Aquinas’s realism is underpinned by his theory of cognition as the reception of sensible forms that exist in nature. In order to convey the receptivity of cognitive powers to forms in nature, he, like Aristotle, likens sensation and intellection to wax’s being impressed with the shape of a seal. While this metaphor vividly emphasizes the receptive aspect of human perception and intellection, it does not convey the whole picture. The perceptual awareness that we share with brutes of our goal-directed interactions with environment is likewise essential to realism; our human awareness of these interactions is transformed, if you will, by the human “instinct” for the universal good, so that it can become the basis of our receiving forms through which we know the natures of things. Without the interactive component of perception, we would be left with the “picture theory of the phantasm,” at which point Aquinas’s theory of abstraction would break down. In such a case, we would either possess no genuine knowledge or what knowledge we did possess would be innate rather than acquired through the senses. Our only alternative is to seek to understand perception as a synergy of its active and passive aspects. Aquinas himself manifests such an understanding of perception in his description of the many roles performed by the cogitative power.

Introduction

Central to St. Thomas Aquinas’s moderate realism is the claim that we know the forms of sensible beings through our intellect’s reception of form from those beings. At the time that he formulated
this theory, it stood in contrast to Avicenna’s claim that the Agent Intellect gives intelligible forms to our intellect. More recently, Aquinas’s theory stands in contrast to Kant’s portrayal of concepts as innate ways of organizing sensations, and Hume’s claim that there are no concepts, but instead only custom-driven ways of associating ideas. In contrast to all of these theories, Aquinas maintains that sensible beings are themselves potentially intelligible. All that is required for intellection to occur is for us to acquire the intelligible species from the sensible things themselves.

Form as it exists in nature is limited in a way it is not when received by the intellect. For each form in nature belongs to only one individual, whereas the forms received by the intellect direct us to many different individuals at different places and times. In fact, through the intellect’s reception of forms we are able to form propositions that apply to all individuals of a certain kind, no matter what time or place. Aquinas explains this difference between form as it exists in the intellect and form as it exists in nature by saying that the former sort of form or species is the terminus of an immaterial operation. This immateriality distinguishes the concept found in the intellect not only from the form in nature but also from the phantasm through which the intellect acquires these forms or species. The phantasm, like any other sensible species, does not belong to the sense power in the way that a form in nature belongs to a body; it is thus in some qualified manner “immaterial.” But like the animated organs that generate them, the phantasm consists of both a material and a formal component. Because of its hylomorphic nature, the phantasm can make us aware only of particular individuals at definite places and times. Concepts have no such limitation.

While the concept transcends the phantasm, it is nevertheless utterly dependent upon the phantasm. As Aquinas says repeatedly, a human never knows without a phantasm ("nihil potest homo

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1 QDA, a. 15, c.
2 ST I, q. 75, a. 2, c.; ST I, q. 79, a. 3, c.
3 QDV q. 21, a. 3, c.
4 ST I-II, q. 50, a. 4, ad 1.
5 ST I-II, q. 50, a. 4, ad 1; SCG II, cap. 77, par. 2.
intelligere sine phantasmate")⁶. It needs a phantasm both to learn and to recall what it has previously known⁷. Hence the immaterial concept of the natures of things is always mediated through the material phantasm. But this dependency creates a problem for Aquinas’s realism, inasmuch as, according to Aquinas, the material cannot act upon the immaterial⁸. It would seem that the phantasm cannot impress the intellect. In order to overcome this problem, Aquinas distinguishes two principles in the intellect. The first, called the intellectus agens or agent intellect, uses the phantasm to impress a second, receptive intellectual principle, called the intellectus possibilis or possible intellect⁹. The phantasm, therefore, does not impress the possible intellect of its own power, for the phantasm is material: strictly speaking, the agent intellect uses the phantasm as its instrument to impress the possible intellect¹⁰. The agent intellect, however, does not possess any form through which it might determine how the possible intellect is to be impressed. Rather, the phantasm is the sole determinant of how the possible intellect shall be impressed with an intelligible species¹¹. By making this distinction between the agent and possible intellect, therefore, Aquinas both upholds the thesis that the intellect can know forms that it has received through the senses while also maintaining that the material as such cannot impress the immaterial.

While he makes it clear that phantasms are indispensable to intellectual awareness, Aquinas does not tell us a great deal about what he means by the phantasma that he holds so central to knowledge. Often when speaking of this phantasm, he speaks only of phantasms as playing an instrumental role to intellectual operation, but without indicating whether these phantasms belong to one or many internal senses¹². At other times, he mentions only the

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⁶ CMR I, lec. 2, n. 314.  
⁷ ST I, q. 84, a. 7, c.  
⁸ ST I, q. 84, a. 6, c.  
⁹ ST I, q. 79, a. 4, ad 4; SCG II, cap. 77, par. 2.  
¹⁰ QDV q. 27, a. 4, c.; q. 26, a. 1, ad 8.  
¹¹ ST I, q. 79, a. 4, ad 4; QDV q. 10, a. 6, ad 7.  
¹² ST I, q. 84, a. 6, c.; ST II-II, q.175, a. 4, c.; QDA . a. 15, c.; QDV q. 2, a. 6, c.
imagination\textsuperscript{13}. If by "imagination" he means the specific internal sense power that receives sensible forms from the external senses through the common sense, then the phantasm would represent things according to their common and proper sensible characteristics. On a few occasions, however, he makes it clear that by phantasm he means something more than the sort of image just described\textsuperscript{14}: in the \textit{Summa theologiae} he tells us that we know through the intellect's turning to phantasms in three internal senses: i.e., the imaginative, cogitative and memorative\textsuperscript{15}. In the \textit{Summa contra gentiles}, he identifies the same three powers with the passive intellect described by Aristotle in \textit{De anima}\textsuperscript{16}. These three internal senses enable the intellect to perform its operations by providing it with an object serving as an adequate basis for human understanding.

On more than one occasion, Aquinas seems to give a preeminent role to the cogitative power in making intellectual cognition possible\textsuperscript{17}. Thanks to the influence of reason, this power is able to perceive "this human" as "this human" and "this wood" as "this wood"\textsuperscript{18}. This internal sense's apprehension of "this human" is a necessary condition for reason's grasp of "human" as such\textsuperscript{19}. It seems, therefore, that intellectual apprehension is paralleled by the

\textsuperscript{13} In \textit{ST I}, q. 55, a. 2, ad 2; \textit{QDA} a. 20, c.; and \textit{III Sent. D. 27}, q. 3, a. 1, c., Aquinas treats the imagination as a midpoint between external sensation and intellection. In \textit{QDV} q. 10, a. 6, ob 7 and ad 7; \textit{QDV} q. 18, a. 5, c. Aquinas names only imagination (i.e., \textit{imaginatio} or \textit{phantasia}, a synonym for \textit{imaginatio}) when arguing that that it cannot impress the possible intellect without the aid of the agent intellect. In \textit{QDV} q. 18, a. 8, c., he mentions that the operation of the intellect can be impeded by damage to \textit{phantasia}.

\textsuperscript{14} Some commentators have conjectured that in the latter case \textit{imaginatio} and its Greek cognate \textit{phantasia} are really shorthand references to the three internal senses other than the common sense.

\textsuperscript{15} \textit{ST I}, q. 89, a. 5, c.; \textit{ST I}, q. 85, a. 7, c.; \textit{ST I-II}, q. 51, a. 3, c. See also \textit{QDV} q. 18, a. 8, ad 5.

\textsuperscript{16} \textit{SCG II}, cap. 73; n. 1501.

\textsuperscript{17} \textit{SCG II}, cap. 76; 1567; In \textit{CDA}, III, lect. 10; 745. Aquinas speaks of the passive intellect as presenting the phantasms without which the intellect cannot know. Passive intellect, however, is the same as cogitative power: see \textit{SCG II}, cap. 60, par. 2.

\textsuperscript{18} \textit{CDA II}, cap. 13.

\textsuperscript{19} \textit{CPA II}, lec. 20.
cognitive power's sentient apprehension. Aquinas seems to think the same is true for the composition and division. In the *Summa theologiae*, for example Aquinas says that particular reason (an alternative name for the cognitive power) compares individual intentions just as universal reason compares universal intentions. It follows, therefore, that Aquinas regards the cognitive power as operating in a somewhat parallel manner.

One may object that Aquinas (or at least this interpretation of Aquinas) muddles sense and intellect by having them operate together in a rather similar fashion. After all, wouldn’t this understanding of an internal sense power be inconsistent with the claim he makes elsewhere that sense does not know the natures of sensible things—only the intellect does. If we take the claim that sense is not cognizant of essences seriously, then we might conclude that the phantasm presented by sense to the intellect is at most a complex image, one that represents the object according to its proper and common sensible characteristics, while the intellect apprehends the essence by seeing more deeply into this reality than sense can do. After all, Aquinas himself points out that *intelligere* comes from the words *intus* and *legere*, which means literally "to read deeply." The intellect reads deeply into reality by knowing essence, whereas sense is aware only of accidents. Such an interpretation of Aquinas's theory of the phantasm is in fact proposed by George Klubertanz. He bases his understanding of the cogitative and estimative power on the following comparison made repeatedly by Aquinas: the cognitive power is to the imagination as practical reason is to

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20 ST I, q. 78, a. 4, c. In QDV q. 1 a. 15, c., Aquinas says that the cognitive power compares individual forms just as universal reason compares universal forms. In III Sent. D. 23, a. 2, ad 2, questiuncula 1, Aquinas explains that the cognitive power is able to compare in virtue of its union with the intellect, while it is in virtue of its being a sense power that the objects of this comparison are individuals. It is in virtue of the cognitive power's ability to compare individuals that it is called particular reason: see SN III, d. 26, a. 1, ad 2, r.

21 ST I, q. 78, a. 3, c.; see also QDV q. 1, ad 12.

22 QDV q. 1, a. 12, c.
speculative reason\textsuperscript{23}. He implies from this that the cogitative power represents individuals solely inasmuch as they are operable, while the imagination represents them inasmuch as they can be known by speculative reason\textsuperscript{24}. In Klubertanz's opinion, the imagination rather than the cogitative power is the passive intellect\textsuperscript{25}. The estimative power does not in any way represent the nature of its object, for such knowledge is outside the sphere of practical knowledge. It does, however, provide one contribution to speculative reason: it sustains the imagination's focus or attention on the individual the nature of which is to be understood by the intellect\textsuperscript{26}. He adds that those who would draw a parallel between the operations of the cogitative power and intellect are "Averroestic": they are attributing to sense a power that can only be had by intellect\textsuperscript{27}.

It may be easy to find passages in the \textit{Summa theologiae} or \textit{Summa contra gentiles} and in the commentaries that contradict Klubertanz's interpretation of the Angelic Doctor\textsuperscript{28}. It is less easy to explain precisely why the imagination does not offer a sufficient sentient basis for the derivation of concepts from our experience of nature.

\textsuperscript{23} KLUBERTANZ, G.: \textit{The Discursive Power: Sources and Doctrine of the vis cogitativa} \textit{According to St. Thomas Aquinas}, St. Louis, Missouri: The Modern Schoolman 1952, p. 157, 237. See II SN, d. 24, q. 2, a. 1, ad 2; SCG I, cap. 72, par. 6; CDA II, cap. 6, par. 4; ST I q. 79, a. 11, ob 3.

\textsuperscript{24} The imagination gives no knowledge of a thing as good or the like: 157-290.

\textsuperscript{25} KLUBERTANZ: \textit{The Discursive Power}, p. 195.

\textsuperscript{26} KLUBERTANZ: \textit{The Discursive Power}, p. 290-3. He attempts to explain away passages in Aquinas's writings that seem to contradict his thesis. On p. 292 he tells us that when Aquinas says that the cogitative power prepares the phantasm for abstraction, he has in mind this power's role in directing the imagination's attention. On p. 203 he says that when Aquinas says in CDA II, cap. 13 that the cogitative power apprehends its object "sub natura communi," he means that it apprehends this individual as standing under the light of the agent intellect. The phantasm from which the intellect might abstract knowledge of the natures of things is formed by the imagination rather than the \textit{vis cogitativa}. In fact, the passive intellect is mainly the imagination rather than cogitative power, says Klubertanz on p. 195. In support of this interpretation, he claims on p. 254 and 257-8 that Aquinas mentions only the imagination whenever he is discussing "particular speculative knowledge," i.e., knowledge of the nature of a particular individual.

\textsuperscript{27} KLUBERTANZ: \textit{The Discursive Power}, p. 277.

\textsuperscript{28} See, for example, CDA II, 13; CPA II, lec. 20; CMP I, lec. 1.
To give an adequate response to the latter challenge, I propose that we first engage in a thought experiment. Suppose that we describe the phantasm used by the intellect as consisting solely of common and proper sensibles that are represented by the imagination. We will call such a phantasm a “picture,” and name this hypothesis the “picture theory of the phantasm.” I shall argue in this article that if we apply the picture theory to Aquinas’s accounts of speculative and practical reasoning, we will find that it is inconsistent with the realist claim that the intellect is fundamentally receptive in acquiring concepts. Therefore, if we take the moderate realism as axiomatic, we must reject the picture theory of the phantasm. Reviewing the various problems that surface when we examine this theory, we will also discover why Aquinas names the cogitative power as the secondary subject the intellectual virtues, particularly prudence and science. Furthermore, we will note how the perceptions underlying practical and speculative reason are closely interrelated in Aquinas’s theory of knowledge. In fact, it is precisely by recognizing this close interrelationship that we understand how the intellect can be receptive of forms.

The Picture Theory of the Phantasm

Let us suppose that the phantasm from which the intellect abstracts the intelligible species consists only of proper sensibles, such as color, tone, flavor, etc. along with their common sensible characteristics, such as shape, size, movement, etc. How would this hypothesis affect our claim to be able to know the natures of things? For example, suppose that one imagines a wolf. Can such a phantasm serve as the basis for abstracting an intelligible species pertaining to the nature of this animal?

To see the problems with this hypothesis, we need to consider how one and the same nature can be considered as a wolf, an animal, an organism, and a substance. It is each of these in virtue of one and the
same substantial form\(^{29}\). Therefore, it would seem possible to abstract not only “wolf” from the picture phantasm, but more generic intelligible species as well. But what determines whether we shall abstract “wolf” rather than “organism” or “animal”? The difficulty of answering this question within the context of the picture theory becomes apparent once we reflect upon the central axiom in this paper, i.e., that the intellect understands the natures of things by receiving their forms in an immaterial manner. Given that axiom, the actually intelligible species impressed upon the possible intellect does not differ from the potentially intelligible species or phantasm except with respect to mode of being. That is, the species impressed upon the possible intellect is the same species that is present in the phantasm, except for the fact that it has an immaterial mode of being in the immaterial power. According to the picture theory, then, “wolf,” “organism,” and “animal,” could not differ from each other, as they would all be abstracted from the very same phantasm. Since the intelligible species through which we know “wolf” is different from that through which we know “organism”\(^{30}\), we must reject one of the premises leading to this conclusion. We must either deny that the intellect is receptive of form during the process of abstraction, or we must affirm that the picture theory of the phantasm is inadequate.

On might respond to the above-mentioned problem by positing differences in the phantasms from which generic and specific concepts are derived. For example, perhaps the picture phantasm that impresses the intelligible species “organism” upon the possible intellect highlights those features that a wolf shares with other living things, while the phantasm that impresses the intelligible species “wolf” highlights the distinctively lupine features of the same animal. There are two problems with this proposal. The first has to do with the difficulty of a picture phantasm’s isolating the properties that a wolf shares with other organisms from those that are proper to wolves. All organisms acquire nourishment, grow, and reproduce,

\(^{29}\) Generic and specific species differentiate knowledge, not according to a difference in objects, but according to a difference in our manner of knowing: QDV q. 14, a. 12, ad 1.

\(^{30}\) QDV q. 8, a.1, c.
yet wolves have distinctly lupine ways of performing these three operations. Therefore, no pictorial phantasm could represent what pertains to wolves qua organisms without also representing what pertains to them as wolves. Secondly, no proper or common sensible characteristic is shared in common by such different organisms as a whale, a wolf and an amoeba. Therefore, no picture phantasm could directly represent any commonality.

In response to the problem, one might propose that the image in the imagination through which we form a concept of "organism" looks neither like anything in a wolf, nor any other animal - be it whale or amoeba, yet this image somehow symbolizes to the intellect what is common to all types of organisms. We might call this variation of the picture theory the "symbol" theory of the phantasm, for such a phantasm uses imagined proper and common sensible characteristics to represent something else. According to the symbol theory, the intellect interprets the phantasm in a manner similar to how a viewer interprets words or signs. In this way, differences in these symbols trigger the mind to think in a generic manner at one time and in a specific manner at another time.

The problem with the symbol theory is that the interpretation of the symbol-phantasm involves a process quite different from the abstraction of intelligible species as described by Aquinas. The interpretation of symbols involves the remembering of what the symbol stands for, but impression of an intelligible species upon the possible intellect in involves no derivation of information from the intellectual memory; otherwise, abstraction would hardly be significantly different from Platonic recollection. But Aquinas's theory of abstraction is metaphysical rather than hermeneutical: it is a matter of an illuminated phantasm's impressing the possible intellect rather than the possible intellect's interpreting the phantasm.

Another problem with the symbol theory of abstraction is that the differences between the different phantasm would only be differences in imagined proper and common sensible characteristics. Given Aquinas's understanding of intellectual apprehension as taking place through the reception of form, it seems to follow that
the differences in the accidental sensible qualities represented by the phantasm would yield only accidental differences in the natures known through the phantasm. The significance of this consequence becomes apparent when we consider how we know two vastly different genera of substance. The phantasms representing living and non-living substances would differ only with respect to the common and proper sensibles: the concepts formed through the impressed intelligible species would likewise convey only accident differences. Essential differences would thereby be reduced to accidental ones; if we take this analysis to its logical conclusion, substance itself would be a collection of sensible characteristics. Thus the picture theory of the phantasm tends to reduce Aristotle’s theory of the categories to something more like Humean phenomenalism.

The picture theory of the phantasm also renders problematic judgments about the natures of individuals. In the proposition “Socrates is a living being,” for example, we identify the predicate “living being” with the subject Socrates. One forms this judgment on the basis of the phantasm. In order for this phantasm to give an adequate sentient basis for this judgment, it must represent the same concrete individual in two different ways: first, as a unique individual; secondly as an individual possessing the characteristics from which the intellect can abstract the concept “living being.” Even if picture phantasms could represent “Socrates” and “living being,” they still could not convey how these two belong to the same whole. Two pictorial phantasms might represent the subject and predicate, but nothing in either of the phantasms would convey how one is related one to the other, for this relationship itself is neither a proper nor a common sensible.

The second major problem that besets the picture theory of the phantasm concerns the derivation of concepts related to causality. In nature we find agents acting upon patients for the sake of some goal. Since the agent, patient, and goal occur together in the same process, it might seem that the phantasm representing any one of these three principles would also represent the other two. But if all three are

31 ST I, q. 13, a. 12, c.; ST I, q. 85, a. 5, ad 3.
given together in the phantasm, then the intellect could not be impressed with an intelligible species representing just one of them.

One response to the above problem would be to say that the imagination forms an image of the agent, patient and goal apart from each other. In such a case, the phantasm of the agent (through which the respective intelligible species is impressed upon the possible intellect) does not in any way represent of the patient or goal. But this solution introduces a new problem: if we imagine any of these three apart from the others, then the concepts that we derive from their respective phantasms would have no reference to the concepts of the other two. That is, if in imagining the agent one in no way imagines the goal of the agent’s action, then it does not seem that the concept of the agent would contain the concept “acts for a goal.” In such a case, the proposition “every agent acts for a goal” would not be analytic: we would not “see” that the predicate necessarily belongs to the subject. This problem leaves the picture theorist with two alternatives. He can deny that “every agent acts for an end” is self-evidently true: at most, humans may regard this proposition as highly probable on the basis of having experienced the constant conjunction of the subject and predicate. On the other hand, he may affirm that humans regard the proposition as necessarily and universally true. The awareness of this universality and necessity, however, could not be derived from experience. Instead, it must derive from a natural disposition on the part of reason to combine the terms of certain general propositions. The former alternative replaces abstraction with the Humean notion of constant conjunction, the latter replaces it with the Kantian notion of an a priori synthesis. In either case, the picture theory of the phantasm leads to the unraveling of Aquinas’s theory of abstraction.

The picture theory of the phantasm likewise creates insuperable difficulties for Aquinas’s account of practical reason. This sort of reasoning requires that one form concepts of human action. These concepts, like others, are obtained through the process of abstraction from a phantasm. The formation of such concepts, however, is problematic for the picture theory of the phantasm. How, for example, could a picture phantasm represent the pursuit of truth
education of children, or the cultivation of friendship? Any attempt to answer this question must deal with problems analogous to those we saw with our acquiring concepts of agents, patients and goals. The combination of imagined proper common and proper sensible characteristics could represent three sorts of objects: human action, human nature, and the sensible qualities of a human being. These imagined characteristics, however, offer no basis for distinguishing any one of these three from the other two. If a proponent of the picture theory proposes that phantasms have special indicators through which they represent human action or human nature rather than accidental qualities, then the question arises as to how this indicator guides the intellect. If the intellect interprets the indicator as a sign that the phantasm is to be taken one way rather than another, then we run once again into the problem of replacing abstraction with an hermeneutical activity. And as we saw before, the intellect that allegedly interprets phantasms can no longer be said to be passively receiving intelligible species from the phantasm. Instead, it would be engaging in an activity somewhat akin to Platonic recollection.

One solution, offered by George Klubertanz, is to say that humans perceive their own actions through the cogitative power, while they use the imagination to form the sort of phantasm that serves as a source of speculative knowledge. This proposal satisfies the need for a phantasm that represents human actions to the intellect, but it gives rise to a new problem inasmuch as it does not explain how we relate human action to its object. Consider, for example, how the judgment that “this life is to be preserved” links life, which is the object of speculative reason, to the act of preservation, which is the object of practical reason. The proposition “the truth about this issue is to be sought,” likewise links truth, which is the object of speculative reason to the act of studying. If Klubertanz is correct, then the subject and predicate would refer to two different objects represented by two different phantasms. We could not identify one with the other, as we do when we form a proposition.

The three problems listed above show how the picture phantasm underdetermines the intelligible species to be impressed upon the
possible intellect. One response to this problem would be to have the intellect itself provide the additional determination. That is, the same picture phantasm can impress different intelligible species at different times based upon some difference in the way the intellect itself operates. This explanation is inherently plausible. Consider, for example, how someone who is taking a course in biology might think of a rabbit as an organism. The same person, when on a camping expedition that has a low food supply, might think of a rabbit in rather practical terms, i.e., as something to be hunted and eaten. He is mindful of different goals at different times, and this difference leads him to relate the same pictorial phantasm to different concepts. The goals that we have in mind might similarly influence how the intellect is impressed with an intelligible species during our original acquisition of concepts.

In order to explain precisely how the intellect might influence this process, we must return to the distinction between the agent and possible intellect. The former cannot be responsible for the picture phantasm's impressing the possible intellect in different ways at different times. For to do that, it would have to be aware of the phantasm, and to be aware it would need to be passive with respect to the phantasm. The agent intellect, however, is in no way passive with respect to the phantasm; otherwise, the material would be capable of acting upon the immaterial, so that the very reason for positing the agent intellect would be negated. We might add that positing an agent intellect that is already cognizant of the phantasm and directs the formation of universals would amount to the homunculus fallacy, for an agent intellect that determines how we focus has engaged in practical reasoning even before the possible intellect forms a concept. The possible intellect, on the other hand, can direct the formation of phantasms from which intelligible species might be abstracted. In the final section of this paper we shall see how the possible intellect, working in conjunction with rational appetite, influences the formation of phantasms. First, however, we will compare the various problems associated with the picture theory in order to understand how the phantasm makes abstraction possible.

32 SN III, d. 14, a. 1, sol. 2, ad 2; ST I-II, q. 50, a. 5, ad 2.
Analysis of the Problems with the Picture Theory of the Phantasm

By reflecting on the many deficiencies in the picture theory of the phantasm, we can better understand the sort of phantasm required to allow the intellect receive forms from the things it knows. Consider, first of all, how the picture theory offers an inadequate basis for forming concepts of human action. This problem indicates the need for phantasms that represent the humans as initiators of changes that in turn lead to the attainment of goals. We also saw that Klubertanz’s version of the picture theory cannot explain how we form practical judgments, for it has one internal sense representing the goal of human action and another representing the human action itself. Reason cannot perform a practical judgment if the concrete goal and the human action are cognized separately at the sentient level. This problem indicates the need for a phantasm that can interrelate the possession of the goal and actions done for the sake of possession of the goal. Instead of representing these as two different objects, it would represent them as two aspects of the same concrete whole.

We concluded that the picture phantasm on its own cannot determine whether a generic or specific intelligible species shall be abstracted, or whether to represent the agent, patient, or the goal belonging to a process of change. These problems can be solved by adopting an approach similar to the one just mentioned vis-à-vis practical reasoning: a phantasm that can represent human actions as directed toward goals can represent the goal-directed activities of other beings as well. After all, nature is revealed through operation\textsuperscript{33}. By representing these different sorts of activities, it will provide the determinations that were lacking in the picture theory. Consider how we may think of the same individual as an organism at one time and as a wolf at another. The phantasm through which one acquires the concept “organism” represents an individual as capable of the goal-directed actions that are proper to different living beings. The phantasm through which one acquires the concept “animal” may represent the same individual as the source of those goal-directed

\textsuperscript{33} ST I, q. 76, a. 1, c.
actions that are proper to animals. In this way, nature is be grasped in either a generic way or a specific way, thanks to the determinations provided by the phantasm.

We also saw that the picture theory of the phantasm cannot account for our ability to form propositions about the nature of an individual, such as “Socrates is a living being.” These judgments, which are somewhat speculative in nature, require a phantasm that represents the same individual in two different ways. The first way, corresponding to “Socrates” in the example above, refers to the concrete individual whom the knower remembers or senses. The second way, corresponding to “living being” in the example above, represents the same individual as capable of performing life activities. Through these two aspects’ being united in the same phantasm the subject and predicate are already related the each other at the level of sensory awareness in a manner that sufficient for the intellect to perform its judgment identifying one with the other.

The Unity in the Diversity of Roles Played by the Cogitative Power

The cogitative power as described by Aquinas satisfies the requirements discussed in the last section. This power, says the Angelic Doctor, is capable of perceiving generically or specifically, and it is the secondary subject of intellectual virtues such as prudence and science. Furthermore, Aquinas credits this power with the composition and division of particular intentions in a manner analogous to how reason composes and divides universal intentions. Through this composition and division the cogitative power performs an instrumental role in the judgments made by speculative and practical reason.

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34 “Si uero apprehendatur in singulare, ut puta <si>, cum uideo coloratum, percipio hunc hominem uel hoc animal, huiusmodi quidem apprehensio fit per uiv cogitatum...” CDA II, cap. 13. CPA II, lec. 20, discusses how through experience, we can become cognizant of “hic homo,” then of more generic terms.
35 ST I, q. 89, a. 5, c.; ST I-II, q. 53, a. 1, c.; ST I-II, q. 50, a. 4, ad 3.; and ST II-II,q. 47, a. 3, ad 3.
36 SCG II, cap. 73, par. 14; QDV q. 10, a. 5, c.
We can explain how one power able to perform all of these roles by showing how they all originate from the same basic awareness. Prior to the influence of reason, the operation of the cogitative power has a determinate structure similar to instinctive judgment. Aquinas says that the power that performs instinctive judgment, called the estimative power, is the same in species as the cogitative power in humans: any difference between the two is the result of the influence of reason on the internal sense power. By looking at the nature of instinctive judgment, therefore, we can discern those characteristics of cogitative perception that are prior to the influence of reason. As we will show below, instinctive judgment is a complex mental act that interrelates three elements: first, what is presently acting upon the external senses; secondly, some imagined, anticipated future encounter that is either desirable or undesirable to the perceiver; thirdly, the actions through which that encounter might be achieved or avoided, depending on whether it is desirable or undesirable. Using this sort of awareness as its foundation, the cogitative power is enabled by the influence of reason and will to form phantasms that provide suitable objects for both speculative and practical reason.

Aquinas frequently illustrates his descriptions of instinctive judgment with the example, borrowed from Avicenna, of how a sheep perceives a wolf. He speaks in the *Summa theologiae* and in his commentaries of how the sheep, upon seeing the wolf, naturally judges that something harmful is to be avoided. This perception causes the sheep to fear the wolf, and fear causes the sheep to flee. Instinct therefore combines the sheep's awareness of the wolf as it is present to the external senses with both the imagined harm and the flight necessary to avoid that harm. On the other hand, the wolf's instinctive judgment of the sheep combines the awareness of three things the sheep as it is present to the external senses, the imagined

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37 ST I, q. 78, a. 4, ad 5.
38 "Unde prudential in aliis animalibus est naturalis aestimatio de convenientibus prosequendis, et fugiendis, nocivis, sicut agnus sequitur matrem et fugit lupum." CMP I, lect 1.
39 ST I, q. 81; a. 3, c. "[S]icut ovis viso lupo necesse habet timere et fugere..." QDV q. 24, a. 2, c. For appetite causing movement see QDV, q. 26, a. 3, ad 11; CDA III, cap 16; ST I-II, 22, a. 2, ad 2.
goal of eating it, and the actions through which it may attain this goal. Note that in neither case does the animal first perceive these three components separately only to piece them together through a process of inference. Instead, the sheep immediately perceives the wolf both as a source of anticipated harm and as something to be avoided, while the wolf perceives its prey as dinner to be hunted down right now. The three aspects of the object are interwoven from the onset. Aquinas conveys this complex yet unified awareness had by the estimative power by saying that the sheep perceives the wolf as its “enemy” or as “harmful” to itself. In the *Commentary on De anima* Aquinas summarizes the different possible ways in which an animal may perceive an object by saying that the animal perceives it as the “principle or terminus of an action or passion”. The sheep perceives the wolf as the principle of a passion, i.e., as a predator, while the wolf perceives the sheep as the terminus of an action, i.e., as something to be hunted and eaten.

In his descriptions of practical reason Aquinas mentions the same three components (a goal, actions directed toward that goal, and the present situation) that we found in instinctive judgment. Consider how deliberation commences once one is aware of a concrete end as attainable in the present situation by various means while the will intends to attain this good. This initial grasp of the situation prior to any deliberation is called *intellectus*. The cogitative power is the

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40 “Vis autem apprehendens hujusmodi rationes convenientis et non convenientis [i.e., of the kind that would make us fear a picture of something harmful if we think that it is real] videtur virtus aestimativa, per quam agnus fugit lupum et sequitur matrem.... Hoc autem conveniens quod sensualitatem movet, aut ratio suae convenientiae, aut est apprehensa a sensu, sicut sunt delectabilia secundum singulos sensus quae animalia persequuntur; aut est non apprehensa a sensu, sicut inimicitiam lupi neque videndo neque audiendo ovis percipit, sed aestimando tantum. Et ideo motus sensualitatis in duo tendit ...ad ea quae nociva vel convenientia secundum solam aestimationem cognoscuntur....” II Sent., d. 24, q. 2, art. 1, c. (*Scriptum super libros Sententiarium magistri Petri Lombardi*, vol. 2, ed., Pierre F. Mandonnet, Paris: P. Lethielleux 1929, 601-2).

41 CDA II, cap. 13.

42 ST II-II; q. 49, a. 2; ad 3; CET VI, cap. 7. The *Summa theologiae* divides human action into three phases, the first of which is concerned with the end, the second with the means and the third with execution. Thomists have usually subdivided the first phase into two parts: first, the intellect simply apprehends the end
secondary subject of the virtue perfecting this operation. That is because intellectus is undergirded by the perceptual awareness relating the present situation both to a concrete future goal and to the different courses of action that may lead to the attainment of that goal. There are obvious differences, however, between the perception that underlies intellectus and instinctive judgment. In the former case, the animal always judges that the goal is to be pursued here and now. That is because the brute apprehends its goal as something good here and now: it does not hesitate to judge that...

(apprehensio) while the will simply wishes for that end (velle); second, the intellect judges that it is possible to attain the end (iudicium circa finem), whereupon the will intends to seek what is possible (intentio). See Bourke, V.: Ethics: A Textbook in Moral Philosophy, New Jersey: Englewood Cliffs 1957, p. 85. In Right Practical Reason: Aristotle, Action and Prudence in Aquinas, Oxford: Clarendon Press 1994, however, Daniel Westberg argues that there is no textual or philosophical basis for divided the phase concerned with the end into two parts: "It is much more straightforward, more sensible, and more faithful to Thomas to combine apprehensio with iudicium circa finem, and velle with intentio. Here again, seeing the context of discussion as one of the production of particular actions and not the moral life in general is helpful. The process of action must begin with an attainable object, because one cannot intend an end which is impossible. There can be speculative thought about impossibilia but certainly no practical reasoning. Therefore a stage to judge the possibility of an end is superfluous..." Regardless of whether one sides with Bourke or Westberg, it is clear that practical reason's inquiry into various possible means begins only once one has recognized that the end is attainable by some means, albeit one that has not yet been determined. Hence the analysis in this paper takes no sides on this controversy and instead takes its point of departure from the two authors' common ground.

This parallel between instinct and practical understanding or intellectus explains why Aquinas relates this act to the present in ST II-II, q. 48, a. 1, c. (8:365); and ST II-II, q. 53, a. 3, c. (8:391); while he relates it to the end (which lies in the future) in ST II-II, q. 47, a. 6, c. (8:353); and ST II-II, q. 49, a. 2, ad 1 (8:368). In Quaestiones disputate de veritate [QDV] q. 10, a. 2, ad 4 (22.2:303), Aquinas says reason applies foresight (providentia), which concerns the future, to particulars through the mediation of particular reason (i.e., the cogitativa power).

Aquinas contrasts the animal's desire for well-being here and now with the human desire for well-being simpliciter, which implies a desire for perpetual existence in CET I, cap. 10 (47.1:36-7). See also CET X, cap. 2; SCG II, cap. 82; and SCG II, cap. 79 for a similar contrast. Note that this argument applies primarily to the concupiscible appetite and its respective apprehensive powers, for these apprehensive powers apprehend what is delightful to the senses ut mune, as Aquinas says in SN III, d. 26, q. 1, a. 2, r. (Moos ed., 816-17, pars. 25-27). Nevertheless, it
whatever course of action that appears to lead to the attainment of the goal is to be undertaken. Reason, however, apprehends the good under a universal formality, so that the will, drawn by what reason has apprehended, seeks to live well *simpliciter* rather than merely to live well here and now. As a consequence, it is not necessitated to seek whatever particular good is available in any particular situation, for each particular realization of the good falls short of the universal good that the human person seeks. The universality of the object of the will not only frees one from the constraint to pursue the concrete good under consideration, but it affects sense appetite as well, for the higher appetite flows into the lower. As a result, sense may simply apprehend the concrete good without judging, as a brute does, that it is to be pursued now. Thanks to the will's inclination toward the universal good, therefore, the cogitative power's judgment is released from the domination of instinct.

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46 ST I-II, q. 13, a. 2, ad 2. See also ST I-II, q. 17, a. 2, ad 3.
47 ST I, q. 80, a. 2, ad 2; QDV q. 22, a. 5, c.
48 CET I, cap. 10 (47.1:36-7). De veritate notes how the will, because its object is the *bonum absolute*, "non habet necessitatem respectu huius vel illius rei quantunque apprehendatur ut bona vel utilis." QDV q. 25, a. 1, c. (22.3:729).
49 "Unde si proponatur aliquod objectum voluntati quod sit universaliter bonum et secundum omnem considerationem, ex necessitate voluntas in illud tendet, si aliquid velit: non enim poterit velle oppositum. Si autem proponatur sibi aliquod objectum quod non secundum quamlibet considerationem sit bonum, non ex necessitate volutas fertur in illud... partcutaria bona, inquantum deficiant ab alioquo bono, possunt accipi ut non bona: et secundum hanc considerationem, possunt repudiari vel approbari a voluntate, quae potest in idem ferri secundum diversas considerationes." ST I-II, q. 10, a. 2, c. (6:86).
50 ST I-II, q. 31, a. 5, c. See also QDV q. 25, a. 4, c. (22.3:737). In ST I-II q. 31, a. 6, c., Aquinas suggests that this overflow may account for the ability of humans to take delight in sensation itself.
51 "... [C]oncupiscibilis nata est moveri in delectabili sensus, et irascibilis in vindictam, quae tamen interdum ratio prohibet per suam deliberationem." De virtutibus in communi q. 1, a. 12, ad 19; "... [C]onsuetudo facit necessitatem non simpliciter set in repentinis praecipue. Nam ex deliberatione quantumcumque
This suspension of judgment brings about a pause from action during which the various means toward an end may be compared with each other. The cogitative power plays a crucial subordinate role during these deliberations, and for that reason Aquinas calls it the secondary subject of eubulia, the virtue perfecting deliberation. While reason is comparing the end and various means under a universal formality, the internal sense compares the ways in which various concrete means may lead to the attainment of the same concrete goal.

One who is engaged in practical reasoning may compare not only future possible means to an end, but past attempts to attain that goal as well. Such comparisons may lead to experience (experientia or experimentum) or "know how," a combination of skill and knowledge regarding the production of something. Aquinas gives the example of someone who compares past attempts to alleviate fever until he recognizes that the application of a specific herb has been especially effective. The cogitative power plays a central role in this process, for this discovery involves a concrete awareness of this herb as having been successfully used many times in the past.

\[\text{consuetus potest contra consuetudinem agere.} \] Quaestiones disputate de malo q. 6, ad 24 (23:153).
\[52 \text{... [A]pprehensio virtutis imaginativae est subita et sine deliberatione: et ideo potest aliquem actum causare, antequam superior vel inferior ratio etiam habeat tempus deliberandi. Sed judicium rationis inferioris est cum deliberatione, quae indiget tempore, in quo etiam ratio superior deliberare potest.} \] ST I-II, q. 74, a. 7, ad 4 (7:42).
\[53 \text{CET VI, cap 9. In CET VI, cap. 1, Aquinas explains that the cogitative plays this central role in eubulia because of its ability to particular variables.}
\[54 \text{In CDA III, cap. 10, Aquinas speaks of rational imagination (fantasia rationalis) to compare various phantasm representing different means to the same end. This power, found in humans, supercedes the sensory imagination (fantasia sensibilis) found in brutes. In this passage, Aquinas seems to be adopting the language used in the Moerbeke translation of De anima to refer to the same powers that he elsewhere calls the cogitative and estimative powers.}
\[55 \text{CMP I, lec. 1; CPA II, lec. 20.}
\[56 \text{CMP I, lec. 1, par. 15.} \]
Experience's perceptual awareness of how different means are related to the same end involves the same three basic components that we find in instinctive judgment, albeit in modified form thanks to the influence of reason and will. These components are the initial situation in which a person has a fever, the goal of alleviating fever, the human action of giving the herbal medicine so as to alleviate that fever. These three components parallel instinctive judgment's interrelating what is presently acting on the senses with some anticipated good or evil and the actions through which one achieves or avoids the good or evil respectively. Nevertheless, two kinds of sensory awareness clearly differ. Instinctive judgments relate only to the problem existing here and now, while experience relates to past situations and compares them with each other. Instinctive judgments may relate only to the needs of the perceiver or perhaps the perceiver's family, while it is plausible that experience may be enhanced by the consideration of treatments that have been applied to other patients by other doctors or medics. Experience escapes instinctive judgment's limitations to the goals attainable in the present situation, while its recognition of what is common to many cases is more like universal reason's recognition of what is common to many cases. But the cogitative power does not grasp what is universally true, for in recognizing that one sort of action has worked in the past one is aware of a finite number of concrete events rather than what is true always and everywhere.

Aquinas tells us that repeated experience gives rise to art and science. By art he means the knowledge of which actions produce desired effects and why they do so. The art of medicine, for example, consists not only of the recognition of which treatments of disease work, but also of an understanding of how these treatments bring about bodily well-being. Art is closely related to science, for art works with nature in producing its effect, while science considers the nature of something apart from its connection to human productive activity. The doctor who applies medicine to heal patients, for

57 ST II-II, q. 47, a. 3, ad 2; ST II-II q. 49, a. 1, c.
58 CMP I, lec. 1, par. 18. In CPA II, cap. 20, par. 11, he adds that experience leads to the discovery of the first principles of art and science.
example, knows that one treatment works while others do not on the basis of his understanding of the nature of the medicine and the human body. It is as though the doctor reasons syllogistically, with human productive activity as the minor premise and the nature of medicine’s interaction with the human body as the major. It is not difficult, therefore, to imagine how the same three components that we find in art are in science as well. Consider how speculative reason is aware of how nature acts for a goal. Speculative reason does not, however, restrict itself to the consideration of human actions or goals. Rather, speculative reason inquires into how beings, both human and nonhuman act for their own goals. For example, a biologist considers how various organisms act for the goals of continuing their own existence and that of their species. The perceptual awareness that accompanies the scientific understanding of human nature has its roots in the pre-discursive awareness of perceived individuals as acting in a manner that is conducive to or detrimental to the well-being of the perceiver.

One apparent difference between instinctive judgment and the experience that underlies speculative inquiry is that the former is generally directed toward something present to the external senses. Speculative reasoning in the strict sense is directed toward universal truths and hence needs not form concepts of the things within the immediate gaze of the knower. One must recall, however, that one who engages in speculative inquiry must communicate about his subject matter. Inasmuch as it involves the use of language, speculative reasoning always relates the knower to interactions with his immediate environment. Aquinas therefore notes that even speculative reasoning involves a practical component inasmuch as it involves the consideration of the fitting use of language. Inasmuch as the sentient awareness of these communicative interactions constitute part of the experience that underlies speculative reasoning, this experience has its roots in instinctive judgment’s reference to interactions with what is presently acting upon the senses.

59 De unitate intellectus, cap. 5.
60 ST I-II, q. 57, a. 3, ad 3.
Aquinas's theory of the cogitative power also provides us with an understanding of the sentient awareness that facilitates both practical and speculative judgments. Both sorts of judgments require perception that provides us with an awareness of the same individual under two different aspects. We see an analogous sort of awareness in the sense judgments that precipitate concupiscible and irascible passions. Consider the example, given by Aquinas of a lamb that seeks to be nursed by its mother. This animal perceives something as suitable to its senses. That is, the lamb perceives its mother's milk as suitable to taste. An animal that does not yet possess what it loves will imagine it when provoked by circumstances. The lamb, for example, will imagine what it would be like to taste this milk. In fact, even an animal that is so primitive that it has no memory imagines what it loves. At the same time the lamb imagines this object it also imagines the actions leading to the enjoyment of this milk. As Aquinas says, the lamb perceives its mother as "something to be sucked." As result, it performs an instinctive judgment, which then causes it to crave the milk and start nursing. Craving is caused by a complex awareness first of all of a goal as something suitable to the perceiver but not yet present, and at the same time the awareness of whatever is present to the senses as something to be interacted with so as to attain the goal.

The irascible passion of hope builds upon craving, but adds to it another layer of perception and passion. Aquinas illustrates hope in brutes with the example of a dog that sees a prey that is distant and hence difficult to catch. The dog imagines not only what it would be like to feast upon this prey (which causes craving), but also the difficult pursuit that would be required. This complex perception precipitates hope, which in turn leads the dog to pursue its prey. The perception causing hope relates to the same goal under two different aspects. First the dog imagines eating its prey; secondly, the dog

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61 CDA II, cap. 13.
62 ST I, q. 81, a. 2, c.
63 ST I-II, q. 33, a. 1, c.
64 CDA III, cap. 10.
65 CDA II, cap. 13.
imagines the difficult activities that lead to eating the prey. Inasmuch as the dog craves its prey, it apprehends it as simply good, but inasmuch as it regards it as obtainable through difficult actions, the dog apprehends the same goal as a difficult good. Although it adds another apprehension to the first, the second apprehension is still principally focused upon the same goal. This interrelating of different facets of the same individual goal shows that sentient awareness even at this level has the kind of complex unity needed to serve as the sentient basis of the judgments performed by reason.

**Conclusion: Synergy of Active and Passive Elements of Cognition**

Aristotle’s realism is underpinned by his theory of sensation as the reception of sensible forms that exist in nature. In order to convey the receptivity of sense powers to sensible forms, Aquinas, like Aristotle, likens sensation to wax’s being impressed with the shape of a seal. While this metaphor vividly emphasizes the receptive aspect of sensation, it does not convey the whole picture. The perceptual awareness that we share with brutes of our goal-directed interactions with environment is likewise essential to realism; our human awareness of these interactions is transformed, if you will, by the human “instinct” for the universal good, so that it can become the basis of our knowing the natures of things. Without the interactive component of perception, we would be left with the picture theory of the phantasm, at which point Aquinas’s theory of abstraction breaks down. In such a case, we would either possess no genuine knowledge or what knowledge we possess would be innate rather than acquired through the senses. Our only alternative is to seek to understand perception as a synergy of its active and passive aspects. Aquinas himself manifests such an understanding of perception in his description of the many roles performed by the cogitative power.

A similar synergy can be found between practical and speculative reason. Consider how the knowledge of the natures of things that we attain through speculative reason has its earliest roots in practical experience. Even when formally engaged in speculative reasoning, one arrives at the truth only after engaging in a kind of deliberation
concerning how to imagine and communicate about that which one seeks to understand. Speculative inquire involves persistent effort rather than mere passivity. To fail to recognize the way in which this effort is essential to the quest for truth is an insidious adoption of the picture theory, with all its problems. Any attempt, therefore, to articulate a realist understanding of the relationship between sense and intellect, should include the integration of the passive and active aspects of perception, as well as to recognize how practical and speculative knowledge work together.