AQUINAS AND KRIPKE ON THE GENEALOGY OF ESSENTIAL PROPERTIES

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The aim of this article is to reassess the similarity between Kripke's metaphysics and Aquinas' thought on truth, a similarity affirmed in Schultz-Aldrich's *Heythrop Journal* article from 2009[1] and denied by Klima and Kerr in their analysis of Kripkean and Thomist accounts of essence.[2] My claim is that this similarity has been insufficiently understood and its misunderstanding has closed off ways by means of which Aquinas' thought can provide Kripkean epistemology with a component that it lacks.

Despite the significance of Kripke's thought to analytic metaphysics and growing work in so-called 'Analytical Thomism,'[3] only a few thinkers have attempted to examine Aquinas' thought in relation to that of Kripke's. While some scholars have argued for a constructive application of Kripkean notions to Thomistic and/or Aristotelian metaphysics,[4] the predominant scholarly view has concluded that Kripke's and Aquinas's metaphysical frameworks, especially with regards to grounding essentialism in possible-world semantics, are deeply incompatible and that all methodological similarities between them result purely from a superficial interpretation.

Notwithstanding the risk of a superficial reading, there are *prima facie* two reasons why these similarities are worth investigating. The first is that Kripke's *Naming and Necessity* (1970)[5] and its subsequent elaboration in his recently-published John Locke Lectures from 1973,[6] can in broad terms be read as attempting to close the methodological gap between metaphysics, epistemology and language, a gap opened by developments in early 20th-century analytic philosophy, and inconceivable for Aquinas in the first place. Secondly, Kripke is by many considered to have ushered into analytic philosophy an unprecedented revival of Aristotelian essentialism. Since essentialism lies at the core of Aquinas' thought on truth, it is not surprising that the idea of potential comparisons between the two systems arose as early as eight years after the publication of *Naming and Necessity*.[7] Pursuing this line of inquiry, Schultz-Aldrich has briefly suggested that Aquinas' relation between the truth of things and the truths of the intellect is structurally equivalent to Kripke's epistemological and metaphysical apparatus from *Naming and Necessity*.[8]

This article aims to pick up where Schultz-Aldrich left off. I argue that the vast majority of objections against a fusion of Thomist and Kripkean frameworks in the recent treatments, while based on a careful reading of Aquinas, receive their force from a lack of appreciation of a very specific account of possible worlds in Kripke; although these critiques provide accurate accounts of 'essence' in the context of Aquinas's metaphysics, they fail to do so in the context of Kripke's epistemology.

From the outset, this project requires three preliminary clarifications:

Firstly, despite the afore-mentioned perspicuous similarities between Kripke and Aquinas, – namely, their commitment to a certain variety of essentialism[9] and an interrelatedness of metaphysics, language, logic and epistemology,[10] – the number and nature of differences that separate them cannot be overlooked. I do *not* wish to claim that Aquinas' thought is the same as or neatly maps onto Kripke's philosophy; apart from obvious anachronisms, this would be doomed from the outset by the incompatibility of basic philosophical terminology.[11] My aim rather is to bring out the similarities in philosophical intuitions between Kripke's and Aquinas' thought on truth and to suggest that Kripke's metaphysics is not only compatible with Aquinas', but that it, in fact, needs Aquinas' insights regarding the relation between the truth of things and truth in God to explain the existence of essential properties in the first place.

Secondly, by way of delimitation, Aquinas differentiates many senses of 'truth' in different contexts: the truth of judgement, definition, thing itself, divine intellect or being.[12] I will discuss the relation between the truth of things as the cause of truth in the intellect and its subsequent expression in a true proposition based on a true judgement that in turn reflects the being of things. By parity, while not excluding the possibility of there being others, Kripke provides only three examples of essential properties: those of chemical composition, belonging to a natural kind, and origin.[13] I will only consider the first two, although my discussion applies equally to the third.

Thirdly, there is an easily neglected difference between the way that Kripke and Aquinas understand what an 'essence' is. For Kripke (similarly to Putnam, another advocate of analytic essentialism[14]), essential properties of material things denoted by names ('rigid designators') are necessary of a given thing but insufficient to specify what the particular instance of that thing is.[15] Therefore, while Kripke argues that origin, chemical composition and belonging to a natural kind are essential, he grants that there may be other yet-undiscovered essential properties.[16] For Aquinas, by contrast, the concept of essence of a material thing, i.e., its genus and differentia, is understood as a composition of matter and form of a given substance, as judged and known in *this* world, i.e., the *actual* world.[17] This observation is clearly at the root of Klima's insistence that the understanding of essence in contemporary essentialism (i.e., as a set of properties that the object cannot fail to have in any possible world), can be demonstrated to include trivial properties, such as 'the property of either reading this essay or not reading this essay' that *any* object cannot fail to have. These properties do not tell us anything about the 'nature' of the things in question.[18] Nevertheless, and crucially for my argument, the form of a given thing in Aquinas comprises properties that such an individual substance could not fail to have. This is in direct agreement with Kripke's insistence that *at least some of these* properties must be essential. In short, both Kripke and Aquinas believe in the distinction between there being accidental and essential properties of a given thing – although they would, of course, differ on the issue of what, how numerous and how exhaustive these are.

I. AQUINAS ON THE TRUTH OF THINGS AND THE TRUTH OF THE INTELLECT

Aquinas' relation between the truth of things and the truth of the intellect can be understood as plotted onto the following threefold sequence: (a) the truth of things causes or grounds the truth of the intellect, whereby their own truth is perfected;[19] (b) The truth of the intellect, first apprehended through sense, is perfected in the intellect's act of judgement;[20] (c) The truth of judgement grounds or is the cause of truth expressed in a true proposition.[21]

(a) For Aquinas, the transcendental of 'truth' expresses one of the five 'modes' of being with which it is convertible, being as its 'conformity to the intellect.'[22] Here Aquinas argues

that although truth (*verum*) does not 'add' anything to being (*ens*) properly speaking since this would entail limiting being and thus removing its character as the most general of the transcendentals, it expresses the relation of being to the human intellect. As Aertsen puts it, this makes Aquinas' view of truth as transcendental deeply 'anthropocentric.'[23]

The truth of things is in turn grounded in God as the First Truth since their truth directly depends on God as their first principle, with whose intellect they are in eternal conformity.[24] Therefore, the truth of things is in a sense 'between' two intellects: on the one hand, things conform to the divine intellect as their cause and measure,[25] on the other hand, their truth is perfected in the human intellect which is measured by them. As Wippel puts it: '… in the order of nature, the definition of truth as an adequation of thing and intellect applies first of all to the relationship between a thing and the divine intellect to which it corresponds, and then only to the relationship between a human intellect and a thing.'[26] This second relation is, of course, accidental, since it depends on the purely contingent presence of human intellects to which the things could conform.[27] As Aquinas argues:

> The divine intellect, therefore, measures and is not measured; a natural thing both measures and is measured; but our intellect is measured, and measures only artefacts, not natural things. … A natural thing, therefore, being placed between two intellects is called true insofar as it conforms to either.[28]

The reference to an 'artefact' here is also related to Aquinas' distinction between the *practical* and the *speculative* intellect.[29] While our practical intellect can impart form *to* matter, thereby producing artefacts, i.e., objects or tools, and our speculative intellect can know things and thus conform them to itself in virtue of their form abstracted *from* matter, in God there is perfect conformity of natural things to His intellect, 'since divine art produces not only the form but also the matter.'[30] Without human intellects, things would still be true as measured by the divine intellect, but without a divine intellect (a situation which Aquinas deems impossible), 'the essentials of truth would in no way remain.'[31] While it is primarily a thing's *esse* that causes the truth in the intellect (i.e., human beings must be confronted with actually existing objects, not just mere forms), the essence or quiddity of which it forms a part must still play a role – it must be a certain *type of thing* existing that we can apprehend, not just undifferentiated being.[32] Conversely, a thing's truth is perfected insofar as it has being, since the possibility of a *composite* thing existing only through and as its form in the divine intellect is explicitly rejected by Aquinas. The signification of the term 'essentia' includes *both* matter and form.[33] Furthermore, the possibility of separating form and matter when considering the essence of a given thing as it exists in the divine mind would also preclude this very thing from having any truth in itself whatsoever, since '… a composite being as in God's mind is not as true as that being is in itself because in God's mind 'it' is not a composite being at all! No real composite nature as such exists in God's (or any) mind.'[34] This is because God is the cause of *esse*, i.e., unlike the artist He causes both matter and form and it is precisely this act of causing both *esse* and *essences* that grounds God's undivided knowledge.[35] As Shanley remarks:

> [T]he divine intellect's relationship to the world is the obverse of our own: whereas our knowledge passively presupposes the existence of its object and is measured by it, God's causal knowledge actively precedes and measures what it knows … God does not know things because they are, but rather things are because they are creatively known by him.[36]

This is in stark contrast to human knowledge which cannot know singulars precisely because it cannot assimilate matter to itself and in the process of knowing has to proceed by abstracting form from matter.[37]

(b) While the ontological truth of things which consists of their conformity to the divine intellect causes truth in the human intellect, it is only in the latter where it is perfected and of which it can thus be primarily predicated; therefore, truth is primarily predicated of the intellect and only secondarily of things.[38] Thus, once a thing has been apprehended by sense, and once the active intellect (*intellectus agens*) has in its first operation grasped the quiddity of the thing, the truth of the thing itself is perfected in the human intellect in the intellect's second act, that which 'separates' and 'joins', that is, which forms judgements proper to itself and which can express them in true propositions, including attributions of *esse*.

The intellect's coming to a judgement, that 'a thing corresponds to the form which it apprehends about that thing,'[39] as something 'proper to itself' ('*proprium ei, quod non invenitur extra in re*'[40]), is crucial for the adequation of thing and intellect, since only then are there *two* things (i.e., the judgement in the intellect, which the intellect itself must be 'aware of,' as it were, which is not in the thing itself, *and* the thing itself as such) that can be adequated to each other. Adequation cannot exist between a thing that is the same as itself, only between two different things.

(c) This second operation of the intellect, which 'composes' (subsumes properties and attaches multiple predicates – both accidental and essential – to a single self-identical *suppositum*[41]) and 'divides' (differentiates between sub-species of the same genus on the basis of essence[42]) is only true insofar as it conforms to the state of affairs present in reality, that is, as actually reflecting the ontological truth of things. For Aquinas 'the essence of a thing is the proper object of the intellect, we are properly said to understand a thing when we reduce it to its essence, and judge of it thereby....'[43] Furthermore:

> The name *intellect* arises from the intellect's ability to know the most profound elements of a thing; for to understand (*intelligere*) means to read what is inside a thing (*intus legere*). Sense and imagination know only external accidents, but the intellect alone penetrates *to the interior and to the essence of a thing*.[44]

Finally, once the intellect has formed a judgement about the truth of a thing it has apprehended, it expresses this truth by an exterior word in a true proposition or definition which reflects the truth of things in reality.

II. AQUINAS AND KRIPKE'S NECESSARY *A POSTERIORI*

Based on the structure of the relation between the truth of things and the truth of the intellect from the previous section, Schultz-Aldrich argues that the notion of the necessary *a posteriori* can be identified in Aquinas, and suggests that there is an analogous relation between the metaphysically necessary truth of things (i.e., their being and essential properties existing regardless of our knowledge of them) and the *a posteriori* truth of the intellect (i.e., our coming to know their being and essential properties) in Kripke.

The 'necessary *a posteriori*' is a specifically Kripkean notion. Kripke distinguishes between necessity as a metaphysical category, which 'in and of itself has nothing to do with anyone's knowledge of anything,'[45] and aposteriority as an epistemological category.[46] To use his own example, the Goldbach conjecture is *necessarily* true or false, that is, if it is true or false, it is

such in every possible world, but we do not know that *a priori*; as a matter of fact, we currently do not know it at all.

Schultz-Aldrich observes that, according to Aquinas, 'our intellect arrives at truth not in a simple apprehension of essence, but in a judgement that begins in a sensible grasp of objects of our experience;'[47] a given essence is always 'presented to us through our experience with instances of it actuated by real being.'[48] In other words, the apprehension of a thing's quiddity in the first act of the intellect is dependent on the primary apprehension of *esse*.[49] Nevertheless, sometimes we first apprehend the *esse* of a thing through one of its accidents (e.g., its superficial 'natural appearance [which] is likely to cause a false apprehension'[50]) and 'fix our reference'[51] to this thing using the accident we apprehended, not thereby implying that the accident is part of the definition or essence of the thing itself. This almost inevitably happens when we are apprehending a thing for the first time. For example, when initially apprehending a philosopher (say, Socrates), our intellect cannot differentiate whether wearing a toga is part of his essence or not; nevertheless, only later do we correctly discern that some aspects of the philosopher (e.g., his rationality) are essential, whereas others (wearing a toga) are not; this does not mean that once we learn that wearing a toga is not an essential property of being a philosopher, our initial apprehension has been invalidated – the only thing that could have been invalidated would have been a judgement of the form 'All philosophers wear togas.' Synan illustrates this with a similar example: 'The validity of the notion "swan" was untouched [once black swans were discovered in Australia]; what went was the conviction that "all swans are white" which, of course, is a judgement expressed in a proposition.'[52] Furthermore, some of the properties we initially apprehend may be misleading. As Aquinas expresses it:

> Whereas it is innate in us to judge things by external appearances, since our knowledge takes its rise from sense, which principally and naturally deals with external accidents, therefore those external accidents, which resemble things other than themselves, are said to be false with respect to those things; thus gall is false honey; and tin, false gold.[53]

Interestingly enough, Kripke himself happens to use an almost identical example, namely, fool's gold: we first fix the reference of gold by one of its contingent properties (i.e., a property that we may be wrong about, which 'resembles a thing other than itself,'[54] and which it shares with fool's gold (namely, being shiny and yellow)), and only then, *a posteriori*, come to know what its essence is, namely, a chemical substance with the atomic number 79. Similarly, for Aquinas, as the following quotation shows, the perfecting of knowledge as the adequation of thing and intellect is a *gradual* process – while we may intuit essences and accidents directly, we only gradually come to know which is which, rather as Kripke insists that essential properties of things are disclosed to us *a posteriori* through empirical investigation:

> … the intellect … has a likeness to things which are generated, which do not attain to perfection all at once, but acquire it by degrees: so likewise the human intellect does not acquire perfect knowledge by the first apprehension; but it first apprehends something about its object, such as its quiddity, and this is its first and proper object; *and then* it understands the properties, accidents and the various relations of the essence.[55]

Similarly, according to Kripke, we grasp and name the thing we are referring to and making judgements about using its non-essential properties (e.g., water as the 'cold liquid-y stuff over there,' or Aquinas' example of 'stone [*lapis*] [which] is imposed from the fact that it hurts the foot [*laedit pedem*], but [which] is not imposed to signify that which hurts the foot, but rather to signify a certain *kind of body*'[56]) and only later come to know what the true essence of water is,

namely, the fact that it is composed of H_2O molecules and not of molecules, say, X, Y and Z.[57] Therefore, the judgement 'Water is H_2O' is necessary *a posteriori*. It is necessary in that it cannot fail to be the case in any possible world since one (and perhaps the only one) essential property of water is that it *is* H_2O and because it is a statement of identity between two rigid designators that both pick out the same object in all worlds. As Kripke says, '"Possible worlds" are *stipulated*, not *discovered* by powerful telescopes;'[58] our theorising about what could be the case in other worlds depends on the way that our rigid designators refer to objects in *this world* – we start with 'water' and then ask questions about what could happen to *it* in other possible worlds. Water may have different accidental properties, (i.e., it could perhaps not cause the sensation of liquidi-ness in humans), but it cannot fail to be composed of H_2O, since in this world, 'water' (rigid designator) *is* 'H_2O' (rigid designator) and all the instances of water in all possible worlds must bear a relation to the water 'around here.'[59] At the same time, the fact that water is in fact composed of H_2O molecules requires *a posteriori* investigation.[60] In Aquinas' terms, the ontological truth of 'water' is that it consists of H_2O molecules – its first apprehension by sense consists in regarding it as 'the liquid-y stuff over there' and naming it 'water,' while its truth perfected in the intellect consist in eventually coming to apprehend the essence of water and forming the judgement 'Water is H_2O.' At the same time, water would remain H_2O regardless of whether anyone knew it or not (e.g., even in Aquinas' hypothetical situation of there existing no human intellects).

III. AQUINAS, POSSIBLE WORLDS AND THE 'IMMENSE HYPOTHESIS'

It may be argued, however, that perhaps these are only superficial similarities that disregard Aquinas' and Kripke's metaphysical frameworks since the latter's account of essences relies heavily on possible-world semantics which were unavailable to the former. For example, Kerr claims:

> Whereas on the Thomistic account essence is signified by the definitional content of the concretely existing individual, on the modal account essence is signified by the properties that a thing possesses in all possible worlds in which it exists.[61]

Furthermore, Kerr continues, the relation between the things' essences existing in all possible worlds is grounded in the usage of *terms*, 'but here there is a tension given that it is difficult to see how the use of terms could reveal anything significant about the *nature* of things.'[62] In this respect, Klima goes even further and argues that the notion of essentiality and rigid designation is not even grounded in this semantics, but it is something that is added *ad hoc* to the possible-world framework:

> This stipulation [of essences and rigid designators] is in no way part of the logical machinery of possible-world semantics itself, but something that may or may not be added to this machinery for independent reasons. … [W]hat renders using these extra-logical intuitions … highly dubious is that these intuitions are formulated and understood within the conceptual framework of a historically quite recent philosophical tradition, which for the most part evolved on the basis of a radically anti-essentialist, indeed, generally anti-metaphysical mentality.[63]

I would like to reply to these objections against the compatibility of Aquinas' and Kripke's essentialism by taking a brief detour and adding an objection of my own. Consider the following question: 'Can God create a donkey that would not be an animal, but would, for instance,

be a robot cleverly disguised as a living donkey?'[64] Kripke would doubtlessly answer 'no.' Natural-kind identifications are necessary; they refer to the intrinsic features of things across all possible worlds. Thus, God could create a robot that we would *mistakenly refer to* by the term 'donkey,' which would conform to our intellect as a donkey, and which could cunningly hide its non-animality. Nevertheless, it would not *be* a donkey – one of the essential properties of donkeys that we have discovered is that they *are* animals. However, where does this leave God's omnipotence? As I have shown above, for Aquinas the conformity of things to the divine intellect is primary – would Aquinas not regard the inability to create a robotic donkey as an unwarranted constraint on God's creative power?

It seems, however, that this objection from divine omnipotence is based on a misinterpretation of both Aquinas and Kripke. First, there is a significant difference between asking the question '*Could* God *have* created a robot that we would now refer to by the word "donkey"?' and the question 'Could God (now) create a non-animal donkey?' I propose that both Kripke and Aquinas would reply 'yes' to the former and 'no' to the latter.

A crucial, but often overlooked aspect of Kripke's epistemology consists in phrasing possible-world questions as asking 'whether the universe could have gone on as it actually did up to a certain time, but diverge in its history from that point forward.'[65] When he says that donkeys (in any possible world) could not *be* anything but animals, his 'starting point' in time is the present, i.e., the time at which we have decided to use the term 'donkey' to refer to 'that kind of thing' and *a posteriori* discovered that 'that kind of thing's' essence excludes non-animality. The way the world is conditions our theorising about what *could be* the case and what *could have been* (but *was not* in fact) the case. This is clearly what Aquinas has in mind when he argues that God cannot will things that are impossible,[66] i.e., He cannot will things that include or imply a contradiction – which Kripke would doubtless identify with a state of affairs being impossible in any possible world.[67] For Aquinas, the idea of a given thing changing its essential definition or a part thereof as judged by the intellect (for instance, the essence of donkey-hood suddenly including a robotic structure) would be absurd. Nevertheless, when asking whether God *could have* created a 'donkey' (i.e., as a thing that would now conform to our intellect as 'donkey') to be non-animal, we are placing ourselves, hypothetically, at the point in time when God was creating the world.

Here it is important to note that Aquinas' prohibition on God's willing for man to be a donkey is clearly taken to refer to *the present moment*; the question is not discussed within the context of creation but within the context of God's will in the present world (the question that immediately follows asks whether the divine will 'tolerates' contingency within the *already created* realm.[68]) From our temporal perspective, *back then*, God *could have* caused the thing that we would now be referring to by the rigid designator 'donkey' (and to which our intellect would conform) to be robotic. *But He did not*. Although Aquinas argues that God's ideas pre-exist in His mind according to their natures,[69] these natures, *back then*, could have been determined differently: whatever it was that God would create for us to refer to by the term 'donkey,' it could have been a robot. This is what Aquinas means when he says that God can create anything that is not impossible, that is, something in which 'the predicate is altogether incompatible with the subject, as, for instance, that man is a donkey'[70] – He cannot do that *now* since it is now impossible due to what the term 'donkey' and 'animal' with their concomitant essential properties came to mean for us in the history separating creation and the present with its linguistic conventions. Nevertheless, He *could have* done that. In Wood's words: 'God's intentional act of creating establishes the link between our concepts, the forms of things in the world, and the ultimate source of intelligibility.'[71] Synan is clearly also aware of this when mentioning Kripke's essentialism with regards to Aquinas' notions of absolute and hypothetical possibility:

> The range of the absolutely impossible is indeterminately vast; the range of the hypothetically possible is immense, but limited by the prior actualization of the appropriate state of affairs, first among them, the creation of this cosmos and of no other … Creation functions as an immense hypothesis; it has entailed a state of affairs in which many an absolute possibility has become impossible.[72]

In the remainder of this article, I wish to argue that Kerr and Klima are wrong to suggest that possible worlds metaphysics are the source of methodological incompatibility bewteen Kripke and Aquinas. Nevertheless, I propose that their observations about the mistakenly presumed incompatibility point to a deficiency in Kripke's account of essence that the Thomist can solve.

For Kripke, speculating about the ways the world *could be* and *could have been* is grounded in the way the world *is*. Recall the that all waters in all possible worlds have to bear a relation to the water 'around here.'[73] This absolute methodological primacy of the actual world, with its concomitant terms-object relations, structures of things discovered by science and their origin, is something that differentiates Kripke's view of possible worlds from those of Quine or Lewis, for example. Contrary to Klima's assertion, the notion of rigid designation is not *added* to the Kripkean logic of possible worlds – it is one of the prerequisites of possible-world talk in the first place. Since Klima imagines Kripkean essences as being produced by a process of starting with a set of possible worlds and then stipulating the existence of some essences based on the way we *happen* to be using certain terms in our world, it is not surprising that he thinks that there is something arbitrary in the way the terms themselves are attached to essences. (Although here one could also argue that Klima does not pay due attention to the concept of 'initial baptism' in establishing the relation between terms, objects they refer to, and empirically discoverable essences belonging to the objects referred to by the terms.) Klima accuses Kripkeans of putting the cart before the horse in starting with essential properties and then attempting to explain essence in terms of them.[74] Nothing of this sort happens in Kripke. Not only because essences are not *the prerequisite* of Kripkean metaphysics (in fact, Kripke does not speak of 'essences' *at all*, he merely discovers that some *properties* are essential), but also because they are merely an unexpected *consequence* of empirical investigation about the actual world.

By parity, similarly to rigid designators, essences are not conveniently added to the framework either, especially not to solve problems of transworld identification. They are simply a surprising consequence of properly understanding the conformity of objects to our intellects in this world. A similar misconception seems to plague Kerr's reading of Kripke, who regards essence in Kripke as being 'characterise[d] in terms of Transworld identity across possible worlds'[75] and then points out that the problem of transworld-identification does not arise for the Thomist at all. However, the problem does not really arise for the Kripkean either, precisely because he takes transworld-identity to be a pseudo-problem based on an incorrect view of possible worlds (that Klima mistakenly identifies as Kripke's own) as an independent logical framework that can exist regardless of whether the notion of rigid designation or essence is included in it or not.[76] It is simply a misreading of Kripke to argue that he *characterises* essence in terms of transworld identity or let alone that he is motivated by it as a philosophical problem: the existence of essences is simply a consequence of scientific discovery combined with a correct recalibration of language, metaphysics and epistemology and a distinctive view of what possible worlds actually are.

More importantly, while Kerr is rightly suspicious about the possibility of *terms* revealing anything about the true nature of things,[77] for Kripke the role of discovering the 'nature' of things does not consist of armchair speculation about terms – it consists of empirical scientific enquiry. Kripke would therefore completely agree with Kerr that the usage of terms does not

reveal anything significant about the nature of things. The role of the rigid designator is to fix the object that empirical science then proceeds rigorously to study. Furthermore, contrary to what Klima says, Kripkean essentialism does *not* 'seek to explain essence in terms of essential properties'[78] – it simply stipulates that there are *at least some* essential properties. The discovery of others is the job of empirical science, which, on the Kripkean view, is the primary source of epistemological access to essences and thereby to the nature of things. I therefore find it extremely puzzling that Klima remarks the following about *Aristotelian* essentialism, since it is clearly a precise description not just of Aquinas', but especially of *Kripke's* view on the enterprise of discovering essential properties:

> Therefore, it should be clear that, contrary to the apparent practice of [contemporary, i.e., Kripkean] 'essentialists,' finding out what is essential to a given kind of thing is not a matter of personal intuitions, but rather a matter of experience, indeed, of scientific experiments, putting the thing in 'abnormal' circumstances, making it interact with other things … , precisely in the way in which modern sciences investigate the nature of things. In fact, this has also been the way in which we acquired our pre-scientific substantial concepts, but in a slow, uncontrolled, unsystematic accumulation of experience, getting encoded in, and passed down to generations by, language.[79]

The reference to our pre-scientific concepts being handed down from generation to generation with the help of language is particularly eerie since it precisely captures Kripke's grounding of concept-object relations in historic 'initial baptisms.'

Now, the rather minimal account of essence in Kripke leads Kerr correctly to claim that 'contemporary modal accounts of essence are not attractive for the Thomist.'[80] However, it seems that the Thomist's claims about essence should be highly attractive for the Kripkean essentialist.

What I have shown so far is merely that there is no incompatibility between the following: (1) The Kripkean claim that 'donkeys are animals' is necessarily true because it is a judgement about natural kinds, about the way the world is. (2) The Thomist claim that 'donkeys are animals' is necessarily true because it is a judgement about natural kinds, about the way the world has been created by God who fully determined its being, which in turn participates in his eternal nature, manifests something of His Truth etc. Nevertheless, while the Kripkean can show that there *are* essences in the actual world and articulate the way we come to know them, he is unable to explain *why* they are there in the first place. This is doubtlessly what leads Klima's accusation of an arbitrary addition of essences to a pre-existing possible-worlds framework.

Interestingly enough, the climax of *Naming and Necessity* itself seems to point to this deficiency. Kripke uses the following example to clarify the relation between 'heat' and 'molecular motion:'

> Suppose we imagine God creating the world; what does He need to do to make the identity of heat and molecular motion obtain? Here it would seem that all He needs to do is to create the heat, that is, the molecular motion itself. … God created light (and thus created streams of photons, according to present scientific doctrine) before He created human and animal observers; and the same presumably holds for heat. How does it then appear … that the mere creation of molecular motion still leaves God with the additional task of making molecular motion into heat? This feeling is indeed illusory, but what is a substantive task for the Deity is the task of making molecular motion felt as heat. To do this He must create some sentient beings to ensure that the molecular motion produces the sensation S in them. Only after He has done this will there be beings who can learn that the sentence 'Heat is the motion of molecules' expresses an a posteriori truth in precisely the same way that we do.[81]

For an analytic philosopher, this is simply an interesting thought experiment which helps to elucidate the fact that being 'molecular motion' is the essence of 'heat.' However, without a full articulation of the ontological dependency of essences on God, the Kripkean runs one of two risks in accounting for there being essences in the first place. Either he is vulnerable to the accusation of circularity in defining essential properties as depending on rigid designation and rigid designation as terms attached to essential properties. Or, even worse, he is simply forced to stipulate essences as a brute fact.

As has been stressed above, for Aquinas the relation between the truth of things and the truth of our intellect involves two sub-relations: the first is between the divine truth and the truth of things (which is convertible with the way they *are*, but only accidentally related to our intellect); the second is between the way our intellect conforms to the being of things which depends on God: donkeys are animals not because we have discovered them to be so; rather, we have discovered them to be so because donkeys *are* (or have been created to be) animals. Kripkean epistemology and metaphysics are only concerned with the *second* of these relations and although they are not incompatible with the first (simply because the first plays no role in Kripke's metaphysics); they are unable to explain the existence of essential properties without appealing to it. Based on the compatibility between Kripkean and Thomist epistemology defended above, it is clear that it is the first of these relations that can be inserted into the Kripkean system to form a bedrock on which questions of scientific discovery of essences can be negotiated. Without creation, the 'immense hypothesis,' Kripke can show us that there are essential properties, but he cannot show us why.

IV. CONCLUSION

Given the foregoing, I propose that Kripke's and Aquinas' intuitions about the relation between the truth of things and the truth in our intellect are compatible. Moreover, Kerr and Klima may have been right in claiming that Thomism has little to gain from Kripke, but their mistaken arguments against a compatibility between Kripke and Aquinas should not prevent Kripkeans from seeing in Aquinas a source for finding an ontological basis to explain not just the existence, but the genealogy of essential properties. It also seems, *prima facie*, that an infusion of Aquinas' theology of creation into Kripke's philosophical system can significantly contribute to overcoming the theoretical under-determination present in the majority of disputes in debates about possible worlds, particularly regarding their ontological status, and potentially shed light on conflicting claims put forward by, say, modal realists, ersatzists, fictionalists etc. As I remarked several times above, Kripke simply provides examples of a couple of essential properties; perhaps it is precisely a Thomistic account of essences based on the doctrine of creation that, on the one hand, can point towards a way of accounting for characterisation of essence through sufficient properties, and, on the other hand, of excluding the trivial properties that trouble Klima.[82]

Notes

1 J. L. Schultz-Aldrich, 'Being as the Ground of Truth in Aquinas', *The Heythrop Journal* 50 (2009), pp. 620-34.

2   For the two most detailed accounts of these incompatibilities see G. Klima, 'Contemporary "Essentialism" vs. Aristotelian Essentialism' in J. Haldane (ed.), *Mind, Metaphysics and Value in the Thomistic and Analytical Traditions* (Notre Dame: University of Notre Dame Press, 2002), pp. 175-94; G. Kerr, *Aquinas's Way to*

God: The Proof in De Esse et Essentia (New York: Oxford University Press, 2015), especially pp. 45-56; J. Archambault, 'Aquinas, the a priori/a posteriori distinction and the Kantian dependency thesis', *Religious Studies* 50 (2014), pp. 175-92.

3   See P. Craig & M. Pugh, *Analytical Thomism: Traditions in Dialogue* (Aldershot and Burlington: Ashgate, 2006) and F. Kerr, 'Aquinas and Analytic Philosophy: Natural Allies?', *Modern Theology* 20 (2004), pp. 123-39.

4   See J. W. Forgie, 'The Cosmological and Ontological Arguments: How Saint Thomas Solved the Kantian Problem', *Religious Studies* 31 (1995), pp. 89-100; A. C. English, 'The Cyrilian Solution: Cyril of Jerusalem and Saul Kripke on Naming God', *New Blackfriars* 94 (2013), pp. 569-82.

5   S. Kripke, *Naming and Necessity* (Malden, Oxford and Victoria: Blackwell, 1981), p. 48.

6   S. Kripke, *Reference and Existence: The John Lock Lectures* (Oxford and New York: Oxford University Press, 2013)

7   See E. A. Synan, *Thomas Aquinas: Propositions and Parables* (Toronto: Pontifical Institute of Mediaeval Studies, 1979), p. 13.

8   Schultz-Aldrich, 'Being as the Ground of Truth in Aquinas'.

9   Kripke, *Naming and Necessity*, p. 42.

10   See for example L. Dewan, 'Is Truth a Transcendental for St. Thomas Aquinas?', *Nova et Vetera*, English Edition 2 (2004), pp. 1-20; J. A. Aertsen, 'Truth as Transcendental in Thomas Aquinas', *Topoi* 11 (1992), pp. 159-71 and J. A. Aertsen, 'Is Truth Not a Transcendental for Aquinas?' in P. Kwasniewski (ed.), *Wisdom's Apprentice: Thomistic Essays in Honor of Lawrence Dewan, O.P.* (Washington, D.C.: Catholic University of America Press, 2007), pp 3-12; J. F. Wippel, 'Truth in Thomas Aquinas', *The Review of Metaphysics* 43 (1989), pp. 295-326; J. F. Wippel, 'Truth in Thomas Aquinas, Part II', *The Review of Metaphysics* 43 (1989), pp. 543-67. See also W. Yourgrau, 'Some Notes on the Epistemology of St. Thomas', *Theoria: A Journal of Social and Political Theory* (1955), pp. 29-42 and C. Pickstock, 'Imitating God: The Truth of Things According to Thomas Aquinas', *New Blackfriars* 81 (2000), pp. 308-26 (here p. 312).

11   See Archambault, 'Aquinas, the a priori/a posteriori distinction'.

12   St. T. Aquinas, *Summa Theologica: Complete English Edition in Fives Volumes* (New York and London: Christian Classics, 1948), IaQ16a1-a3; St. T. Aquinas, *The Disputed Questions on Truth* (Chicago: Henry Regnery Company, 1952), Q1a3.

13   Kripke, *Naming and Necessity*, p. 40.

14   H. Putnam, 'The Meaning of "Meaning"' in H. Putnam, *Mind, Language and Reality: Philosophical Papers* (Cambridge: Cambridge University Press, 2003) pp. 215-71.

15   Klima identifies contemporary essentialism with the claim that 'some names are rigid designators.' (Klima, 'Contemporary "Essentialism"', p. 175) While this notion is clearly a necessary component and prerequisite of Kripke's views of essences, it is by far not sufficient to specify his view overall. Klima himself acknowledges that the claim that names are rigid designators is the 'least common denominator' (ibid.) of contemporary versions of essentialism, which may well be true, but, as I will argue below, it is precisely *Kripke's* own specific view of possible worlds that lends his system its coherence.

16   Kripke, *Naming and Necessity*, p. 48.

17   The statement that an essence is composed of matter and form applies only to composite beings, i.e., material objects, since immaterial beings (e.g., angels) are just forms without any matter. It is only composite beings that our intellect is in contact with in the empirical realm that I will be concerned with in this text.

18   Klima, 'Contemporary "Essentialism"', p. 180.

19   Aquinas, *Summa Theologica*, IaQ16a1; *Disputed Questions*, Q1a2. See also Dewan, 'Is Truth a Transcendental for St Thomas' and Aertsen, 'Is Truth *Not* a Transcendental for Aquinas?'

20   Aquinas, *Summa Theologica,* IaQ16a2; *Disputed Questions,* Q1a3.

21   Aquinas, *Summa Theologica*, IaQ16a7.

22   The others being 'a thing' (*res*), the thing's undividedness from itself, 'oneness' (unity), 'something' (*aliquid*) and 'good' (Aquinas, *Summa Theologica,* IaQ16a1, a4; *Disputed Questions*, Q1a1).

23   Aertsen, 'Truth as Transcendental', p. 165.

24   Aquinas, *Summa Theologica*, IaQ16a7; *Disputed Questions,* Q1a6.

25   Aquinas, *Disputed Questions*, Q2a14.

26   Wippel, 'Truth in Thomas Aquinas', p. 315.

27   Aquinas, *Summa Theologica*, IaQ16a1; *Disputed Questions*, Q1a4.

28   Aquinas, *Disputed Questions*, Q1a2.

29   ibid. Wood uses the following analogy: '…the house depends for its being on the intellect of its architect and is true *per se* insofar as it conforms to the architect's model. But it is true *per accidens* with respect to

other intellects. It can be known by those intellects, but it does not depend on them for its being.' (W. Wood, 'Thomas Aquinas on the Claim that God is Truth', *Journal of the History of Philosophy* 51 (2013), pp. 21-47 (here p. 25).

30   Aquinas, *Disputed Questions*, Q2a5.

31   op. cit., Q2a2.

32   Aquinas differentiates the terms 'essence' and 'quiddity' in *De Esse et Essentia*, the former being 'that through [which] and in [which] a real being has existence', the latter 'that what is signified by the definition' of a thing (St. T. Aquinas & J. Bobik, *Aquinas on Being and Essence: A Translation and Interpretation* (Notre Dame: University of Notre Dame Press, 1965), §11). I treat both interchangeably here. 'Quiddity' specifies the way the concept of 'essence' is related to a definition in the first act by which the intellect grasps simple quiddities and it is only *this aspect* of essentiality that I shall be discussing. (For an extensive treatment, see B. Lonergan, *Verbum: Word and Idea in Aquinas* (Toronto, Buffalo and London: University of Toronto Press, 1997), p. 24-9). Furthermore, 'quiddity' (more so than 'essence') for Aquinas has primarily to do with the classification of things into categories by our intellect, which is precisely the way that Kripke understands the function of essences. (see Kerr, 'Aquinas's Way to God', p. 39)

33   Aquinas, *De Esse et Essentia*, §17-18.

34   Schultz-Aldrich, 'Being as the Ground of Truth', p. 625.

35   See Wippel, 'Truth in Thomas Aquinas', p. 298.

36   B. J. Shanley, 'Eternal Knowledge of the Temporal in Aquinas', *American Catholic Philosophical Quarterly* 72 (1997), pp. 197-224 (here pp. 211-12)

37   Aquinas, *Disputed Questions*, Q2a5-7.

38   op. cit., Q1a2. See Wippel, 'Truth in Thomas Aquinas', p. 298.

39   Aquinas, *Summa Theologica*, IaQ16a2.

40   Aquinas, *Disputed Questions,* Q1a3.

41   Aquinas, *Summa Theologica*, IaQ13a12.

42   Aquinas, *Disputed Questions*, Q1a3.

43   Aquinas, *Summa Theologica*, IaQ17a1, reply to obj. 1.

44   Aquinas, *Disputed Questions*, Q1a12, my italics.

45   Kripke, *Naming and Necessity*, p. 36.

46   op. cit., p. 34.

47   Schultz-Aldrich, 'Being as the Ground of Truth', p. 626.

48   art. cit., p. 628. To clarify, Schultz-Aldrich uses 'being' slightly ambiguously, since the English term is used to translate both 'esse' (the act whereby a thing is) and 'ens' (the subject that exercises the act of 'esse'); it is the latter that Aquinas has in mind. Cf : 'Illud autem quod primo intellectus concipit quasi notissimum, et in quod conceptionem omnes resolvit, est ens, …' (Aquinas, *Disputed Questions*, Q1a1)

49   Aquinas, *Summa Theologica*, IaQ16a2; *Disputed Questions*, Q1a1. Also see Wippel, 'Truth in Thomas Aquinas', p. 302.

50   Aquinas, *Disputed Questions*, Q1a10; Aquinas, *Summa Theologica*, IaQ16a2, reply to obj. 3.

51   Kripke, *Naming and Necessity*, p. 55.

52   Synan, 'Thomas Aquinas: Propositions and Parables', p. 7.

53   Aquinas, *Summa Theologica*, IaQ17a1.

54   ibid.

55   op. cit.*,* IaQ85a5, my italics.

56   op. cit., IaQ13a2, reply to obj. 2, my italics.

57   Putnam, 'Meaning of "Meaning"', p. 241.

58   Kripke, *Naming and Necessity*, p. 44.

59   Putnam, 'Meaning of "Meaning"', p. 232.

60   Schultz-Aldrich correctly identifies the process of coming-to-know essences as secondary to the initial apprehension of *being*, although she fails to point out that while for Kripke this 'graduality' is concerned with *scientific* investigation, in Aquinas, the direct apprehension of essence is confined to a single intellect.

61   Kerr, 'Aquinas's Way to God', p. 46.

62   op. cit., my italics.

63   Klima, 'Contemporary "Essentialism"', p. 176-7.

64   This example is taken from Aquinas, *Summa Theologica*, IaQ25a3. Kripke similarly speaks of cats which would superficially *look like* animals, but would later be discovered to *be* little demons (*Naming and Necessity*, p. 122).

65   Kripke, *Naming and Necessity*, p. 115.

66   The notions of necessity, possibility and impossibility in Aquinas are complicated and not completely coextensive with our understanding of 'logical possibility' which refers to what is true in all possible worlds. (For an excellent exposition of the different uses and meanings of 'necessity' in Aquinas, see J. J. MacIntosh, 'Aquinas on Necessity', *American Catholic Philosophical Quarterly* 72 (1998) pp. 371-403 (here p. 378)). Crucially for my argument, however, Aquinas clearly opposes (i) 'absolute necessity' to at least the following: (ii) the 'necessity in view of a thing's 'nature'' (ibid.), i.e., the fact that 'there are things which, because of their natures, have possibilities and impossibilities attached to them. These are sometimes, but not always, necessities (or impossibilities) of definition' (art. cit., p. 384) and (iii) hypothetical necessity, or necessity of supposition. As I will argue below, once the notion of 'necessity' in Kripke is correctly appreciated as comprising the history of the world (see the 'immense hypothesis' claim below), past scientific discoveries and usage of terms rooted in what he refers to as 'initial baptisms,' it becomes clear that (i) should be understood as rooted in (ii) and (iii).

67   St. T. Aquinas: *Summa Contra Gentiles* (Notre Dame and London: University of Notre Dame Press, 1975), I.84.§1-2

68   op. cit., I.85

69   See *Summa Theologica*, IaQ15a2.

70   op. cit., IaQ25a3.

71   Wood, 'Thomas Aquinas on the Claim that God is Truth', p. 28.

72   Synan, 'Thomas Aquinas: Propositions and Parables', p. 10-11.

73   Putnam, 'Meaning of "Meaning"', p. 232.

74   See Klima, 'Contemporary "Essentialism"', p. 179.

75   Kerr, 'Aquinas's Way to God', p. 55.

76   On a conciliatory note, Kerr does in fact take on board Kripke's insistence about possible worlds being only hypothetical entities constructed around objects in this world and concedes the following: 'If this is all the modalist is claiming then I have no objections, except to point out that appeal to possible worlds as in some sense illuminative of essence is redundant, because this account, whereby rigid designation occurs prior to Transworld identification, seems committed to a primitive non-modal account of essence, in which case essences can be known from the real essences that exist in the actual world.' (Kerr, 'Aquinas's Way to God', p. 49-50). In a sense, this is a claim that I entirely agree with and that this paper attempts to defend, maybe with the qualification that such a reading of possible worlds is simply *compatible* with the Thomist framework, not *redundant* with regards to it.

77   An identical worry is also expressed in Klima's repeated insistence that *nomina significant ad placitum* (Klima, 'Contemporary "Essentialism"', p. 179)

78   ibid.

79   op. cit., p. 192.

80   Kerr, 'Aquinas' way to God', p. 55.

81   Kripke, *Naming and Necessity*, p. 153.