

Aquinas vs. Buridan on the Universality of Human Concepts and the Immateriality of the Human Intellect

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Abstract: Under the traditional classification of medieval positions on the issue of universals, both Aquinas and Buridan would have to be deemed to be “conceptualists”: they both deny the existence of mind-independent, Platonic universals (against “realists”), and they both attribute universality primarily to the representative function of our universal concepts, and thus only secondarily to universal names of human languages (against “nominalists”). Yet, Aquinas is quite appropriately classified as a “moderate realist”, and Buridan as an “Ockhamist nominalist”. This paper will argue that what justifies these more refined classifications is the two authors’ radically different conceptions of the representative function of our universal concepts. The paper will show how this difference results in their opposing judgments concerning the demonstrability of the thesis of the immateriality of the human intellect and will reply to Buridan’s main objection to Aquinas’s argument for this thesis, by pointing out the objection’s conflation of merely indifferent, non-distinctive singular representation with genuinely universal intellectual representation. In its conclusion, the paper will briefly gesture at an important contemporary implication of Aquinas’s thesis concerning a metaphysical limitation of artificial intelligence.

Keywords: Aquinas, Buridan, conceptualism, nominalism, universal representation, immateriality of the intellect, natural limits of AI

Introduction: Who Is Right, Aquinas or Buridan?

Under the traditional classification of medieval positions on the issue of universals, both Aquinas and Buridan would have to be deemed to be “conceptualists”: they both deny the existence of mind-independent, Platonic universals (against “realists”), and they both attribute universality primarily to the representative function of our universal concepts, and thus only secondarily to universal names of human languages (against “nominalists”). Yet, Aquinas is quite appropriately classified as a “moderate realist”, and Buridan as an “Ockhamist nominalist”. This paper will argue that what justifies these more refined classifications is the two authors’ radically different

conceptions of the representative function of our universal concepts. The paper will show how this difference results in their opposing judgments concerning the demonstrability of the thesis of the immateriality of the human intellect and will reply to Buridan's main objection to Aquinas's argument for this thesis.

For Buridan holds the exact opposite of Aquinas's position concerning *the knowability* of the immateriality (and the consequent immortality) of the intellectual soul. To be sure, both thinkers hold the thesis—which I will also refer to as “the main thesis”—, that the intellectual soul is immaterial. However, while Aquinas provides what he takes to be philosophical demonstrations of this thesis (whence he is committed to holding that the thesis is a philosophically knowable conclusion), Buridan holds that this thesis cannot be demonstrated, but can, and must, be held only on the basis of faith. Accordingly, he takes all of Aquinas's alleged demonstrations to be flawed. So, who is right, Aquinas or Buridan? Is the thesis of the immateriality of the intellectual soul a demonstrable conclusion or an indemonstrable article of faith?

When we raise the question whether Aquinas or Buridan is right concerning the knowability of the main thesis, we should first realize certain “dialectical asymmetries” between the positions of each thinker. If we are focusing on Buridan's claim, it seems that he is in a more difficult position. For in order to establish his claim, he would have to show not only that actually proposed proofs for the thesis do not work, but also that it is *not possible* to provide such a proof. That is to say, he has to show that for *all* we know the intellectual soul might as well be material. On the other hand, if we look at the position of Aquinas, *he* might seem to be in a more difficult position. For in order to invalidate any of his proposed proofs, all his opponent needs to do is show either that the denial of his thesis *can* be true together with his premises (in which case the proof is invalid) or that at least *one* of his premises is false, or is just not better known than the conclusion (in which case the argument is not a proof, but an argument that rests on a false assumption, or on an assumption that is more dubious than the main thesis itself, thereby begging the question).

The question of whether Aquinas or Buridan is right, therefore, breaks up into the sub-questions of whether Buridan is successful in establishing the impossibility of *any proof* for the thesis *and* whether he is successful in his criticisms of Aquinas's proposed proofs. I propose to deal here only with the latter, apparently more modest task. Is Buridan's refutation of Aquinas's arguments successful?

However, before we address this question, we should realize just how little either of the two possible answers would achieve in connection with the original question: if Buridan is successful in refuting Aquinas's arguments, then it means that he managed to show that *some* arguments for the main thesis do not work, which of course does not mean that there are no other possible arguments that might successfully establish the main thesis; so Buridan's success against Aquinas does not in and of itself establish his position about the unknowability of the main thesis; on the other hand, if Buridan's criticism is not successful, it merely shows that Aquinas's arguments are able to withstand *his* attack, which in and of itself would not show that the proofs are in fact demonstrative, i.e., that there is no other

possible refutation that can bring them down, unless the failure of Buridan's criticism can somehow be generalized to all possible attempted refutations. Nevertheless, we may still say that if it turns out that Buridan's criticism fails, then it provides a good *corroboration* of Aquinas's position and thereby of the main thesis itself: if a philosopher of Buridan's acumen does not succeed in undermining Aquinas's proposed proofs, then those proofs may have a really good chance of actually working, i.e., establishing the main thesis itself.

As we can see, the apparently simple question of "who is right?" can only be answered bit by bit, through a careful analysis and weighing of individual arguments. To render the task manageable, therefore, I will focus here only on one of Aquinas's arguments for the immateriality of the intellective soul and its attempted refutation by Buridan. The argument in question is what in an earlier paper I dubbed "Aquinas's argument from the universality of concepts".¹ This is the main argument that relates the issue of the immateriality and consequent immortality of the intellective soul to the issue of how differently Aquinas and Buridan conceive of the universality of our intellectual concepts.

Aquinas's Argument from the Universality of Concepts

The main claim of Aquinas's argument is that the universal concepts of our understanding cannot be received in a material medium because their universality is achieved precisely by their being abstracted from matter.

To be sure, the universal, abstract mode of representation of the concepts of the intellect alone cannot guarantee their immateriality—after all, we are all familiar with material, universal signs, such as the words we utter or write. However, these universal symbols can have their universal representative function only because they correspond to the primarily universal concepts of the understanding. So, their derivative, conventional universality need not entail any ontological constraints upon their nature. Such a constraint may, however, be entailed by the primarily universal representative function of the concepts of the understanding, which are formed as a result of the natural causality of sensible objects on the senses and the consequent further processing of the information thus obtained from the senses by the intellect.

The question then is whether, and, if so, why the primarily universal mode of representation of the concepts of the understanding formed as a result of the causality of sensible objects should entail the immateriality of these concepts, in the sense that the subject in which they are received, the intellect, cannot be material.

The main idea is the following. The senses represent singulars in their singularity because they necessarily represent the sensible features of material objects together with the material individuating conditions of these features, namely, the spatio-

¹ The next section partly comes from Gyula Klima, (2001, 19–28). (See also Bob Pasnau's comments and my rejoinder in the same volume, 29–36 and 37–44, respectively.) Reprinted in Klima and Hall, (2011, 25–38, 39–48, and 49–60).

temporal dimensions determining the designated matter of these objects.² The reason why this is necessary is that the causally active sensible features of sensible objects necessarily exercise their causality on the senses under these determinate dimensions, and so these sensible features are necessarily encoded by the senses *as determined by these dimensions*.³ Therefore, what encodes these spatio-temporal features in the senses is precisely some corresponding spatio-temporal features of the sense organs, because it is precisely these features of the sense organs that are impacted by the corresponding features of their objects. For example, the spatial arrangement of distinct patches of color in my visual field is encoded by the spatial pattern of neurons firing in the retina of my eyes, and similar considerations apply to the other senses. In the process of abstraction, therefore, the agent intellect has to “cut out” precisely this part of the code preserved in the phantasms. So, it has to form the concepts encoding the universal information contained in a vast number of different phantasms in a medium that will not encode the information about the singularity of singulars represented by the phantasms. But it will encode that part of the information which is invariably common in this massive “database” of various singular experiences under variable circumstances, such as time and location and other coincidental circumstances and features.

But then, since what encodes this information in the phantasms is precisely the spatio-temporal features of the organs in which they are received, the medium in

² *Sentencia De anima*, lib. 2 l. 12 n. 5: *Circa ea vero quae hic dicuntur; considerandum est, quare sensus sit singularium, scientia vero universalium; et quomodo universalis sint in anima. Sciendum est igitur circa primum, quod sensus est virtus in organo corporali; intellectus vero est virtus immaterialis, quae non est actus alicuius organi corporalis. Unumquodque autem recipitur in aliquo per modum sui. Cognitio autem omnis fit per hoc, quod cognitum est aliquo modo in cognoscente, scilicet secundum similitudinem. Nam cognoscens in actu, est ipsum cognitum in actu. Oportet igitur quod sensus corporaliter et materialiter recipiat similitudinem rei quae sentitur. Intellectus autem recipit similitudinem eius quod intelligitur, incorporaliter et immaterialiter. Individuatio autem naturae communis in rebus corporalibus et materialibus, est ex materia corporali, sub determinatis dimensionibus contenta: universale autem est per abstractionem ab huiusmodi materia, et materialibus conditionibus individuantibus. Manifestum est igitur, quod similitudo rei recepta in sensu repraesentat rem secundum quod est singularis; recepta autem in intellectu, repraesentat rem secundum rationem universalis naturae: et inde est, quod sensus cognoscit singularia, intellectus vero universalis, et horum sunt scientiae.*—For Aquinas’s works, I am using the online edition *Corpus Thomisticum, Subsidia studii ab Enrique Alarcón collecta et edita Pompaelone ad Universitatis Studiorum Navarrensis aedes ab A.D. MM* (<http://www.corpusthomicum.org/>); in the references, I have also adopted the abbreviations of this edition.

³ *Sentencia De anima* ib. 2 l. 13 n. 12: *Differentiam autem circa immutationem sensus potest aliquid facere dupliciter. Uno modo quantum ad ipsam speciem agentem; et sic faciunt differentiam circa immutationem sensus sensibilia per se, secundum quod hoc est color, illud autem est sonus, hoc autem est album, illud vero nigrum. Ipsae enim species activorum in sensu, actu sunt sensibilia propria, ad quae habet naturalem aptitudinem potentia sensitiva; et propter hoc secundum aliquam differentiam horum sensibilium diversificantur sensus. Quaedam vero alia faciunt differentiam in transmutatione sensuum, non quantum ad speciem agentis, sed quantum ad modum actionis. Qualitates enim sensibiles movent sensum corporaliter et situatiter. Unde aliter movent secundum quod sunt in maiori vel minori corpore, et secundum quod sunt in diverso situ, scilicet vel propinquo, vel remoto, vel eodem, vel diverso. Et hoc modo faciunt circa immutationem sensuum differentiam sensibilia communia. Manifestum est enim quod secundum omnia haec quinque diversificatur magnitudo vel situs. Et quia non habent habitudinem ad sensum, ut species activorum, ideo secundum ea non diversificantur potentiae sensitivae, sed remanent communia pluribus sensibus.*

which the universal concepts are formed must be something that does not have such spatio-temporal features, i.e., something that does not have its own dimensions, which can only be a thing that is immaterial; therefore, the potential intellect receiving these concepts has to be immaterial.

As can be seen, the most important idea in this argument is that the singularity of representation is necessarily tied to the materiality of representations. Sensory representation is necessarily singular because it is material, since the singularity of the information in sensory representation is encoded precisely by the material features of sensory representations, namely, the spatio-temporal features of the sense organs (including relevant parts of the brain) that are modified according to the spatio-temporal features of sensory objects, which determine their singularity. But if this much is acceptable, then the argument can indeed establish its desired conclusion.

In view of this, regardless of the finer details, the main point of the argument seems to be just the following *modus tollens*:

1. If a representation is material, then it is singular
2. The intellect's representation (an intellectual concept) is not singular (since it is universal)
3. Therefore, the intellect's representation is not material

Once we reduce Aquinas's rather complex original argument to this simple *modus tollens*, then it should become clear that its crucial part is the first premise, namely, the alleged implication moving from the materiality of a representation to its singularity, by natural (as opposed to logical) necessity. So, it is not surprising that it is precisely this implication that Buridan targets in his criticism.

Buridan on Aquinas's Argument

In the eighth question of book III of his *Questions on Aristotle's De Anima*, Buridan begins his discussion in the body of the question with the claim that the position we find in Aquinas's *Commentary on De Anima* (but which Buridan found in Averroes as well) is wrong:

it has seemed to some that sense lacks the nature for cognizing universally, although it does have it for cognizing singularly and determinately, because it has extension and a determinate location in a corporeal organ. It is the other way around with the intellect, however, because it is immaterial and unextended, not determining for itself a location in a corporeal organ, it does possess the nature for understanding universally and not singularly. [. . .] But this opinion seems defective.⁴

If we take a closer look at his arguments, it is clear that in attacking this opinion Buridan is arguing against the following two implications:

⁴ Buridan, QDA3 q. 8, nn. 18–19. in Klima and Sobol, et al. (2022).

1. the materiality of the senses implies the singularity of sensory acts
2. the immateriality of the intellect implies the universality of intellectual acts

Buridan finds both of these implications false, since, according to his arguments, (1) the materiality of a cognitive power is compatible with the universality (i.e., non-singularity) of its act, and (2) the immateriality of the intellect is compatible with the singularity (i.e., non-universality) of its act. As can be seen from the foregoing, it is only the first implication that is relevant to Aquinas's proof for the immateriality of the intellectual soul. Aquinas's endorsement of the second implication merely commits him to his further claim, once he has established the immateriality of the intellect, that the intellect *only* has universal cognition, which, however, is *not assumed* in his proof.⁵

There are actually two passages in which Buridan explicitly takes on the task of refuting (1):

an extended power is indeed brought to its object in a universal way, just like a horse's appetite. For the thirsty horse desires water, and not determinately this water to the exclusion of that, but indifferently, any water at all. Thus, it drinks whichever it finds first.⁶

Likewise, in q. 8, the idea is the *indifferent*, and hence apparently *universal* natural desire of the agent, indeed, even of an inanimate agent, which does not require an immaterial subject for its universality:

Furthermore, it is apparent that a material and extended power is properly brought to bear on its object in a universal way, for the appetite of a horse in the form of hunger or thirst is not singularly for this sack of oats or that water, but for any indifferently, which is why it would take whichever it finds first. And the natural intention or appetite of fire for heating is not related to this or that heatable thing in a singular way, but indifferently, to anything it can heat. Thus, it would heat whatever is put to it.⁷

However, despite his criticism of Aquinas's implication, Buridan does agree with him, *pace* Ockham,⁸ on the claim that *the universality* of a cognitive act is due to the *abstractive ability* of the cognitive power in question, and the *singularity* of a cognitive act is due to it carrying *distinctive information* about singulars as such, *from which it is unable to abstract*:

although an exterior sense cognizes Socrates, or whiteness, or white, this is only via a species representing it confusedly with the substance, the whiteness, the size,

⁵ Cf. Bob Pasnau's criticism to this effect and my rejoinder in PSMLM 1, referred to in n. 1.

⁶ Buridan, QDA3 q. 3, n. 30.

⁷ Buridan, QDA3 q. 8, n. 24.

⁸ For Buridan's disagreement with Ockham on the issue of singular cognition, see Klima (2009, 73–83). For a detailed account of Ockham's position, see Panaccio (2004, 9–11 and c. 7)..

and location, as he appears in the prospect of the person cognizing him. And the power of sense cannot sort out the confusion if it is unable to abstract the species of the substance, the whiteness, the size, and location from each other, and so it can only perceive substance, or whiteness, or a white thing in the manner of something existing in its prospect. Thus, it can cognize the aforementioned objects only singularly.⁹

Indeed, since he thus ties the singularity of cognition to distinctive representational content about individuals, Buridan argues even further that the singularity of representation is inherited by all those sensory powers that do not abstract from this distinctive, singularizing information:

Again, even if the common sense receives species from the external senses with this sort of confusion and cannot resolve the confusion, it necessarily apprehends in a singular manner. That is why we judge in dreams that this or that appears to us to exist, or to be here or there.¹⁰

This move on Buridan's part avoids the difficulties of Ockham's conception of singular cognition, which tied the singularity of cognition to the *actual causal link* between singular object and cognitive act. Ockham was moved to adopt this conception on the basis of what I dubbed elsewhere his *argument from indifference*.¹¹

⁹ Buridan, QDA3 q. 8, n. 28.

¹⁰ Buridan, QDA3 q. 8, n. 29.

¹¹ Klima (2010, 99–110). See Ockham, *Quodl.* 1, q. 13, OTh 9:74: “. . . it does not seem that an intuitive cognition is a proper cognition, since any given intuitive cognition is equally a likeness of one singular thing and of another exactly similar thing, and it equally represents both the one and the other. Therefore, it does not seem to be more a cognition of the one than a cognition of the other I reply that an intuitive cognition is a proper cognition of a singular thing not because of its greater likeness to the one thing than to the other, but because it is naturally caused by the one thing and not by the other, and it is not able to be caused by the other You might object that it can be caused by God [acting] alone. This is true, but such a vision is always apt by nature to be caused by the one created object and not by the other; and if it is caused naturally, then it is caused by the one and not by the other and is not able to be caused by the other. Hence, it is not because of a likeness that an intuitive cognition, rather than a first abstractive cognition, is called a proper cognition of a singular thing. Rather, it is only because of causality; nor can any other reason be given.” William of Ockham, *Quodlibeta septem*, in *Opera Theologica IX*, ed. Wey (1980), I, q. 13, 74. Translation: William of Ockham, *Quodlibetal Questions*, vols. I and II, trans. Freddoso and (1991, pp. 65). To complicate matters, Ockham actually borrowed the idea from Scotus, who wrote: “. . . a single action of a sense has an object that is one in virtue of some real unity; but not numerical unity. Therefore, there is some real unity other than numerical unity. Proof of the minor premise: a power that cognizes an object in this way (namely, insofar as it is one by *this* unity), cognizes it as distinct from anything else that is not one [with this object] by *this* unity. However, a sense does not cognize its object insofar as it is distinct from anything that is not one [with it] by numerical unity. And this is clear, because a sense does not distinguish *this* ray of sunlight to be numerically different from *that* other ray of sunlight, although they are diverse on account of the movement of the sun. If all common sensibles were to be excluded [from our consideration], such as the diversity of location or position, and if we assumed two quantities to exist in the same place by divine power, which however were altogether similar and equal in whiteness, then sight would not discern that there are two white things there; however, if it cognized one of them insofar as it is numerically one, then it would cognize it insofar as it is a unit that is distinct [from the other] by numerical unity.” *Ordinatio* II, d. 3, p. 1, q. 1, nn. 20–21 (ed. Vat. VII, 399–400). For an intriguing discussion of a closely related argument in a

Very briefly, this argument claims that the sensory indistinguishability of qualitatively perfectly similar individuals (like two eggs or two freshly minted coins) shows that the senses do not carry distinctive information about individuals, and so the singularity of their sensory representation can only be due to the actual causal link between them and the cognitive acts they produce. But then, if the actual causal link is cut off, any remaining representation is indifferent to many individuals, just like a snapshot of an egg might just as well be a picture of another. In fact, this is precisely the idea Buridan exploits in his criticism of Aquinas's implication: on the basis of Ockham's argument, one may clearly claim that material sensory cognition is indifferent to many individuals; therefore, its materiality does not entail its singularity.

However, although this account has the advantage for Ockham of providing him with a theory of universal concept formation *without* the abstraction of some "common nature" from its individuating conditions, it obviously faces serious difficulties in accounting for singular memories or imaginations. Indeed, this may have been Buridan's main motivation to tie the singularity of sensory representation in general (including sensory memory and imagination) to its distinctive content, rather than to the actual causality of the object. Therefore, he does not seem to have accepted the full force of Ockham's *argument from indifference* after all, despite his explicit endorsement of it in criticizing the position of Aquinas.

The crucial point Buridan seems to have noticed against Ockham's argument (in view of his own observation about the non-recognition of perfectly similar stones swapped while the viewer turns away but *cognized as distinct when viewed simultaneously*) is the fundamental difference between what is required for the distinctiveness of singular *cognition*, on one hand, and singular *recognition*, on the other.¹² For even if the qualitative similarity of two objects may render *singular recognition* sometimes *impossible*, the simple *cognition* of individuating

contemporary philosophical context, see Sainsbury, (2005, 246–254), where the author also provides further important references. But I cannot pursue the comparison with the contemporary discussion here.

¹² QDA3 q. 8, n. 26. "*Immo illa quae sunt eiusdem speciei specialissimae tantam habent essentialem convenientiam quod tu non habes viam ad percipiendum eorum distinctionem nisi per extranea. Verbi gratia, sint duo lapides similes in colore et magnitudine et figura et aliis singularis accidentibus, et nunc videas unum et quantum potes considereres ipsum. Demum, te recedente auferatur ille et ponatur alius loco eius. Tu rediens iudicabis quod ille qui sit ibi repositus est ille idem quem ante tu videbas, et similiter, quod color quem in eo iudicabis sit iste idem color quae ante videbas, et similiter de magnitudine et figura. Nec tu habebis aliquam viam ad sciendum an ille est idem lapis vel alter.*"—"Indeed, things belonging to the same most specific species have so great an essential agreement that the only way you have of perceiving their difference is by their external features. For example, let there be two stones alike in color, size, shape, and other singular accidents, and suppose you now see one of them and you examine it as much as you can. Then, when you are gone, it is removed and the other one is put in its place. Upon returning, you will judge that the one put there now is the same one you saw earlier; likewise, you will judge that the color in it is the same color you saw before, and the same is true for size and shape. Nor will you have any way of knowing whether it is the same stone or another." (tr. Jack Zupko)

circumstances *here and now* is distinctive enough for *singular cognition*, barring the miracle of two completely overlapping bodies occupying the exact same location.¹³

Although Buridan does not seem to make this distinction systematically, it is intuitive enough and something like it certainly seems to be operative in his thinking about these issues. I think we should make the following observations here in connection with singular *cognition* as opposed to singular *recognition*, which is the main idea figuring in *the argument from indifference*.

When we are talking about the cognition of singulars in a singular manner, what is meant is that singulars are cognized in their singularity, *qua* singulars. But this characterization is not specific enough. For cognizing something in its singularity may mean (1) cognizing it as distinct from any other singular in the *actual* cognitive situation (call it the *actual cognition of singularity*), but it may also mean (2) cognizing it *unmistakably*, as distinct from any other singular in any possible situation (call it the *necessary cognition of singularity*)—and this would be cognizing the singular together with or rather, under the aspect of, its principle of individuation, which “tags” it, as it were, as *this* individual in all possible situations, which could serve for error-free *re-cognition*.

With this distinction at hand, we may say that Aquinas (as well as Aristotle, as Thomas interprets him) is correct in saying that the senses cognize singulars in a singular manner, in the sense of the *actual cognition of singularity*, in a natural situation, excluding the supernatural possibility of perfectly overlapping bodies. However, in the second sense, or in a supernatural situation, there is always the *possibility* of mistaking one individual for another on account of the *not sufficiently distinctive* representation of sufficiently similar individuals. But just because sensory representation is *not sufficiently distinctive* in this way in all possible situations, it does not mean that it is not sufficiently *singular* in the first sense, or that it is *universal* without further ado. For in contrast to the mere non-distinctiveness of sense perception in all possible situations, there is the obvious universality of intellectual cognition in contrast to the actually singular cognition of the senses in an actual situation. If I see a man to my right and another to my left, then I obviously cognize them in their singularity (no matter how similar they appear, because they are “identical” twins), in the actual situation (though I may be fooled about their identity in a possible situation by divine power, or a mere natural swap of them while I am not watching). On the other hand, if I am told that the object on my left is a man and the object on my right is a man too without actually seeing them (say, because I’m blindfolded), cognizing each only insofar as a man will in no way distinguish one from the other; indeed, it will not distinguish each from any other

¹³ Perhaps, it is important to note here that this miracle is fundamentally different from the miracle Ockham considered, namely, the alleged possibility of God sustaining an act of intuitive cognition without its corresponding adequate object. Given his doctrine of the formal unity of the cognizer and the cognized thing, Aquinas may not have regarded Ockham’s miracle possible (or *ought* not to have, anyway), but he definitely argues for the miraculous possibility of overlapping bodies, on account of scriptural authority, such as the risen Christ entering the room of the apostles through closed doors. Cf. Klima (2004a, 37–44), 37–44, URL = <http://faculty.fordham.edu/klima/SMLM/PSMLM4/PSMLM4.pdf>, reprinted in Klima and Hall (2011, 47–8).

possible man, no matter how *dissimilar* they might appear to my senses (which is why I could form universal truths concerning all possible men, *qua* men).¹⁴

Indeed, Aquinas provides a very compelling reason why location can have this crucial, naturally distinctive role in singular cognition, while discussing the sensory cognition of *common sensibilia* (i.e., sensible qualities that are cognized by several senses, such as shape, size, position, etc., as opposed to *proper sensibilia* that are cognized only by one sense):

there are objects which differentiate sensation with respect not to the kind [*species*] of the agent, but to the mode of its activity. For as sensible qualities affect the senses corporeally and locally, they do so in diverse ways if they are qualities of large or small bodies or are diversely situated, i.e., near, or far, or in the same place or in diverse places. And it is in this way that the common sensibles differentiate sensation.¹⁵

So, the *common sensibilia* are the necessary spatio-temporal determinations of all *proper sensibilia*. The *proper sensibilia*, in turn, are the individualized sensible qualities of material individuals that the external senses are specifically attuned to be affected by, such as color, sound, smell, taste, texture and temperature. But these *proper sensibilia* are individualized precisely by their spatio-temporal determinations here and now, the *common sensibilia*. The cognition of *common sensibilia*, therefore, provides precisely that distinctive sensory information that singularizes the cognition of individualized sensible qualities, presenting the singulars having these qualities *qua* the singulars actually affecting the senses *here and now*.

However, if the external senses receive this distinctive, singular information about the individuating spatio-temporal conditions of their objects precisely on account of receiving the causal impact of these objects through *their own spatio-temporal features*, then this seems to establish the implication Buridan argued against in the first place—that the materiality of a cognitive power entails the singularity of its cognitive act. For if sensory representation is singular *precisely because* it represents

¹⁴ Therefore, when Scotus says, “a single action of a sense has an object that is one in virtue of some real unity; but not numerical unity”, *Ordinatio* II, dist. iii, pt.1, qu. 4.2.5. This may well be interpreted that *what* is cognized is a singular, but it is not cognized *qua* singular, i.e., not in its singularity. That is to say, the *formal object* of the act of sensory cognition is not the singular object itself without further ado. But with this it is compatible that its *material object* is the singular object. However, this seems to be just another way of saying that the singular is not cognized in its singularity. What Scotus insists on is merely that this *formal object* of sensory cognition is something having some real, but non-numerical unity (for the formal object as such is a form, a sensible quality). But this, again, is compatible with the further claim that this formal object is cognized by the senses in concretion with the singular, as it is individualized in the singular (though its individuating principle itself is not cognized), whereas it is cognized by the intellect in abstraction from the singular, and it is only then that the formal object itself is universal, cognized *qua* universal, whence the material object of intellection, the singular itself, is cognized in a universal manner. Thus, despite the fact that Scotus employs the argument from indifference, he would not make the further move of identifying indifferent singular cognition without an actual causal link to the object with universal cognition in the way Ockham does. Hence the same argument has a radically different systematic role in his thought.

¹⁵ *Sententia De anima*, lib. 2 l. 13 n. 12.

its object in a material fashion, encoding the distinctive, singular information about the object by its own material features, then this means that sensory representation is singular *because* it is material, i.e., *its materiality implies its singularity*.

Indeed, if he is successful in establishing this much, then, *pace* Buridan,¹⁶ Aquinas does have a good argument for the immateriality of the intellect. For the contrapositive of this implication, namely, that *the non-singularity of its cognitive act entails the immateriality of a cognitive power*, together with the fact that the intellect does have some non-singular, i.e., genuinely universal cognitive acts, establishes the immateriality of the intellect. Thus, when Buridan endorsed the claim that the singularity of sensory cognition is due to it carrying distinctive singular information that it cannot abstract from, he did not move too far away from Aquinas's position. Aquinas just made the further, quite plausible, claim that the encoding of this distinctive singular information in the senses is due to their material character, as they receive the localized, spatio-temporal, causal impact of material singulars in a similarly localized, spatio-temporal fashion. But then, it seems, Aquinas is quite entitled to his further conclusion concerning the immateriality of the intellect.

Nevertheless, it must be added here that given that Buridan's objection to Aquinas's proof rests on a conflation between the mere indifference of singular representation obtained by the senses and true universality of representation, we should be really careful in separating the two.

For take again the snapshot of an egg. That picture, despite the fact that it does not carry enough distinctive information to tell (*from that information content alone*) which particular egg it is the picture of, still carries information only about that particular egg; so, it is not really an indifferent/universal representation of all similar eggs, it is a *singular* representation only of that particular egg. Indeed, it does not carry any information about a marble egg of the same shape and color, even if a snapshot of that fake egg might be indistinguishable from that of the genuine egg. To be sure, this still does not mean that the two pictures are absolutely indistinguishable: after all, based on their metadata (time and geolocation), we could tell with precision which is the picture of which object. So, these apparently indifferently representing images are not universal representations of many or even all eggs; they are just singular, yet in their direct information content (as opposed to their metadata) non-distinctive representations of their singular objects.

By contrast, a *genuinely universal representation* of a genuine egg is the result of abstracting precisely *that form of eggs in general* which comes from innumerable experiences of all sorts of singular eggs not only in a single human life, but over generations of human experiences, so firmly established that allows it to be encoded in all varieties of human languages, eventually even allowing a scientific investigation to establish its articulation in a genuine, scientific, quidditative definition, to the exclusion of marble eggs merely resembling in shape and color.

¹⁶ For a detailed analysis of and textual references to Buridan's argumentation for the indemonstrability of the immateriality of the intellect, see Zupko (2001, 4–18) <http://faculty.fordham.edu/klima/SMLM/PSMLM1.pdf>.

To be sure, one might object: don't I also see a common form, say the common form of oval shape, in the indifferent image of an egg?

I would respond that no, you don't. A properly universal representation of that shape would be the mathematical formula of an ellipsoid shape, articulating our pre-theoretical, yet genuinely universal concept of the same, which carries not only non-distinctive information about this particular egg that the snapshot does, but also distinctive, precise, universal information about all possible egg-shapes.¹⁷ This is why I have kept emphasizing in my previous writings touching on this subject that the process of abstraction, *pace* Locke,¹⁸ results not in a mere *loss of information*, but in the active sorting out of accidental, coincidental, irrelevant information, from a massive database of singulars to the effect of *gaining genuinely universal, essential information*, representing all possible singulars, whether in the category of substances or accidents.

So, making the distinction clear between a merely non-distinctive, singular representation and a genuinely universal representation effectively defuses Buridan's objection: just because a horse may quench its thirst in search of any bucket of water, it doesn't mean it has a universal concept of water any more than the fact that any bucket of water may put out a small fire requires that water has a universal concept of fire. The indifference of action in singular causal relations primarily dependent on the kinds of agent and patient is part and parcel of the regularities of nature, based on the formal unity of agents and patients of the same kind, which of course does not require or presuppose any sort of awareness of this formal unity in any of them. Therefore, when Buridan is talking about the horse's indifferent desire toward any bucket of water to quench its thirst, it does not require on the horse's part any sort of genuinely universal representation: the horse is just indifferently reacting to the *singular* representations of this or that bucket, equally good for satisfying its thirst. But Aquinas's argument is about genuinely non-singular, universal representations of the intellect; so, Buridan's objection, conflating *genuinely universal representations* with merely *non-distinctive singular ones*, simply misses its target.

Still, *pace* Aquinas, and in favor of Buridan, we have to say that this much does not establish that the immateriality of the intellect has to entail the universality of its cognitive act, i.e., that the intellect can cognize *only* universally, and never in a singular fashion. For even if sensory information is singular on account of the materiality of the senses because sensible objects always have to affect the senses as determined by their individuating, spatio-temporal, material conditions, the distinctive singular information encoded in the process may be *transcoded* by an immaterial intellect in an immaterial fashion, i.e., not by any corresponding spatio-temporal features of this intellect, without abstracting from it. Thus, the immateriality of the intellect need not entail the non-singularity of its acts, provided that besides *abstracting*, the intellect is also capable of this sort of *transcoding*, which is at least not impossible.

¹⁷ <https://www.math.net/ellipsoid#:~:text=An%20ellipsoid%20is%20a%203D,an%20ellipsoid%20forms%20an%20ellipse>.

¹⁸ For the contrast with Locke and British Empiricism in general, see Klima (2010, 99–110).

So, apparently, the basis of Aquinas's famously contended position concerning the intellect's inability to represent singulars is simply his view *that human intellectual acts are always abstractive*. The immateriality of the intellect implies the universality of intellectual acts, *only if these intellectual acts are genuinely abstractive*. However, if there are intellects that have non-abstractive acts (which Aquinas took to be the case with divine or angelic thought) or if the human intellect can have non-abstractive acts (as medieval "Augustinians" would contend), then this implication is not valid. But, as I have noted already, the problem of singular intellectual cognition in Aquinas is quite independent from his argument for the immateriality of the intellect.

Conclusion: Aquinas May Just Be Right

Thus, let me conclude with a brief summary of this discussion, and just gesturing at some of its further implications. Ockham's *argument from indifference* and his consequent account of singular cognition may seem to provide a powerful reason for rejecting the main implication of Aquinas's argument: the materiality of sensory cognition does not have to imply its singularity, for in view of Ockham's argument even sensory cognition is not singular as far as its information content is concerned. However, apparently prompted by the problems Ockham's account faces concerning singular memories and imagination, Buridan does not go along with Ockham, and in his own account of singular cognition he ties the *actual singularity* of sensory cognition to its distinctive representational content about spatio-temporal features of singulars. But if we add to this concession Aquinas's plausible assumption, never questioned by Buridan, that the spatio-temporal features of singulars have to get encoded by corresponding material features of the senses in the natural causal process of sense perception, then we seem to have a good reason to accept Aquinas's implication even on the basis of Buridan's own considerations.

So, the nominalist conflation of true universality with mere indifference of a singular representation does in the end totally undermine Buridan's criticism: just because the snapshot of an egg does not give you distinctive information about this egg distinguishing it from any other egg of the same size and shape, it doesn't mean that the snapshot is a universal representation of eggs in general. In fact, the picture still carries information only about the same egg you took the picture of, except, based on the information content of the picture alone (to the exclusion of its metadata), you cannot determine which one it pictures (although, based on the broader context of taking the picture encoded in its metadata, it can still quite easily be determined).

Thus, Buridan seems to be implicitly committed to the implication he explicitly rejects, which renders his attempted refutation ineffective. But then, if this is correct, we may safely conclude that as far as Buridan's criticism is concerned, *Aquinas may just be right*.

But if he is indeed right, then his account of essential abstraction, consisting in mentally grasping the nature of things, rather than producing a mere indifferent

representation of singulars, may just be right as well. Yet, this does not commit him to the ontological realism of Scotus: for as far as Aquinas is concerned, in order to pull off the feat of abstraction, there does not have to be a pre-existing universal quasi entity *in rebus*, with its less-than-numerical unity before the operation of a human mind, as Scotus would have it. For according to Aquinas, the human mind, in particular, its agent intellect is specifically attuned to sorting out *universal information* from a *world of singulars*: on account of its immateriality, it is capable of “denuding” the individualized natures of individual things of their material, individuating conditions, and thus form *a universal representation*, without positing *any universal entity*, which is the point of adding the qualifier “moderate” in characterizing Aquinas’s realism. Yet, it certainly is *realism* in contrast to Buridan’s Ockhamist nominalism, insofar as it endorses the intellect’s ability to grasp the natures of things in a universal manner, rather than just produce their indifferent representations, which by Ockham’s lights would also be produced by the senses. Buridan, however, while being a “faithful Ockhamist” in his logic,¹⁹ never shied away from departing from Ockham in matters of metaphysics or cognitive psychology. Thus, seeing the need for attributing genuine singular cognition to our sensory faculties, he tied the singularity of their representation to their *representational content*. But that, as I have argued, willy-nilly committed him to a crucial point in Aquinas’s argument, which undermined his criticism, allowing me to declare, again, that *Aquinas may just be right*.

But, again, if Aquinas is indeed right, then the immateriality thesis has far-reaching consequences, not only concerning scholastic metaphysics, but also concerning such apparently remote, and nowadays “trendy” fields as contemporary artificial intelligence research. For if someone is wondering what all the arcane scholastic distinctions discussed in this paper may have to do with contemporary thought, they should just take a step back and wonder about the implications Aquinas’s main thesis has for contemporary AI research. Since any computer we shall ever make will process information in its material medium, the inevitable conclusion is this: if Aquinas’s main thesis is right, then all the information any AI machine processes can only be secondarily universal, riding on the universality of our primarily universal, human concepts, which can only be produced and processed in the immaterial medium of the human mind. Thus, an AI system will never be creative in the way human intelligence is. An AI system will never form new concepts, it can only re-process (perhaps, much faster, and never tiring, but those are other issues) the concepts produced by the genuinely creative, because immaterial human intelligence.²⁰

¹⁹ This is not to say, though, that he *never* departed from Ockham even in matters of logic. For this point, see Klima (2009).

²⁰ See Stephan and Klima (2021, 9–18).

References

- KLIMA, Gyula. 2001. "Aquinas's Proofs of the Immateriality of the Intellect from the Universality of Thought," in *Proceedings of the Society for Medieval Logic and Metaphysics*, Vol. 1, ed. Gyula Klima. Newcastle upon Tyne: Cambridge Scholars Publishing. Pp. 19-28.
- KLIMA, Gyula. 2004a. "The Demonic Temptations of Medieval Nominalism: Mental Representation and 'Demon Skepticism,'" *Proceedings of the Society for Medieval Logic and Metaphysics* 4. Pp. 37-44. URL = <http://faculty.fordham.edu/klima/SMLM/PSMLM4/PSMLM4.pdf>
- KLIMA, Gyula. 2004b. "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, and S. Ebbesen. Copenhagen: The Royal Danish Academy of Sciences and Letters. Pp. 17-32.
- KLIMA, Gyula. 2009. *John Buridan, Great Medieval Thinkers*. Oxford: Oxford University Press.
- KLIMA, Gyula. 2010. "Indifference vs. Universality of Mental Representation in Ockham, Buridan, and Aquinas," in *Later Medieval Perspectives on Intentionality*, ed. Fabrizio Amerini, Francesco Marrone, Pasquale Porro, Quaestio 10. Bari: Brepols. Pp. 99-110.
- KLIMA, Gyula. and Alexander W. Hall, eds. 2011 *The Immateriality of the Human Mind, the Semantics of Analogy, and the Conceivability of God, Proceedings of the Society for Medieval Logic and Metaphysics*, Vol. 1. Newcastle upon Tyne: Cambridge Scholars Publishing.
- KLIMA, Gyula. and Peter G. Sobol, et.al. 2022. *John Buridan's Questions on Aristotle's De Anima—Johannis Buridani Quaestiones in Aristotelis De Anima*, Latin text and annotated English translation. Cham, Switzerland: Springer.
- OCKHAM, William. 1991. *Quodlibetal Questions*, vols. I and II, trans. A. J. Freddoso and F. E. Kelly. New Haven: Yale University Press,.
- PANACCIO, C. 2004. *Ockham on Concepts*. Ashgate: Aldershot.
- SAINSBURY, Mark Richard. 2005. *Reference without Referents*. Oxford: Oxford University Press.
- STEPHAN, Karl D. and Gyula Klima. 2021. "Artificial Intelligence and its Natural Limits," *AI and Society* 36. URL: <https://doi.org/10.1007/s00146-020-00995-z>
- ZUPKO, J. 2001. "John Buridan on the Immateriality of the Intellect," *Proceedings of the Society for Medieval Logic and Metaphysics* 1. URL: <http://faculty.fordham.edu/klima/SMLM/PSMLM1.pdf>.