the position of Cypher, the traitor of "Matrix", who would give up the true reality of Zion, for the virtual pleasures of a merely apparent juicy steak of the Matrix? Isn't Buridan's optimistic confidence in the natural reliability of our cognitive faculties just a covert way of giving up on the demand of finding *genuine* certainty about the nature of *true reality*, settling for what is just a "good enough" certainty about what may be a merely *phenomenal,* quasi-reality?

I am not going to address these questions here. I believe Buridan and his modern ilk *can* have some pretty good answers to them. I would rather just briefly compare and contrast Buridan's strategy with another way of handling the type of skepticism Buridan and his ilk are grappling with, which definitely does not give rise to these questions, for it does not allow this type of skepticism to emerge in the first place.

I take it that this other approach can be found in Aquinas (at least on my strong reading of his doctrine), or in any author who would endorse the same strong interpretation of the

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[29] "Sed tu quaereres, si ego manifeste video Socratem currere, an ego scio quod Socrates currit vel quod ego solum hoc opinor. Et ego respondeo quod tunc hoc non opinor sed scio. Omnes enim sic loquuntur "scio quod hoc ferrum est calidum, quia manifeste sentio ipsum esse calidum", et "scio firmiter quod Socrates heri currebat, quia vidi eum currere"." SD 8.4.4, p. 710.

Aristotelian claim that our cognitive faculties are not deceived regarding their proper objects, based on the doctrine of the formal unity of the knower and the known.

We should recall here that the crucial point of the skeptical argument was the claim that it is invalid to infer from the existence of a cognitive act the existence of a corresponding external object. It is this claim, then, that allows the further move to the possibility of in principle undetectable perfect deception, i.e., the possibility of having precisely the same cognitive acts in a cognitive subject, regardless of whether there are any external objects corresponding to these acts, that is to say, regardless of whether any of these cognitive acts is veridical or not. In other words, the basis of the skeptical claim is the assumption that the relationship between cognitive act and external object is merely contingent, and so, that the veridicality of all cognitive acts is merely accidental.

But on the basis of Aquinas' account of cognition, this would be impossible. For on his account a simple cognitive act is the form of the object received in the cognitive subject according to the nature and capacity of the subject, in a mode of being different from the mode of being of the object. Accordingly, the cognitive act itself, as such, is formally the same as the object, although it is distinct from it in its being. But those that are formally the same are essentially related, by essential similarity. *If* these things exist, then they *necessarily* are of the same kind, by *logical necessity*.[30] Therefore, simple acts of sensory or intellectual apprehension *must* be instances of the same form as their proper objects; so, it is not possible to have an act of vision of some whiteness that is not a vision of something that really is whiteness, and it is not possible to have the concept of donkeys that is not a concept of real donkeys.[31]

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[30] And, to be sure, there is nothing impossible in there being logically necessary relations between contingent beings, as the case of, say, logically equivalent sentence-tokens illustrates.

[31] Cf. "Respondeo dicendum quod, sicut res habet esse per propriam formam, ita virtus cognoscitiva habet cognoscere per similitudinem rei cognitae. Unde, sicut res naturalis non deficit ab esse quod sibi competit secundum suam formam, potest autem deficere ab aliquibus accidentalibus vel consequentibus; sicut homo ab hoc quod est habere duos pedes, non autem ab hoc quod est esse hominem, ita virtus cognoscitiva non deficit in cognoscendo respectu illius rei cuius similitudine informatur; potest autem deficere circa aliquid consequens ad ipsam, vel accidens ei. Sicut est dictum quod visus non decipitur circa sensibile proprium, sed circa sensibilia communia, quae consequenter se habent ad illud, et circa sensibilia per accidens. Sicut autem sensus informatur directe similitudine propriorum sensibilium, ita intellectus informatur similitudine quidditatis rei. Unde circa quod quid est intellectus non decipitur, sicut neque sensus circa sensibilia propria. In componendo vero vel dividendo potest decipi, dum attribuit rei cuius quidditatem intelligit, aliquid quod eam non consequitur, vel quod ei opponitur. Sic enim se habet intellectus ad iudicandum de huiusmodi, sicut sensus ad iudicandum de sensibilibus communibus vel per accidens. Hac tamen differentia servata, quae supra circa veritatem dicta est, quod falsitas in intellectu esse potest, non solum quia cognitio intellectus falsa est, sed quia intellectus eam cognoscit, sicut et veritatem, in sensu autem falsitas non est ut cognita, ut dictum est. Quia vero falsitas intellectus per se solum circa compositionem intellectus est, per accidens etiam in operatione intellectus qua cognoscit quod quid est, potest esse falsitas, inquantum ibi compositio intellectus admiscetur. Quod potest esse dupliciter. Uno modo, secundum quod intellectus definitionem unius attribuit alteri; ut si definitionem circuli attribuat homini. Unde definitio unius rei est falsa de altera. Alio modo, secundum quod partes definitionis componit ad invicem, quae simul sociari non possunt, sic enim definitio non est solum falsa respectu alicuius rei, sed est falsa in se. Ut si formet talem definitionem, animal rationale quadrupes, falsus est intellectus sic definiendo, propterea quod falsus est in formando hanc compositionem, aliquod animal rationale est quadrupes. Et propter hoc, in cognoscendo quidditates simplices non potest esse intellectus falsus, sed vel est verus, vel totaliter nihil intelligit." — "I answer that just as a thing has being by its proper form, so the knowing faculty has knowledge by the likeness of the thing known. Hence, as natural things cannot fall short of the being that belongs to them by their form, but may fall short of accidental or consequent qualities, even as a man may fail to possess two feet, but not fail to be a man; so the faculty of knowing cannot fail in knowledge of the thing with the likeness of which it is informed; but may fail with regard to something consequent upon that form, or accidental thereto. For it has been said (2) that sight is not deceived in its proper sensible, but about common sensibles that are consequent to that object; or about accidental objects of sense. Now as the sense is directly

But this is precisely the kind of impossibility that the skeptical argument assumes to be possible. For whether we look at Berkeley's version or Autrecourt's, or for that matter, Descartes' or Putnam's, or the version suggested by the visual imagery of the "Matrix", we can see that the argument assumes the possibility of having exactly the same cognitive acts whether they are produced by their adequate object, i.e., their formally identical, proper object, or by something else, say, God, the evil demon, the mad scientist, or the revolting machines using humans as batteries. However, if this were possible, then it would be possible to have an act of sight of some whiteness that is not a vision of something that *really is* some whiteness, but rather is just a piece of computer code generating this act of sight in the brain of the human battery. Likewise, a donkey-concept of such a human battery, deriving not from real experiences with real donkeys, but from virtual experiences generated by computer code, would have to be a concept not of donkeys, but of *virtual donkeys*, which are *not donkeys*, whatever they are (whether the pieces of computer code generating these virtual experiences or the virtual experiences themselves). But if Aquinas is right, then this sort of imagination is no more possible than the imagination of a prime number than which no greater can be found. For even if we can imagine that counting upwards we can arrive at a prime number beyond which no number we ever count will be a prime, Euclid's proof conclusively shows that this imagination is impossible. In the same way, we can say that if Aquinas' Aristotelian account of cognition is right, then the entire Matrix Trilogy, and, for that matter, much of modern epistemology is simply based on false imagination.[32]

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informed by the likeness of its proper object, so is the intellect by the likeness of the essence of a thing. Hence the intellect is not deceived about the essence of a thing, as neither the sense about its proper object. But in affirming and denying, the intellect may be deceived, by attributing to the thing of which it understands the essence, something which is not consequent upon it, or is opposed to it. For the intellect is in the same position as regards judging of such things, as sense is as to judging of common, or accidental, sensible objects. There is, however, this difference, as mentioned before regarding truth (16, 2), that falsity can exist in the intellect not only because the intellect's cognition is false, but also because the intellect knows it [i.e., its own falsity], just as it knows [its own] truth; whereas in sense falsity does not exist as that which is known, as stated above (2). But because falsity of the intellect occurs essentially only in the composition of the intellect, falsity also occurs accidentally in that operation of the intellect whereby it knows the essence of a thing, in so far as composition of the intellect is mixed up in it. This can take place in two ways. In one way, by the intellect applying to one thing the definition proper to another; as that of a circle to a man. Because the definition of one thing is false of another. In another way, by composing a definition of parts which are mutually exclusive. For thus the definition is not only false of a thing, but false in itself. A definition such as "rational four-footed animal" would be of this kind, and the intellect would be false in making it; for the statement "some rational animals are four-footed" is false in itself. For this reason the intellect cannot be false in its knowledge of simple essences; but it is either true, or it understands nothing at all." (Dominican translation, slightly emended.) Iᵃ q. 17 a. 3 co.

[32] Of course, one may still question here *exactly how* Aquinas' conception would help against the "No Good Inference" argument. The answer simply is that on the basis of formal unity we can accept the formal validity of the consequence: "if a sighting of this whiteness exists, then this whiteness exists", for on this account something is a sighting of this whiteness if and only if it is this actually existing whiteness received in the eye of the beholder; from which we get "if this actually existing whiteness received in the eye of the beholder exists, then this whiteness exists", which is of course formally valid. But then how would we explain the appearance of some whiteness generated by electrodes in the optical nerve? Isn't that a sighting of whiteness without there being a whiteness in reality? Well, no. That appearance is just that: an appearance generated by the electrodes that is easy to mistake for the sighting of whiteness, just as virtual donkeys are mere appearances that are easy to mistake for donkeys.

4. Epistemology vs. metaphysics (or semantics)?

But is Aquinas' account right? Indeed, can it possibly be right? After all, aside from the obscurity of the doctrine of formal unity in general, it seems to carry enormous ontological commitment to at least two radically different types of entities concerning which their formal unity is even less understandable than it is concerning ordinary entities of the same type.

Obviously, at the end of an already lengthy paper, I cannot even properly raise these issues, let alone properly address them. So, in these brief concluding remarks I will merely indicate some of the ways in which one can handle these issues on Aquinas' behalf, and point to the directions contemporary research should take exploring this Thomistic, or in general pre-Buridanian approach to anti-skepticism, in contrast to the Buridanian approach that informed and I would say still informs much of the modern discussions.

In the first place, as far as ontological commitment is concerned, as I have argued in a number of papers, the charges Ockham leveled against his predecessors on this account are simply unjustified.[33] It is true that the s*emantic conception* of the "*moderni*" Ockham criticizes demands a potentially rich domain of semantic values, but the identification of these semantic values, substantially reducing the ontological commitment of their theory, is absolutely open to Ockham's opponents. Indeed, reconstructing this semantic theory itself, *without* the metaphysical baggage it comes with in some authors, immediately eliminates much of the obscurity of the talk about the "obscure entities" this *semantic* theory is allegedly committed to. For in the semantic theory we are simply systematically mapping items of our language onto a domain of semantic values, enabling us to keep track in any discourse of whatever we are talking about. But then, the determination of the exact nature and metaphysical relations of these items can be the business of a well-regulated metaphysical discussion, *without* any of the "obscurities" of some hard-to-understand, "alien" metaphysical conception.[34] Indeed, more concretely, in such a reconstruction Aristotelian forms at once cease to be "obscure entities", as soon as we construe them as the *significata* of predicates of things, i.e., those individualized features of things, whatever they are, the actuality of which renders these predicates true of these things.[35] Thus, in this framework, the formal unity of these *significata* is simply their

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[33] Cf. Klima, G. "The Changing Role of *Entia Rationis* in Medieval Philosophy: A Comparative Study with a Reconstruction", *Synthese* 96(1993), pp. 25-59; Klima, G. "Buridan's Logic and the Ontology of Modes", in: Ebbesen, S. – Friedman, R. L. (eds.), *Medieval Analyses in Language and Cognition*, Copenhagen: The Royal Danish Academy of Sciences and Letters, 1999, pp. 473-495; Klima, G. "Ockham's Semantics and Ontology of the Categories", Spade, P. V. (ed.), *The Cambridge Companion to Ockham*, Cambridge: Cambridge University Press, 1999, pp. 118-142.

[34] Cf. Klima, G. (1996) "The Semantic Principles Underlying Saint Thomas Aquinas's Metaphysics of Being", *Medieval Philosophy and Theology*, 5(1996), pp. 87-141; Klima, G. "Contemporary 'Essentialism' vs. Aristotelian Essentialism", in: J. Haldane, (ed.), *Mind, Metaphysics, and Value in the Thomistic and Analytic Traditions*, Notre Dame, 2002, pp. 175-194; Klima, G. "Aquinas' Theory of the Copula and the Analogy of Being", *Logical Analysis and History of Philosophy*, 5(2002), pp. 159-176.

[35] As St. Thomas wrote: "...dicendum est quod illud a quo aliquid denominatur non oportet quod sit semper forma secundum rei naturam, sed sufficit quod significetur per modum formae, grammatice loquendo. Denominatur enim homo ab actione et ab indumento, et ab aliis huiusmodi, quae realiter non sunt formae." –"… that on account of which something is denominated does not always have to be a *form* according to the nature of the thing, but it is enough if it is signifies as a form, rgammatically speaking. For a man is denominated on account of his action or clothing, which are

pertaining to the range of significata of the same non-equivocal predicate. But then, if we can say, for instance, that the what the term 'song' signifies is whatever it is on account of which both a modulation of certain vibrations of airwaves and the pattern of tiny pits on the surface of a CD can be called a song (as when we say that the singer's hit song she sang in the studio last year is recorded on track number 1 on her CD), then the different modes of existence of a form in what it informs and in what represents the thing it informs will no longer be obscure or mysterious. In general, construed along these lines, the intentional existence of a form of an object in a cognitive faculty will be no more mysterious than the "mysterious" existence of sounds in the sound tracks of a music CD.[36] And then, finally, if in this framework the notion of formal unity between the acts of cognition and their objects is credibly restituted, establishing a logically necessary relation between the two, then the demonic deceivers, evil scientists and rebellious robots plaguing Buridan and his ilk cannot even emerge, for the skeptics who conjured them up could no longer plausibly appeal to their possibility. So, this move would effectively stop these skeptics in their tracks.

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not forms in reality". *De Potentia* q. 7, a. 10, ad 8. Cf. also e.g. Cajetan: "Verum ne fallaris cum audis denominativum a forma denominante oriri, et credas propter formae vocabulum quod res denominans debet esse forma eius quod denominatur, scito quod formae nomine in hac materia intelligimus omne illud a quo aliquid dicitur tale, sive illud sit secundum rem accidens, sive substantia, sive materia, sive forma." – "Don't be mistaken when you hear that a denominative is derived from the denominating form, and believe on account of the word 'form' that the denominating feature has to be the form of what is denominated; you should know that by the name 'form' in this context we understand anything on account of which something is called such, whether it be in reality an accident, or a substance, or matter or form." Thomas de Vio Cajetan, *Scripta Philosophica: Commentaria in Praedicamenta Aristotelis*, ed. M. H. Laurent, Angelicum, Romae, 1939, p. 18

[36] A more detailed discussion of this idea can be found in section 7 of Klima, G., "The Medieval Problem of Universals", *The Stanford Encyclopedia of Philosophy (Winter 2004 Edition)*, Edward N. Zalta (ed.), URL = http://plato.stanford.edu/archives/win2004/entries/universals-medieval/, and in an (as yet) unpublished paper of mine "Tradition and Innovation in Medieval Theories of Mental Representation" ACPA annual meeting, November 6, 2004, Miami, FL, available online: http://www.fordham.edu/gsas/phil/klima/FILES/Miami.doc