

Knowledge according to Bavinck and Aquinas

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In part one I examined Herman Bavinck's realist theory of knowledge both as set forth in his major work, *Reformed Dogmatics*, and in two later works, *Foundations of Psychology* and *Philosophy of Revelation*.¹ Especially in his dogmatics, Bavinck works out the presuppositions of his theology, articulating a realist account of knowledge, which he contrasts with the two major trends in modern philosophy: rationalism and idealism on the one hand, and empiricism and materialism on the other. Bavinck locates his own thought as standing in the realist Christian tradition beginning with Augustine and running through Aquinas and the Reformed Scholastics. While it is clear that Bavinck draws heavily on Aquinas, he seems to assume that there is no significant difference in the thought of his two great predecessors. I will argue that, with regard to the understanding of objectivity (i.e., the subject-object relation), there is a significant difference between Augustine and Bavinck on the one hand, and Aquinas on the other. Because a difference in the conception of objectivity has implications for almost every aspect of the discussion of knowledge, I will compare Aquinas and Bavinck on the main features of Bavinck's realism discussed in part one. I will begin with Aquinas's account of how things can be said to be known in the eternal exemplars, the divine ideas; in other words, how human reason participates in the divine light. At this point the similarities and differences between Aquinas's and Augustine's view—which is similar to Bavinck's—is most easily seen.

1. *Bavinck Review* 6 (2015), 9–36.

The Natural Light of Reason as a Participation in the Divine Light

Our strategy is to begin with the claim that the natural light of reason is a participation in the divine light. While all three authors agree that this is true, upon close inspection it becomes clear that Augustine and Bavinck draw different conclusions from this thesis than does Aquinas. Examining Thomas's thought we will see that Thomas finds in this doctrine only an account of the nature of the human intellect and not a justification of the truth of understanding. The reason for this difference is that we find in Thomas a different psychology of knowing, an account of the operations of the intellect in which knowing consists in assimilation of the known, rather than a confrontation with the object. For Thomas, the mind is that which makes all things and becomes all things. Embedded in this account is an alternative view of objectivity—one which is free from the ambiguities that we have noted in Bavinck's position.

To begin, then, it is claimed that intellect or the natural light of reason is an intelligible light participating in the divine light. Bavinck rightly observes that Thomas utilizes this image on a variety of occasions. For example, in the discussion of how God is known by us, Aquinas says that “the intellectual power of the creature is not the essence of God” but is “a participated likeness of Him.” He continues:

Hence also the intellectual power of the creature is called an intelligible light, as it were, derived from the first light, whether this be understood of the natural power, or of some superadded perfection of grace or of glory.²

Elsewhere, as Bavinck notes, when arguing that the agent intellect is something in the soul, Thomas also speaks of it “lighting up the phantasms, as it were” (*ST* 1.79.4). Now “as it were” in both passages is Aquinas's way of indicating that to speak of the intellectual power as a light is a metaphor. The exact nature of this power will become clear only

2. *ST* 1.12.2. Citations from the *Summa theologiae* are from the *Basic Writings of Saint Thomas Aquinas*, vol. 1, ed. Anton C. Pegis (New York: Random House, 1945). Latin citations are from the Blackfriars edition (New York: McGraw-Hill, 1963ff.).

after we have examined his account of how the soul knows. Our concern here is how our reason being a participation in the divine light is understood by each author.

According to Bavinck, Augustine and Aquinas have similar views of how our reason participates in the divine reason. While their views may be similar, they are not the same, and understanding the difference between them will provide a key to Bavinck's position. Although Thomas professes to agree with Augustine's claim that "the intellectual soul knows material things in the eternal exemplars," when we look more closely at what he says, we recognize that there are significant differences between them. One might characterize the difference this way: Augustine holds that human reason is a participation in the divine light by virtue of what it does, seeing the truth in God, whereas Aquinas asserts that human reason's participation in the divine light is by virtue of what it is, intelligent being. Every point at which we will be comparing Bavinck and Aquinas will hinge on this difference. Ultimately, on this point Bavinck remains, though not without ambiguities, more Augustinian than Thomist in his thought. Close examination of Aquinas's interpretation of Augustine will identify the differences.

Regarding the role of the eternal exemplars in knowing, Aquinas explains Augustine's position in some detail, affirming his agreement with it, yet interpreting Augustine's words in a way that the latter would hardly recognize. It is significant that the position Aquinas ascribes to Augustine is similar, if not identical, to the view espoused by Bavinck.

Are the eternal exemplars (divine ideas) known from things, or are things known through the exemplars? As Aquinas notes, Romans 1:20 seems to affirm the former: "[T]he invisible things of God are clearly seen...by the things that are made" (*ST* 1.84.5 arg. 2). Again, he points out that to hold that our mind knows things in the eternal exemplars amounts to agreeing with Plato, "who said that all knowledge is derived from them (arg. 3; cf. *Republic* 507c ff.). According to Aquinas, Augustine disagrees with this view, for he holds that our knowledge is not derived from the eternal exemplars but rather "in the eternal exemplars":

If we both see that what you say is true, and if we both see that what I say is true, where do we see this, I pray? Neither do I see it in you, nor do you see it in me; but we both see it in the unchangeable truth which is above our minds. Now the unchangeable truth is contained in the eternal exemplars. Therefore the intellectual soul knows all truths in the eternal exemplars.³

In his response Aquinas observes that Augustine “was imbued with the doctrines of the Platonists,” that he adopted any teachings of the Platonists consistent with faith, and that he amended “those things that he found contrary to faith.” Plato held, Aquinas states, that “the forms of things subsist of themselves apart from matter.” The mind participates in these forms, called by Plato, and corporeal matter participating in the same idea becomes a particular thing. For example, corporeal matter by participating in the idea of stone becomes a stone, and our intellect participating in the same idea has knowledge of a stone. Augustine modified this position, eliminating the independent existence of the ideas, holding instead that the exemplars of all creatures exist in the divine mind and that “it is according to these that all things are formed, as well as that the human soul knows all things” (*ST* 1.84.5).

So far the account of Augustine’s position seems to be identical with Bavinck’s in all significant respects. “The Logos who shines in the world,” writes Bavinck, “must also let his light shine in our consciousness. That is the light of reason, the intellect, which, itself originating in the Logos, discovers and recognizes the Logos in things.”⁴ In both accounts mind and things receive their nature from God, and by virtue of this common origin the mind is fitted to know things.

3. *ST* 1.84.5 sed contra; quoting Augustine, *Conf.* XII, 25. The sed contra of the article usually presents the thesis that Aquinas will defend in his response. What is notable here is that Aquinas is affirming that Augustine is right, but only in Aquinas’s reply in the corpus do we find how “creatively” Aquinas is interpreting Augustine’s words. This discussion is also unusual in that Aquinas pauses to show how Augustine’s position differs from that of Plato. Clearly, Aquinas is trying to show how much agreement there is between his view and Augustine’s.

4. *Reformed Dogmatics*, vol. 1, *Prolegomena*, trans. John Vriend and edited by John Bolt (Grand Rapids, MI: Baker, 2003), 233; hereafter *RD*.

While Augustine and Bavinck assert that the intellect knows all things in the eternal exemplars and use the metaphor of light to explain how this happens, Thomas goes beyond the light metaphor to examine how this knowing occurs. There are two ways, Aquinas states, that one thing can be said to be known in another: “as in an object itself known” or “in a principle of knowledge.” With regard to the first, knowing a thing as in an object itself known is like seeing “in a mirror the images of the things reflected therein.” Looking in a mirror, I can see reflected a chair standing behind me. In this way our soul in the present life cannot see all things in the eternal exemplars. (However, Aquinas adds, “the blessed, who see God and all things in Him, know all things in the eternal exemplars” in this way.)

Aquinas explains his second way in which things can be said to be known in another “as in a principle of knowledge” by using the analogy of the sun: “we might say that we see in the sun what we see by the sun.” What does this mean?

And thus we must needs say that the human soul knows all things in the eternal exemplars, since by participation in these exemplars we know all things. For the intellectual light itself, which is in us, is nothing else than a participated likeness of the uncreated light, in which are contained the eternal exemplars. Whence it is written (Ps. iv, 6,7), *Many say: who showeth us good things?* Which question the Psalmist answers, *The light of Thy countenance, O Lord, is signed upon us;* as though to say; By the seal of the divine light in us, all things are made known to us. (ST 1.84.5)

The key point is that Aquinas specifies that the human soul *participates* in the eternal exemplars rather than *sees* things in them; it knows by means of the light within us, a light received from God.

What does Aquinas mean by saying that “the intellectual light itself which is in us, is nothing else than a participated likeness of the uncreated light?” What does it mean that through this likeness all things are known to us? How does the soul participate in the eternal exemplars? First of all, participation in the eternal exemplars is not sufficient for knowledge—the position already attributed to the Platonists. By contrast, Aquinas asserts that, “besides the intellectual light which is in us, intelligible species, which are derived from things, are required in order that we may have

knowledge of material things...” He cites Augustine in support of this position:

Although the philosophers prove by convincing arguments that all things occur in time according to the eternal exemplars, were they able to see in the eternal exemplars, or find out from them, how many kinds of animals there are and the origin of each? Did they not seek for this information from the story of times and places? (*ST* 1.84.5; quoting *De Trinitate*, IV, 16)

The human intellect is a participation in the intellectual light, but Aquinas is concerned to show that this is not enough for knowledge and that Augustine concurs in this view: intelligible species derived from the senses are also required for humans to gain knowledge.

At this point it is good to recall that Bavinck too asserts the necessity for the senses to provide the data for understanding. Still this does not mean that there is complete agreement between Thomas and Bavinck. For Bavinck the primary function of the argument that our mind is a participation in the intellectual light is to guarantee the objectivity of our knowledge, to solve the subject-object problem. The conviction that our intellectual operations such as forming concepts, judgments, and conclusions correspond to reality, he asserted, “rests only in the belief that it is the same Logos who created both the reality outside of us and the laws of thought within us...” (*RD*, 231). Aquinas makes no mention of these matters but rather simply asserts that the fact that our mind is a participation in the divine mind is not enough to explain knowledge; one must also investigate the story of times and places, for initially we only have the possibility of understanding.

Why the difference? Specifically, why does Bavinck raise the issue of the subject-object relation while Aquinas is silent on this point? The reason, I believe, is that for Bavinck the natural light of reason, which is a participation in the divine light, operates by shining its light on objects and so brings to light the intelligible components in sense experience, and on this crucial point the objectivity of knowledge is based. By contrast, for Aquinas the natural light of reason as a participation in the divine light is not used to explain the objectivity of our knowledge. It is an account of what the mind is, not of how knowledge of truth is possible. To conclude,

Bavinck was right in his claim that Aquinas held the human intellect to be a participation in the divine light. God's very essence is to understand, but we share in understanding as is seen in the fact that we are able to understand both things around us, ourselves, and things above us including God.⁵ The difference between them is that Bavinck uses this thesis to defend the objectivity of knowledge, while Aquinas is silent on this matter. I will argue that this silence is not an oversight on Aquinas's part but stems from his conviction that knowing differs fundamentally from seeing. In short, the problem of objectivity is solved by Aquinas in his analysis of the operations of the intellect, not by an appeal to some form of divine illumination Augustinian or otherwise.

In order to defend this claim it will be useful to examine first Aquinas's account of truth, specifically how it exists differently in the senses and the intellect. After we have seen how truth is found in the intellect, then we will turn to Aquinas's account of the operations of the intellect in order to grasp clearly how the intellect acquires truth. Only when we have detailed the intellectual operations will the reasons for the difference between Bavinck and Aquinas on the problem of the objectivity of knowledge become clear.

The Agent Intellect or the Natural Light of Reason

As noted above, according to Bavinck God understands by his very essence, and we understand through participating in God's essence. Again, it is not enough for the Logos to work in the world, for the Logos "who shines in the world must also let his light shine in our consciousness. That is, the light of reason, the intellect, which, itself originating in the Logos, discovers and recognizes the Logos in things" (*RD*, 233). This, it will be recalled, was identified as "the internal foundation of knowledge (*principium cognoscendi internum*)."⁵ Similarly, Thomas speaks of the natural light of reason. Bavinck's account of the operations of reason has

5. Again, another area of broad agreement is the necessity of the senses for knowing. The question will be how this role is described by each author.

already been given. The present question is whether Aquinas's account of the operations of mind is similar to that given by Bavinck or whether there are significant differences.

For Aquinas there is a double aspect of mind. It is both active and passive; it is what makes all things and becomes all things. Complicating his account is the claim that in the act of being receptive or passive, it is actualized. It will be useful for our purposes to examine these two dimensions separately. First, we will treat of mind as active and then in the next section examine how it is receptive. One should not expect this analysis to be easy. Aquinas comments that to know the nature of the soul requires "a careful and subtle inquiry" and for this reason "many are ignorant of the soul's nature, and many have erred about it."⁶

A brief sketch of the context in which Aquinas argued his position will show how significant this teaching is. In the thirteenth century there were fierce debates concerning the nature of the intellect, and Thomas was heavily involved in those discussions. Forcefully and repeatedly he defends the view that the human soul possesses an intellectual power and that this power is a participation in the divine understanding. The evidence for the latter point is found in the fact that our mind only participates in understanding; it is not wholly intellectual. What is wholly or essentially intellectual has complete understanding, and this is true only of God. Our own experience is that we are intellectual "in part," for our understanding is partial and incomplete. Another indicator is that we come to understand only slowly and gradually—not understanding initially and later coming to understand "by reasoning with a certain

6. *ST* 1.87.1. From what we have already seen, it is clear that Aquinas holds that the intellect knows itself through its own actions. There are two types of knowledge: first, when "Socrates or Plato perceives that he has an intellectual soul because he perceives that he understands"; secondly, "universally, as when we consider the nature of the human mind from a knowledge of the intellectual act" (*ST* 1.87.1). In other words, the first kind of knowledge is experience or awareness of the fact that one is thinking; the second is knowledge of "essence and nature." It is about the latter that Aquinas comments that many have erred and observes that the account of the intellect's nature and operations is anything but easy.

discursiveness and movement.” Our intellect “has an imperfect understanding, both because it does not understand everything, and because, in those things which it does understand, it passes from potentiality to act” (*ST* 1.79.4; cf. 1.79.2). Not only do we not understand everything, we also do not understand all of the time. From this evidence some philosophers concluded that there is only a separate intellect, that there is no agent or active mind in each human being—a position Thomas adamantly opposed. The most prominent exponent of the view that there is only one separate, agent intellect for all human kind was Averroes. Against this view Thomas argues that the agent intellect is something in the soul. He gives two arguments. First, even if there is a separate intellect, still it is necessary that there is in the human soul “some power participating in the superior intellect, by which power the human soul makes things to be actually intelligible.” Since it is true in nature generally that the operation of a higher power is carried out by a power in the individual, there is good reason to believe that it is also true for the human soul that it is through “some power derived from a higher intellect, whereby it is able to illumine the phantasms.” This argument is rooted in the metaphysical thesis that the performance of an action requires that the principle of that action is found in the being which acts. The fact that this capacity or power is itself a participation in a higher power does not negate this principle. In Aristotelian physics locomotion may ultimately be a capacity dependent on the sun, but still the fact that one moves means that the power of locomotion is within oneself. The situation is no different with mind. Thus the agent intellect, as a participation, must be in each person; this power, which is derived from a higher intellect, is in the soul and is that through which “it is able to illumine the phantasms.”⁷

Secondly, for Aquinas it is not enough to argue this point in general, but he insists that we experience this:

7. *ST* 1.79.4. In essence the Averroist position seems to amount to claiming that our experience of understanding is illusory; that, in fact, it is only the one, universal agent intellect which is operating in us, causing us to have the impression that we are understanding on the occasion of sense experience.

... we know this [that the power to understand is within us] by experience, since we perceive that we abstract universal forms from their particular conditions, which is to make them actually intelligible. (ST 1.79.4)

Here the same principle is at work, that is, if I am able to perform an operation, then the principle which is the source or cause of this operation must be in me. Here, however, Aquinas appeals to our awareness of understanding as a subject. We are conscious of the fact (“perceive”) that we understand. We experience our acts of understanding. And as actions are known through their objects, he specifies that in the action of understanding, we “abstract universal forms from their particular conditions.” In other words, what is only potentially universal is made actually universal by being made intelligible. We shall return to this point, but for now it will suffice to note the fact.

To begin, we need to specify the context of intellectual operations more precisely. Granted that the human intellect is an active power, then why do humans not always understand but need to go through a process of learning? Fundamentally, the answer is that the human mind starts with no content; it starts as a *tabula rasa*. In explaining this point—as is typical for Aquinas—he contrasts the way the mind works with the way the senses work. If the relationship of understanding to things were one of an active object to a power such as is found with a visible thing to the eye or even more obviously a sounding thing to the ear, then we would be able to understand all things immediately. But this is not the kind of relationship found between the human mind and its object.

In relation to things, the mind is both passive and active. Specifying both of these aspects is necessary to grasp Aquinas’s view of the intellect. First, then, for Aquinas the intellect is a passive power, taking *passive* in a broad sense because in being receptive it is also actualized. It is passive for it receives the form of things into itself. But this is only one aspect of mind. The other is that the mind is active; it possesses what Aquinas calls *agent intellect*. In short, citing Aristotle, Aquinas affirms that the mind both *becomes* all things and *makes* all things. This double aspect of mind contrasts with the senses, including the sense of sight. To put the point in more familiar terms, we experience passive or receptive aspect of mind in

that we gradually acquire a body of knowledge, develop expertise in a field. Commonly we describe this acquired expertise as having a “mathematical mind,” “political savvy,” and the like. Such a development does not just happen or grow naturally as one’s body does. Such expertise or mentality is acquired through a process of learning, of struggling to come to a clear understanding. And this capacity for learning is what Aquinas and the tradition in which he is working call “agent intellect,” the aspect of mind by which “*it makes all things*.”⁸

Granted that mind becomes all things, why does Aquinas also assert that it makes all things. Here there is a significant contrast between the mind and the senses. The intellect does not have an active object as do the senses but rather it is passive, receptive. It requires the data from the senses, for it is initially a *tabula rasa*. But the presence of data is not enough. It is through the active power of mind that the data of sense are recognized as meaningful. To use Thomas’s language, the intellect or mind is an active power “whereby objects are made to be in act.”⁹

The aim here has been to provide a preliminary description of agent intellect, the mind as active. This description is possible through analyzing its operation because we are aware of our questioning. What we have found is that Thomas provides a significant elaboration of the metaphor of seeing when he identifies the conditions for the operation of active mind. Granted that mind is active, then the question arises as to how it reaches its end; in other words, when and through what operations does it acquire truth.

8. *ST* 1.79.3. The position which Aquinas contrasts to his own position is that of Plato. According to Aquinas, Plato “supposed that the forms of natural things subsisted apart from matter, and consequently that they are intelligible.... And he called such forms *species* or *ideas*. From a participation in these, he said that even corporeal matter was formed...and also that our intellect was formed by such participation in order to have knowledge of the genera and species of things” (*ibid.*).

9. “Sensible things are found in act outside the soul; and hence there is no need for an agent sense.... [I]n the intellectual part, there is something active and something passive.” *ST* 1.79.3 ad 1.

Truth in the Senses and in the Intellect

“As *good* names that towards which the appetite tends, so *the true* names that towards which the intellect tends” (*ST* 1.16.1). The intellect naturally tends to the true, and the true consists in “a conformity of the intellect and things” (*De verit.* 1.3).¹⁰ Again, “truth is defined by conformity of intellect and thing” (*ST* 1.16.2). Repeatedly Thomas affirms this thesis. In Thomas, then, one has an unabashed affirmation of a correspondence theory of truth—the position which philosophers who hold the subject-object conception of truth find problematic, if not indefensible. Recall that at this point Bavinck relied on the Logos doctrine. Since the being of things remains outside of us—as a realist Bavinck maintains the distinction between ideas and reality—he asserted that “being itself therefore can never be approached by us” (*RD*, 231). By contrast, Thomas asserts “that which the intellect conceives as, in a way, the most evident, and to which it reduces all its concepts, is being” (*De verit.* 1.1). For Bavinck being cannot be approached; for Thomas being is what our mind naturally desires to know; it is that which is sought in all our inquiring, the goal of all understanding. For this reason *being* can be said to be “in a way” the most evident and that to which everything else is related. What accounts for this difference?

One way to gain an understanding of Thomas’s position is to examine the way he contrasts the presence of truth in the senses and its presence in the intellect. To argue that there is a significant difference implies that the analogy of the sun and the metaphor of seeing are just that—figures of speech and not descriptions of knowing. Thomas replaces the visual metaphor with an account rooted in psychological fact.

True expresses the correspondence of being to the knowing power, for all knowing is produced by an assimilation of the knower to the thing known, so that assimilation is said to be the cause of knowledge. (*De verit.* 1.1)

10. Citations from *De veritate* are from *Truth*, trans. Robert W. Mulligan, S.J. (Chicago: Regnery, 1952).

There are two points to consider: first, how truth is found differently in sense and in the intellect; secondly, in what operation truth is found in the intellect.

With regard to the first point, Aquinas holds that “truth is found both in intellect and in sense, but not in the same way.” Truth is in the sense “as a consequence of its act, for sense judges of things as they are.”¹¹ The senses report; they provide a content or data—for the eyes it is pattern of color, for the ears variation in sound, etc. This is as far as the senses go. If the content of sense experience is questioned, that is a result of the expectations of mind. In other words, when we question what we have seen or heard, it is our expectations that have not been met.

Sense experience includes more than just the reception of a content, for we are aware of sensing. Unlike biological activities such as digestion, the circulation of the blood, etc., which are on-going in our bodies without our being aware of them, sensing is an act of which we are conscious. And for this reason if one asks a person whether they have heard or seen something, typically they can respond either by describing the content of the experience or by focusing on the experience itself. Thus Thomas writes, “sense knows that it senses.” But an awareness of experience does not amount to a description of that experience, and this is precisely what the senses cannot supply. Thus, as Thomas states, “sense does not know its own nature.” The senses merely report what appears to them, and we are aware of both content and operation. Normally we attend to the content of the experience, but Aquinas holds that we can also attend to the experience itself. Insofar as there is content there is a correspondence between the sense and its object and hence truth in sense.

11. *De verit.* 1.9. In saying that the senses judge of things as they are, Aquinas is not claiming that there is never any error in the senses. There may be falsity in the senses “through their apprehending or judging things to be otherwise than they really are.” With regard to its proper object, error occurs “accidentally and rarely, and then because of an indisposition in the organ it does not receive the sensible form rightly.” The example cited is that because of an unhealthy tongue something sweet may taste bitter to a sick person. But with common objects such as figure, shape, etc. or with accidental objects even “a rightly disposed sense may have a false judgment” (*ST* 1.17.2).

By contrast, truth is not only in the intellect but is known by the intellect. Explaining this claim requires careful attention to Aquinas's precise words:

It [truth] is in the intellect as a consequence of the act of the intellect and as known by the intellect. Truth follows the operation of the intellect inasmuch as it belongs to the intellect to judge about a thing as it is. (*De verit.* 1.9)

In its act the intellect acquires a likeness of the thing known, which is a perfection or actualizing of itself, and reception of that likeness is in accord with its nature, for this is what is meant by the natural desire to know. This likeness in the intellect is different from the likeness existing in the senses; essentially it is the difference between idea and phantasm or sense image. In one respect truth is in the intellect in the same way that it is in the sense: when it grasps *what a thing is*. In this act the mind acquires some content, some idea, or some theory.¹² Aquinas often calls this the first act of the intellect: the point at which there is truth in the intellect, but not as known. In other words, one has an idea, but one has not reflected, not tested the idea; one has not yet asked *Is it so?*, has not yet judged whether one's understanding is correct.¹³ Very precisely and carefully Thomas distinguishes these two stages in the process of understanding:

12. In this connection it is possible to understand why Aquinas holds that understanding is passive in the broad sense, because it “receives that into which it was in potentiality”; but in this very receptivity it “passes from potentiality to act,” or in other words, “it is perfected,” realizes its end (*ST* 1.79.2). So for Aquinas the act of understanding is conceived as being both a reception of something from without and at the same time an actualization or achievement of its own end, a fulfillment of the natural desire to know.

13. Often Thomas refers to the second act of the intellect (i.e., judgment) as the act of “composing and dividing,” as in *ST* 1.16.2, where the title of the article reads: “Whether Truth resides only in the intellect composing and dividing?”; cf. *De verit.* 1.3. This rather cumbersome way of speaking of judgment stems from Aristotle. Aquinas also speaks of the second act of the intellect simply as “judgment,” as when he asserts that the intellect “judge[s] about a thing as it is” (*De verit.* 1.9).

[A]lthough sight has the likeness of a visible thing, yet it does not know the comparison which exists between the thing seen and that which it itself is apprehending concerning it. But the intellect can know its own conformity with the intelligible thing; yet it does not apprehend it by knowing of a thing *what it is*. When, however, it judges that a thing corresponds to the form which it apprehends about that thing, then it first knows and expresses truth. (*ST* 1.16.2)

Sense receives a content, and that is as far as the senses are able to go. By contrast, intellect receives a content (species) into itself, some essence, some *what*—whether substance or accident makes no difference here—but this constitutes only the first stage in knowing. Truth is known by the intellect and expressed by the intellect only when a judgment is made, when one concludes either *it is so* or *it is not so*—“it” referring here to the content in the mind.

What Aquinas is describing is a familiar sequence. Initially something is brought to our attention. If time and energy suffice, then we may begin to puzzle about it. In the extreme it may keep us focused for days on what is dismissed by others as an arcane issue found in dusty old books. The goal, however, is not to puzzle but to discover, to have the “ah-ha” moment when “the light dawns,” the moment when one believes that one has come up with some insight great or small because one has identified some intelligible aspect in the data of experience about which one was puzzling. But coming up with an idea is not enough. There is ever the demand by intellect that one’s idea be well grounded, and for this one must return to the data. Does the insight I have gained explain relevant aspects of the situation? Are the conditions which are specified in the explanation as formulated actually present in the data? Or is there contrary evidence? Does my idea have to be tweaked in order to account for all aspects of the data? If we are satisfied that the relevant aspects have been accounted for, that the specified conditions are actually present in the data, then we conclude so. If not, then one does not affirm, and one must either withhold judgment or affirm only with some measure of doubt or hesitation.

What is happening in the foregoing account? According to Aquinas, the intellect is, like the senses, aware of its own act; in other words, we are conscious of understanding—as is abundantly clear from the above

account of our experience. But when we understand we are not satisfied with just having the experience of insight, the moment of discovery. No matter how exciting it may be, there is always a supervening question, a demand that we cannot ignore: Is my discovery correct? Is my idea an adequate account of the evidence. As Aquinas states:

And truth is known by the intellect in view of the fact that the intellect reflects upon its own act—not merely as knowing its own act, but as knowing the proportion of its act to the thing. (*De verit.* 1.9)

That the intellect knows, that is, is aware of, its own act we have already affirmed. Now the question is what is meant by saying that it knows “the proportion of its act to the thing.” As already noted, the first act of the intellect is realized in some idea, some content. The question is whether the content is in proportion to the thing—the thing as presented by the data from the senses. “[S]ince the speculative intellect is receptive in regard to things,” writes Aquinas, “it is, in a certain sense, moved by things and consequently measured by them” (*De verit.* 1.2). Although the formulation here applies most directly to a particular form or content and a specific thing, the fact is that both content and thing typically stand in a larger field of relations. As we all experience, no sooner have we answered one question than another appears, typically arising from related data.

Without going into detail about how discoveries in related areas repeat and so a body of knowledge gradually develops, it will suffice here to note Aquinas’s account elsewhere of the intellectual virtues of science, understanding, and wisdom, which for our purposes can be seen as elaborations of the conditions of judgment, of recognizing when what has been conceived corresponds to reality. The complexities of knowing when what one has conceived can be affirmed are too various to elaborate here. Suffice it to say that when the judgment one is affirming is of limited scope about precisely limited or defined matters, one can easily reach a high level of certitude. This is one of the attractions of mathematics for example. By contrast, in the natural sciences such certitude is not possible because closure is hardly ever—perhaps never—possible, for there always remains the possibility of the discovery of new ranges of data that may render former hypothesis seriously inadequate as one saw in astronomy

after the flood of data from the Hubble telescope. Or again, it may be that the same set of data may possibly be explained utilizing other explanatory principles. Hence what Plato called dialectic and what is caught in Thomas Kuhn's notion of a "scientific revolution."¹⁴

Here the question is this: how is it that mind can reflect on its own act, whereas the senses are not able to do so? Aquinas explains the matter this way:

This proportion [the proportion of the act to the thing] cannot be known without knowing the nature of the act; and the nature of the act cannot be known without knowing the nature of the active principle, that is, the intellect itself, to whose nature it belongs to be conformed to things. (*De verit.* 1.2)

This analysis carries the knowing process back to its foundation: the intellect is aware of itself, aware that its orientation is to be conformed to things. The desire of our understanding is to mirror reality, and not just this or that aspect of reality as is the case with the senses, but the goal of mind is being, the real, ultimately to know everything about everything—something that no human will ever manage, but nevertheless a goal which inspires each person to his or her daily effort to push back the boundary of ignorance just a bit further. Again, intellect is not satisfied with grasping a *what*, because we recognize that our discovery may be just a bright idea, something lacking basis in our experience. And so we reflect,

14. Today in the context of the natural sciences we are most impressed with the possibility of change on the empirical side, the possibility of additional data. But there is change possible on the intelligible or logical side also in that another organizing principle may be used to explain the same data as in, for example, the shift in chemistry from phlogiston to the periodic table of elements. The latter kind of change is noted by Aquinas in the context of the discussion of the Trinity. There he observes that sometimes reasoning does not provide "a sufficient proof of a principle, but as showing how the remaining effects are in harmony with an already posited principle: as in astronomy the theory of eccentrics and epicycles is considered as established, because thereby the sensible appearances of the heavenly movements can be explained; not, however, as if this proof were sufficient, since some other theory might explain them." And this he states is the case with arguments about the Trinity: "that is to say, given the doctrine of the Trinity, we find arguments in harmony with it. We must not, however, think that the trinity of persons is adequately proved by such reasons" (*ST* 1.32.1 ad 2).

we ask whether the formulation of our insight is adequate, does it account for the relevant evidence? If so, we affirm; if not, we deny or retract; if the evidence is not conclusive, we conclude to some mode of possibility or probability. When challenged we trot out our reasons—the evidence we have marshaled for our thesis. If there are no data to challenge our claim, then we conclude that our formulation is adequate, that we have reached fact. And why do we do this? Because to be intelligent is to do more than spin theories, it is also to verify one's theory no matter what field—in daily experience, in the sciences, in ethical issues, or in philosophical thinking. No doubt the criteria for affirmation will vary widely according to the area of one's endeavor, but the basic pattern remains the same: experience stimulates inquiry, and inquiry results in understanding, and understanding calls forth the question *Is it so?* Moreover, the process is recurrent, and so judgments cluster into bodies of knowledge as patterns found in experience are more fully articulated and affirmed. Nor does the process of checking end with the individual claim, for as we noted briefly whole ranges of judgments may be abandoned when another means of organizing the materials is discovered.

Enough has been said to explain why Aquinas was not concerned with the objectivity of knowing when describing the mind as being a participation in the divine Logos. Whereas Bavinck remains in the Platonic/Augustinian tradition of describing knowing as being a kind of seeing, Aquinas, while employing this metaphor on occasion, provides an account of knowing that explains knowledge as resulting from judging, the second act of the intellect, an act which has only a very limited role in Bavinck's account of knowledge—a matter which we will take up after further clarification of the process of knowing.

A very significant difference between the two positions follows from this analysis. Recall that Bavinck asserts, "Being itself therefore can never be approached by us; it is a fact that has to be assumed and constitutes the basis of thought" (*RD*, 231). For Aquinas, by contrast, the good that intellect seeks is being, for it is the nature of the intellect to be conformed to things. This conformity is grasped only in the second act of the intellect, in the act of judging. As a participation in the divine mind, our

intellect has the capacity to judge, and in the act of judging it is conformed to reality and measured by reality. Here there is no appeal to an Augustinian type of illumination theory to defend the objectivity of knowledge; inversely, where a clear recognition of judgment (the second act of the intellect) is absent, one should not be surprised to find doubts about the objectivity of knowing as we see in Bavinck.

How the Soul Understands

So far we have examined truth as known in judgment, the second act of the intellect. Now we must turn to simple apprehension, the first act of the intellect in which the intellect acquires a likeness of the thing known or apprehends what a thing is prior to forming a judgment about that thing (*De verit.* 1.3). We must look more closely at the how ideas are generated by the mind. Here, too, the test will be whether Aquinas provides an alternative superior to both rationalism and empiricism, a *via media*, as Bavinck thought, and whether Aquinas's account is similar to Bavinck's or differs from it in any significant way. We know already that in some way the content of mind must be derived from the senses. Now we look to Aquinas's account of how the mind is both passive or receptive and active.

Early views: materialism and Platonism (ST 1.84.1). Like Bavinck, Aquinas begins his discussion of understanding by contrasting the materialist and Platonist positions, approximately what Bavinck describes as empiricism and rationalism. The earliest philosophers were materialists, Aquinas observes, that is, they “thought there was nothing in the world save bodies.” Today they might call themselves physicalists, but all agree that only what is present to the external senses is real, and all that is real can in principle be grasped by the senses. Now bodies constantly change, Aquinas observes, and so these materialists held that “we can have no certain knowledge of the reality of things.” The mind cannot form a stable judgment about what is constantly changing, and so they concluded that no knowledge is possible. Heraclitus is cited as an example

of this perspective.

Plato wanted to “save the certitude of our knowledge of truth,” Aquinas states, and so he posited a separate genus of beings, the *forms* or *ideas*. It was supposed that particular things participate in these immaterial forms and that all knowledge was a grasp of these forms and not of particular sensible things. Aquinas rejects Plato’s view for two reasons. First, immaterial and unchanging forms cannot give knowledge of changing things, and so this view makes natural philosophy (roughly our empirical sciences) impossible. Second, he argues—as Plato himself already did in the *Parmenides*—that introducing a realm of ideas which “differ in being” from sensible things is of no use for understanding sensible things (i.e., master vs. master itself, student vs. student itself, etc.), for although the ideas have relations with each other, and although particular things relate to one another, there are no relationships between these two orders of things.

Not content with simply pointing out the inadequacies of Plato’s solution, Aquinas analyzes how Plato went wrong. This analysis goes to the heart of the matter for Aquinas. Plato recognized that knowledge is possible through “some kind of similitude.” After all, if what we think is not like what we are thinking about, then clearly we must be mistaken. However, with regard to this likeness Plato mistakenly thought that “the form of the thing known must of necessity be in the knower in the same manner as in the thing known itself.” Plato unlike the materialists recognized that “the form of the thing understood is in the intellect under conditions of universality, immateriality, and immobility.”

One can see in this characterization how Plato grasped that ideas differ from sense experiences. Every idea is *universal*, for it is a single content which can be applied to an indefinite number of situations or sets of data which are similar in the relevant way. Our ideas are also *immaterial* because they do not include particular aspects of each of the things for which it stands such as that the thing is here or now or that it is composed of some particular wood, stone, or other material, for example. Finally, while the particular things identified or named by an idea are subject to change, the idea as thought is not changing, rather it is characterized by

immobility. We may change our idea, but then we have a new, different idea; the original, discarded idea remains a possible thought. Plato in recognizing these significant differences between the data of sense and ideas in the intellect brought about a most important advance in philosophical analysis.

Nevertheless, Aquinas asserts that Plato made a mistake in claiming that the idea or form of the thing known must exist in the knower the same way as in the thing known. In other words, just because our ideas are universal, immaterial, and unchanging, this does not mean that their object must have these same characteristics. Like Aristotle, Aquinas often appeals to the senses for an analogy to elucidate what is happening with the understanding. He notes that for sight, whiteness can be of greater or lesser intensity or be present with or without another quality such as sweetness. So the sensible form can exist in one way in things which are external to the soul and in another in the sense which receives the form. Granted that this is the case for the senses, there is no reason why the intellect cannot “according to its own mode” receive “under conditions of immateriality and immobility the species of material and moveable bodies; for the received is in the receiver according to the mode of the receiver.” The same “what” or content can exist in different ways both as particularized and in the mind as a content that has the potential to refer to many individuals.¹⁵

To sum up our findings so far, Aquinas clearly sides with Plato as opposed to the materialists. The materialists have no place for immaterial and unchanging ideas or forms because they failed to distinguish the mind or understanding from the senses. Plato did, and Aquinas agrees with him that the ideas in our minds are universal, immaterial, and unchanging. However, he does not agree that the objects of these ideas

15. Note that just the opposite relationship exists in the artistic experience, for in any of the arts it is the conception in the mind of the artist which directs the making, and multiple copies of the idea can be produced. The one representation in the artist's mind is the source of multiple works, which is just the reverse of the situation with knowledge, where multiple particulars are represented by a single content in the mind. In both cases the same likeness or form exists in different ways in the mind and in things.

need to exist in the same way. Hence he denies the need for Plato's ideas or forms to account for human knowing of material things. However, if there are no independently existing forms, then a new problem, or set of problems, appears. As noted, Aquinas says that the intellect receives the ideas "according to its own mode"—under conditions of immateriality and immobility. But particular things are material and changing. How can there be an unchanging knowledge of a changing thing? How can the same form come to exist in the mind that exists in particular things? In what way is the form the same and different in the mind and in things? Is there a process by which the form comes to exist in the mind? If so, what is it?

It is clear that by accepting Plato's advance upon the thought of the pre-Socratic materialist philosophers, Aquinas has a lot of explaining to do. As, it might be added, do all philosophers since Plato. One might say that much of modern philosophy is devoted to dealing with this issue—the relationship between extended substance and thinking substance, between impressions and ideas, between apperceptions and the categories of the mind. Recognizing that we have a perennial philosophical problem here, we will do well to examine closely how Aquinas works out his solution.

On the mode of understanding (ST 1.84.3). One possibility is that the mind understands physical things through its own nature. Aquinas asks, does "the soul understand corporeal things through its essence?" The obvious answer is no, for initially our minds are, as Aristotle noted, like a blank slate on which nothing is written. Materialists would seem to be committed to some form of this thesis: that the mind knows through its essence. Like knows through like, and if things are material then the mind must be too. As noted above, Bavinck traces such a tendency, and such would seem to be the underlying rationale in the attempts to develop materialist theories of mind even today.¹⁶ Aquinas

16. *RD*, 220; cf. David S. Sytsma, "Herman Bavinck's Thomistic Epistemology: The Argument and Sources of His *Principia of Science*," in *Five Studies in the Thought of*

summarily rejects knowing by essence.

Better known is a variant expression of knowledge coming through essence; namely, that “the soul understands through innate species.” In responding to this question, Aquinas recalls that at first we are only potentially able to know. On both the level of sense and understanding we actually come to know after being potentially able to know. Sensible objects, acting on the senses which are potentially able to sense, cause a person to actually sense as when a vibrating object causes a noise through which we hear. Similarly, it is, Aquinas says, through “instruction or discovery” that we come to understand. So

we must say that the cognitive soul is in potentiality both to the likenesses which are the principles of sensing and to the likenesses which are the principles of understanding.

Hence the soul does not have innate species but is initially in potentiality to such species. Note that the point being established here is that both the senses and the mind are in potentiality to their respective acts, but this does not mean that the relationship to their respective objects is the same. Indeed it is obvious that they are different: sensible objects are said to act on the senses, but intelligible objects are not said to act on the understanding; rather they are said to enter the understanding through “instruction or discovery.”

Philosophers have given alternative accounts for why the soul does not always understand. Aquinas distinguishes his account from the one given by Plato. For Plato the soul initially does not understand because the human soul is in the body and the body hinders it in its normal operation, and that is why the soul, though it naturally possesses intelligible species, is not able to access this content. Aquinas responds to this claim in two ways. First, he denies the fact: he asserts that is not the case that we are unable to grasp what is naturally known as in the case of first principles. “[N]o man forgets what he knows naturally, e.g., that every

Herman Bavinck, A Creator of Modern Dutch Theology, ed. John Bolt (Lewiston, NY: Edwin Mellen, 2011), 22.

whole is larger than its part, and the like.”¹⁷ Second, Aquinas rejects the Platonic conception of human nature: Plato for whom the fact that the soul was in the body was an unnatural condition could argue that the body was a hindrance to the soul, but for Aquinas as a Christian the soul belongs naturally to the body. And the natural operation of a thing cannot be hindered by what belongs to it naturally. In addition, Aquinas asserts that the view that ideas are innate is proved false by the fact that if a person lacks a sense, knowledge of what is apprehended through that sense is also lacking as with the case of a person born blind. If there were innate likenesses of all intelligible things in the soul, this would not be the case.

It is time to take stock. Knowledge for Aquinas comes neither from the essence of the soul nor from innate ideas. Rather sense knowledge comes through the action of sensible objects on the senses, and understanding comes by instruction or discovery. So now we can rephrase our question: what happens in instruction or discovery?

Already one answer to this question has been rejected. Among the objections which Aquinas cites is the *Meno* in which Plato shows that an untaught person can, if questioned in an orderly fashion, acquire knowledge. If not Plato, then at least others have taken this as a sign that there are innate species, which are recovered or recalled through the questioning. Aquinas, however, is not convinced. He replies that although in the process of questioning knowledge is produced in the student, it is not because the student had knowledge previously, but the knowledge is produced then for the first time. When questions are put in an orderly way, then “they proceed from universal self-evident principles to what is particular” (ad 3), so that the student is able to progress by moving from what is naturally known to conclusions that follow. Whether the process is

17. Every person who grasps what is meant by *whole* and what is meant by *part* cannot refrain from assenting to this statement. Not assenting is irrational, not intelligent. If a person questions this principle, then one would suspect that in some way there has been a misunderstanding of the meaning of the terms *whole* or *part*. Or maybe the person is just not rational, and therefore, being unable to grasp this basic principle, is not capable of reasoning at all.

by questioning or by asserting makes no difference. In other words, lecturing may be just as effective as using the Socratic method; the goal in both cases is for the moment of discovery to occur in the student.

Whether knowledge is acquired through separate forms (ST 1.84.4). So far we have seen that Aquinas asserts that ideas come to exist in the mind through either discovery or learning. Now we ask, how does learning occur?

Today we naturally expect to answer this question by an appeal to psychology. We expect to be told what actions or activities result in learning. However, for the ancients, and Aquinas as well, psychology tends to be subordinated to metaphysical categories, so psychological data are described using metaphysical terminology. Accordingly the question about the nature of learning is posed this way: does the content that is gained in learning come from separate forms?

In considering this question, one of the objections that Aquinas presents—that is, one of the arguments for the thesis that knowledge is acquired through separate forms—identifies the underlying pattern in the philosophers who take this position. Basically, the argument is that knowing is like sensing, or as more commonly expressed, fundamentally knowing is seeing. What is meant is that knowing is not actually the same as seeing, but it is very similar to what happens when we see; it is seeing in a metaphorical sense.

The intelligible is to the intellect as the sensible to the sense. But the sensible species which are in the senses, and by which we sense, are caused by the sensible things which actually exist outside the soul. Therefore the intelligible species, by which our intellect understands, are caused by some things actually intelligible, existing outside the soul. But these can be nothing else than forms separate from matter. Therefore the intelligible forms of our intellect are derived from some separate substances. (arg. 2)

This view is based on the assumption, as noted above, that the relation of the subject is over against an object; in knowing the subject is confronted by the object. This is the view which we saw Bavinck struggling with.¹⁸

18. In this context it is worth noting that this assumption is also built into the

As so often, Plato was the first to make this claim. He held, Aquinas says, that the forms of sensible things subsist by themselves without matter such as “the Form of Man-in-himself” and that these forms are participated in by both our soul and by corporeal matter, as already noted above. Aristotle, however, argued vigorously against the view that sensible things could have their forms subsist without matter. Aquinas notes some of the history of the debate on this issue. Avicenna, a Muslim theologian living in the 11th century CE, argued that “the intelligible species of sensible things, instead of subsisting in themselves without matter, pre-exist immaterially in some separate intellects” (*corpus*). He posited a series of separate intellects, the last of which he called the *agent intellect*, and claimed that from this intellect the intelligible species flow into our souls and sensible species into corporeal matter. In addition, he insisted that the intelligible species do not continue in the soul, but that with each new sense experience the soul needs to turn to the agent intellect in order to acquire the species (form/content) once again. So knowledge for him is not innate, as for Plato, but acquired on the occasion of learning. Clearly this is a more subtle position which conforms more closely to our experience of understanding. It also incorporates significant features found in the modern idealist tradition.

Aquinas is not impressed. Again, the first reason is not psychological but in this case related to his anthropology. If one adopts the view that the forms flow into the mind from a separate intellect, then there is no reason for the soul to be united to the body. For Aquinas, the soul does not depend on the body for its existence, but rather it depends on the body for its proper operation; namely, to understand. However, if one claims that the soul has the capacity to receive intelligible species only through the influence of certain separate principles and not from the senses, then the soul would not need the body to understand. So then there would be no reason for the soul to be united to the body.

A more nuanced version of the same appeal to separate forms asserts that the soul does need the senses in order to understand but only so that

philosophical tradition which appeals to possible worlds to account for knowledge.

it can “be awakened by them to the consideration of those things whose intelligible species it receives from separate principles.” However, even this does not satisfy Aquinas, because again this “sleep” or “forgetfulness” occurs because of the soul’s union with the body. Also, the sense would have no role except removing this obstacle, and so the reason for the union with the body remains unexplained. Avicenna also suggested that the senses rouse the soul to turn to the agent intellect in order to receive the species, but this too does not satisfy Aquinas. If it were natural for the soul to understand through species derived from the agent intellect, then the soul could turn to that intellect through its own nature or by another sense, but then once again we would not have the phenomenon of a person lacking a sense having no knowledge of the data of that sense (e.g., a man born blind not having a knowledge of colors). And so Aquinas concludes that knowledge is not acquired through separate forms. We learn, but exactly how we learn remains to be determined.

Whether the soul knows material things in the eternal exemplars (ST 1.84.5). At this point Aquinas turns to Augustine’s view, which we already examined in the context of the image of the divine illumination: the Logos doctrine. So it will be possible to be brief.

Does the human soul know all things “in the eternal exemplars?” The divine ideas are known in that they are a principle of human knowledge. It can be said that “what we see in the sun we see by the sun,” for it is by the power of the sun that we are able to see, so also “the human soul knows all things in the eternal exemplars, since by participation in these exemplars we know all things.” Why? “The intellectual light itself,” continues Aquinas, “which is in us, is nothing else than a participated likeness of the uncreated light, in which are the eternal exemplars.” In short, our capacity to understand, our intellect, is for Aquinas a manifestation of the divine light within us. In this discussion Aquinas has turned the focus from what we *do* to what we *are*: by virtue of having minds, having the power of understanding, each person’s capacity to know is a sharing in the divine intelligence.

Granted that we have a capacity to know, the next question is this: how does this power or capacity function? It is one thing to say that the human mind has been made with a proper function. One might describe this as a theological thesis, and an appropriate one for a Christian theologian. But this does not remove or replace the philosophical task of understanding our understanding. There remains the task of determining the nature of proper functioning, giving an account of the psychology of knowing.

A beginning has been made in Aquinas's analysis of Augustine's position. As we saw he observes that the intellectual light by itself is not enough for understanding, but in addition we need the intelligible species which are derived from things: although things occur in time according to the eternal exemplars, nevertheless in order to learn about things philosophers had to seek "for this information from the story of times and places." For Aquinas there is both an internal and an external cause of knowledge. Our next task will be to explore the relationship between these two causal elements.

How intellectual knowledge is derived from sensible things (ST 1.84.6). Having critiqued the most significant accounts prominent in his day—all appeals to innate ideas and separate forms—Aquinas now turns to giving an account of how intellectual knowledge is derived from sensible things.

Materialists of all ages have claimed that knowledge is caused by sensible things. Aquinas was familiar with this position as set forth by ancient atomism. He cites Democritus who is said to have held that knowledge is caused by a "discharge of images." Today with the extensive development of neural psychology, the claim is likely to be couched in terms of neural process. Aquinas would, I suspect, be no more impressed with proponents of cognitive science today than he was with Democritus. The problem with Democritus and other early philosophers, he says, is that they failed to distinguish between intellect and sense. In other words, they recognized only material causality which leads to reductionism and not the possibility of different levels of formal cause. We must now

explain the implications of this assertion. For Aquinas, the senses are required for knowledge, but their role remains to be defined.

If the materialists treat understanding as if it were just another sense, the opposite error is characteristic of the Platonists. They held that the body does not feel but rather the soul feels through the body, through monitoring bodily changes. Lurking just beneath the surface here are issues that emanate from thinking of the soul as a substance using a body, which is well known in modern philosophy as the problem of relating thinking substance and extended substance. Aquinas's own view is in conformity with his account of the soul as being the form of the body. Hence for Aquinas, as for Aristotle, sense and understanding are different from one another, and having sense experience involves the body. "[T]o sense is not an act of the soul alone, but of the composite." So it is held to be possible for sensible things to have an effect on the senses.

Although sensible things have an effect on the senses, they do not cause understanding. If they did, then everyone could be a Galileo or Newton, or rather no one would be known for their discoveries because learning would be merely a matter of having the right experience. Still, experience is relevant. Data from sensible things are needed for understanding. The problem then is to define their role precisely. Aquinas asserts that "something more noble" than sense is required, an active principle. The active principle is nothing other than the agent intellect which he has already argued is a principle in every human soul. It is this agent intellect—active mind, wonder, or desire to know—"which causes the phantasms received from the senses to be actually intelligible, by a process of abstraction." Phantasms, or sense images, are only potentially intelligible; they are something which can be understood, but as images they are merely the data of color, figure, sound, etc. These elements differ from one another, but to identify significant relationships in them is the work of mind. Identifying relationships within and among the features of the sense image is the work of active mind, agent intellect, "by a process of abstraction." Precisely what the process of abstraction is will need to be explained later. For now it is necessary to focus on the secondary or subordinate role of the data of sense experience.

Experience is a partial cause of knowledge: “on the part of the phantasms, intellectual knowledge is caused by the senses.” What kind of cause are the phantasms? The fundamental fact is that “the phantasms cannot of themselves immute the possible intellect.” What Aquinas is asserting is that images alone do not suffice for knowledge; by themselves they cannot produce ideas. Something more is needed. Thus, on the most elementary level, to have an image of an animal is different from being able to name or identify it. What role does the image have in this transition? Aquinas specifies the role of sense data this way: “it cannot be said that sensible knowledge is the total and perfect cause of intellectual knowledge, but rather is in a way the matter of the cause.”¹⁹

Sense knowledge is “in a way the matter of the cause?” What does this mean? What Thomas is claiming is that the cause of knowledge is the agent intellect and that for agent intellect the sense image, the phantasm, is *something like* matter. Matter in an Aristotelian context is that which is potential, that which has within it the possibility of receiving form through the action of some agent. Here it is important to be thinking of the Aristotelian conception of matter and not matter as substance as found in modern philosophy and modern science. Here the appeal is to the original context from which the term was taken: matter is like wood, capable of being shaped into a range of possible forms. And this corresponds to our experience. The data of the senses are open to a variety of interpretations, of conceptualizations, being treated differently depending on what question is being asked. But agent intellect is precisely our capacity to inquire, to question. And so we have according to this account nothing to inquire about until we have experience, but having experience does not determine what question(s) we shall ask. Yet depending on the question, different aspects of the data will be relevant.

But note that Aquinas did not say, “the matter of the cause” but rather “in a way” the matter of the cause. To make the data of sense merely matter for the intellect would seem to give too little weight to the

19. “...non potest dici quod sensibilis cognitio sit totalis et perfecta causa intellectualis cognitionis, sed magis quadammodo est materia causae.” *ST* 1.84.6.

forms as existing in the data and give the impression that mind can order matter with little or no limitation. In another work Aquinas uses a different formulation to describe the relationship between agent intellect and the phantasms (sense images): he says that the sensible acts as an “instrumental and secondary agent” (*De verit.* 10.6 ad 7). In this formulation the subsidiary role of the sensible and the primary role of active mind are maintained.

What is an instrumental agent or secondary agent? In general, it is whatever is in the employ of, or used by, a higher agent. The soldier is an instrument of the general, the army of the ruler, and so forth. Again, the analysis is often used of tools: so a shovel is an instrumental cause for a workman, a violin for a violinist, etc. Still the secondary agent contributes order to the experience. The implication of this formulation is that the data supplied by the senses are used by mind for it to come to understand things, but that they also make their specific contribution.

Both descriptions lead to the same conclusion. The mind uses the phantasms, the data of the senses, for its own purpose. This fundamental fact is what distinguishes Thomas’s realism from ancient materialism and modern empiricism: the data of sense are not enough to cause knowledge, but they are employed by intellect in the generation of knowledge. Still, to conclude on this basis that Thomas tends to a rationalist position is hasty in the extreme. Recall that it has already been explained that Aquinas argues that properly speaking, truth is found in the intellect only in the second act of the intellect, in judging, and not in the first act of the intellect, in grasping what something is. But for the phantasms to be made intelligible is precisely to indicate in some manner a *what*, a quiddity, whether it be essential or accidental in the thing. Hence it is not surprising that Aquinas follows the present discussion with an explanation of how mind returns to the phantasms in order to actually understand.

Finally, above it was said that the agent intellect makes the phantasms intelligible by “a process of abstraction.” Abstraction will be treated in due course, but first it is necessary to explain what is involved in “understanding actually.”

Understanding actually (ST 1.84.7). So far we have arrived at the state in which one has grasped some content, what Aquinas calls a likeness or what it is (quiddity), the state of having discovered an idea or in more complex cases a theory. It will be useful to note briefly how for Aquinas the acquiring of a likeness relates to the second act of the intellect, judgment. And the immediate concern is what conditions are necessary for the performance of this act and, when successful, the conditions for applying this knowledge.

Why is having an “intelligible species” not enough? This is the question of Platonists of all ages, for those who consider knowing primarily as being in some fashion like seeing. In other words, it is the position of all who consider knowing to be a kind of confrontation between the subject and the object. As is his wont, Aquinas formulates this view succinctly:

... the intellect is made actual by the intelligible species by which it is informed. But if the intellect is in act, it understands. Therefore the intelligible species suffices for the intellect to understand actually, without turning to the phantasms. (arg. 1)

What evidence is there to show that we can actually understand only by “turning to the phantasms?” First, if the intellect did not make use of a corporeal organ in order to understand, it would not be hindered in its operation by a “lesion of the corporeal organ,” by some flaw in the functioning of the corporeal organ. But such is not the case. There are two situations which must be taken into account. First, the acquisition of new knowledge and, secondly, when using knowledge previously acquired:

... for the intellect to understand actually, not only when it acquires new knowledge, but also when it uses knowledge already acquired, there is need for the act of the imagination and of the other powers. (corpus)

This explains why understanding is not possible if our senses are disordered or our memory of the data fails. Aquinas adds that this also explains why when we try to understand something, we construct an image: a person “forms certain phantasm to serve him by way of examples, in which as it were he examines what he is desirous of understanding.” Similarly, when trying to get someone else to understand, we will often

cite an example on the basis of which “he can form phantasms for the purpose of understanding.”

This is the way the human mind works according to Aquinas. Other intellectual beings may have minds that work differently, angels for example, but the proper object of the human mind is the nature existing in corporeal matter:

... the proper object of the human intellect, which is united to a body, is the quiddity or nature existing in corporeal matter.... Now it belongs to such a nature to exist in some individual, and this cannot be apart from corporeal matter; for instance, it belongs to the nature of a stone to be an individual stone, and to the nature of a horse to be an individual horse, and so forth. Therefore the nature of a stone or any material thing cannot be known completely and truly, except in as much as it is known as existing in the individual.

But as we have already seen it is the senses and secondarily the imagination which grasp things in their particularity.

Now we apprehend the individual through the sense and the imagination. And, therefore, for the intellect to understand actually its proper object, it must of necessity turn to the phantasms in order to perceive the universal existing in the individual.

For this reason, proper operation of the senses is required for intellect to make appropriate judgments. Just as a smith does not seek knowledge of a knife except for the purpose of producing this individual knife, so Aquinas says, “the natural philosopher does not seek to know the nature of a stone and of a horse, save for the purpose of knowing the essential properties of those things which he perceives with his senses” (*ST* 1.84.8). And so the natural philosopher cannot be a judge of natural things, unless “he knows sensible things.” And so it is that the intellect requires that the senses function well to complete its own operation. If the senses and the imagination are not functioning well, then reflection and judgment are not possible.

Abstraction

We have been analyzing how actual understanding is possible only when the mind “turns to the phantasms in order to perceive the universal

nature existing in the individual.”²⁰ The nature that is universal in the mind is particular in things. Does this not mean that the mind fails to understand things as they are? And so we need to clarify what Aquinas means when he says that the agent intellect “causes the phantasms received from the senses to be actually intelligible, by a process of abstraction” (*ST* 1.84.6).

Bavinck also contends that

the universality we express in a concept does not exist as such, as a universal, apart from us. Things are particular, individual. Universality, then, has its basis in things and is abstracted from them and expressed in a concept by the activity of the intellect. (*RD*, 231 [amended])

Thus far Aquinas agrees. How then does his account of abstraction differ from Bavinck’s? It is both simpler and more complex.

According to Aquinas what is proper to the human intellect is “to know a form existing individually in corporeal matter, but not as existing in this matter.” He continues, explaining what it means to abstract: “But to know what is in individual matter, yet not as existing in such matter, is to abstract the form from individual matter which is represented by the phantasms” (*ST* 1.85.1). So far so good, but what is required at this point is an account of what is involved in the process of abstraction. Aquinas’s answer is that abstraction is “a simple and absolute consideration” (ad 1). “Simple and absolute consideration” is a function of the fact that one is able to ask different questions of the same set of data. This element was foreshadowed when it was asserted earlier that the phantasms are “in a way the matter of the cause” of knowledge, or alternatively, “instrumental and secondary causes.” In other words, Aquinas in speaking of a “simple and absolute consideration” is pointing out the fact that we attend to different aspects of the sense data, sense image or phantasm, depending on our interest. To state the point in more familiar language, it is possible to focus on one aspect of the data and ignore others. It is possible to identify some elements in experience as being relevant and not to attend

20. “[C]onvertat se ad phantasmata, ut speculetur naturam universalem in particulari existentem.” *ST* 1.84.7.

to others because they are irrelevant. Relevance and irrelevance are determined by the question that is being asked. It is agent intellect, our capacity to question, which sets the criterion for what is relevant and what is irrelevant.

The first point which Aquinas makes is that no error results from this selectivity. And to show this he appeals to a simple case in sense experience. It is possible to consider the color and similar properties of an apple without any consideration of the apple, “for an apple is not essential to color, and therefore color can be understood independently of the apple” (ad 1). Here, it should be noted, the criterion is given as to when abstraction is possible: it is possible to abstract from what is not essential to what is being considered; or stated negatively, it is not possible to abstract from what is needed to understand.

Building on this illustration, Aquinas argues that the same procedure is possible when one is considering an individual thing, what he calls “abstracting the universal from the particular” or what is the same, “the intelligible species from the phantasm.”

In the same way, the things which belong to the species of a material thing, such as a stone, or a man, or a horse, can be thought without the individual principles which do not belong to the notion of the species. (ad 1)

Again, the point to note is that it is possible to abstract, to select some elements in the data or image, and to ignore what does not belong to the content, the notion, of the species. While a phantasm is always of stone, of wood, etc., which possesses a particular set of characteristics such as size, color, location, and existing at some time, no error results if these are not attended to. Isolating the relevant aspects, and “expressing in word what we understand” is what it is “to consider the nature of the species apart from its individual principles represented by the phantasms.” And so, though it would be false to think of the species of stone as if it did not exist in matter, there is no problem if the same species exists in one way in the thing being understood and in another way in the mind—as particularized in things and as universal in the mind.²¹

21. “If, therefore, the intellect is said to be false when it understands a thing

For it is quite true that the mode of understanding, in one who understands, is not the same as the mode of a thing in being; since the thing understood is immaterially in the one who understands, according to the mode of the intellect, and not materially, according to the mode of a material thing. (ad 1)

The point is that a species can exist in two ways, and if one considers it from the point of view of its content, then only its intelligible dimensions are relevant.

There are two ways in which a species exists, and it has different characteristics depending on whether it exists in individual things or in the soul. Already in his early work *De ente et essentia* (ca. 1252–1256) Aquinas noted the difference between these two ways of existing and the implications of each. Considered in itself, as species or essence—the term Aquinas uses in this early work—such a nature is “neither one nor many.”²² However, as found in things, the species has “multiple existence because of the different singulars.” The existence of these individuals taken singly is not required for considering the species. So, it does not belong to a species, say man, considered in itself (absolutely) to exist in any particular thing or in the mind.

Therefore the nature of man absolutely considered clearly abstracts from any sort of existence, but in such a way that it does not prescind from either of them. The nature considered absolutely is what is predicated of all individuals.

The result is that

human nature itself exists in the intellect as abstracted from all individuating characteristics; therefore it has a uniform notion in all individuals outside the soul, because it is equally the similitude of all and conducive to the knowledge of each insofar as they are men.

otherwise than as it is, that is so, if the word otherwise refers to the thing understood; for the intellect is false when it understands a thing to be otherwise than it is. . . . But it is not so, if the word otherwise be taken as referring to the one who understands.” *ST* 1.85.1.

22. *De ente et essentia* c. 2. Citations are from Ralph McNerny, *Thomas Aquinas: Selected Writings* (New York: Penguin Classics, 1999); the following several citations are from p. 38.

To repeat, considered in itself, an essence (species or form—use what term you wish) has neither universality nor individuality attached to it; but as it exists in the mind it is universal, as existing in things it is individual.

In the same context Aquinas goes on to clarify that even though the species as existing in the intellect is a universal in relation to things outside of the mind, as it exists in this or that intellect it is something particular in each mind:

[A]lthough this nature as understood has the notion of universality as it compares to things outside the soul, because it is the similitude of all, none the less insofar as it exists in this intellect or that it is a particular understood species.²³

To sum up, for Aquinas, one can consider an essence absolutely, that is from the point of view of its intelligible content, and then it is neither universal nor particularized. However, as species or essence exists, it is particular as found in things and universal as found in the mind.

For Aquinas the abstraction of the universal from the particular is one of several ways in which the mind is able to abstract. Abstracting from the here and now is to consider a thing apart from its spatial and temporal conditions. But with some things having spatial and temporal characteristics is part of what they are, and so this must be incorporated in any account of their nature. So, Aquinas states that the species of man cannot be “abstracted by the intellect from *flesh and bones*.” To do so would be to misunderstand human beings, for humans are bodily beings. Retained in the content then is what he calls *common matter*.

For Aquinas there are still other ways in which we can abstract. Thus when doing mathematics it is not relevant whether we are counting horses

23. *De ente* c. 2. Aquinas notes that Averroes was mistaken on this point: “from the universality of the intellectually grasped form he [Averroes] wanted to conclude that there is one intellect in all men. This falls short of the truth because the intellectually grasped form has its universality not according to the existence which it has in an intellect, but according as it is related to real things as a likeness of them” (par. 61). Aquinas continues using the analogy of a statue which has its own individual existence as it exists as a particular statue, but has “the character of commonness according as it is the common representation of many.”

or cows or people because we are interested in quantitative relationships and not the thing being counted. In Aquinas's language:

Mathematical species...can be abstracted by the intellect not only from individual sensible matter, but also from common sensible matter. But they cannot be abstracted from common intelligible matter, but only from individual intelligible matter. For sensible matter is corporeal matter as subject to sensible qualities, such as being cold or hot, hard or soft, and the like; but while intelligible matter is substance as subject to quantity. (*ST* 1.85.1 ad 2)

There is yet another level of abstraction in which things are considered even apart from their quantitative aspects, "common intelligible matter," and this is found when one treats such topics as *being* and the like which can be exist without matter.

What ties all these types of abstraction together (often called "degrees of abstraction") is that in every case the goal is to identify what is significant in the image and to form a representation of this content in the mind. At the same time, there is the fact that elements present in the sense data (phantasms) are left aside as being irrelevant to the issue at hand.

The distance between sense image and understanding can be illustrated in another way. Typical for us is the experience of having some familiar content acquire a new significance, but such a change occurs only if we are inquiring or have a question. Now it is true that sometimes such discovery occurs at unpredictable moments—recall Archimedes hitting upon a solution and running naked through the streets of Syracuse or the tale of Newton sitting under an apple tree—but without a question the data of sense remain something simply present rather than the bearer of a significant content. Aquinas states the matter in this way:

...phantasms, since they are images of individuals, and exist in corporeal organs, have not the same mode of being as the human intellect. But through the power of the agent intellect, there results in the possible intellect a certain likeness produced by the turning of the agent intellect toward the phantasms. (*ST* 1.85.1 ad 3)

The primary cause of understanding is agent intellect, our capacity to wonder, as Aristotle referred to it, the capacity to question. The result is the production of a likeness of what is in the thing in the mind—the possible intellect. Thus Aquinas continues:

This likeness represents what is in the phantasms, but includes only the nature of the species. It is thus that the intelligible species is said to be abstracted from the phantasm: not that the identical form which previously was in the phantasm is subsequently in the possible intellect, as a body is transferred from one place to another.

Again, the point is that the species which exists as individuated in the thing has come to have an existence in the mind, for the mind becomes all things. The species as a likeness in the mind is a single content which has the potential to stand for an indefinitely large number—indeed an infinite number—of individuals.

So far the focus has been on the number of ways in which agent intellect—the mind—can be selective in the quest for understanding. For Aquinas, however, this does not adequately account for the activity of mind. The content of sense not only may be attended to selectively, but also it may be idealized in order to facilitate understanding. “Not only does the agent intellect illumine phantasms, it does more; by its power intelligible species are abstracted from phantasms” (ad 4).

First, what does it mean “to illumine”? According to Aquinas, “the sensitive part acquires a greater power by its conjunction with the intellectual part.” In other words, our senses are more informative when they are directed by the mind. We focus on certain details as we are looking for something; to listen intently is again to try to isolate a particular sound; with touch we may attend to one or other aspect. In all cases, the senses supply more significant information because of being directed by mind.

But there is more: “...through the power of the agent intellect phantasms are made more fit for the abstraction of intelligible intentions from them.” Here another aspect comes to the fore. It is the possibility of discarding or ignoring dimensions of the data presented by sense and even modifying what is found in the particular case in order to facilitate understanding. Here the role of imagination, as Aquinas notes elsewhere, comes in, for with regard to phantasms there are two operations in the sensitive part of the soul: being receptive, what is impressed on the senses from without, and secondly “formation,” where the imagination forms for

itself an image of an absent thing or even something that never existed.²⁴ To cite a simple case, we draw a visible figure but think point, line, etc., when doing geometry.

For Aquinas, then, “to illumine” is the action of agent intellect interrogating the data supplied by sense in order to acquire within itself a likeness or content so that the species or essence comes to exist in another way, under conditions determined by the power in which it has been received. This is what it means to say that the agent intellect abstracts from the phantasm; it produces in the possible intellect a content which it finds in the images provided by the senses—a content that is universal.

To sum up, for Aquinas, abstraction is the process by which the agent intellect identifies what is significant in a particular context and causes that content to come to exist in the possible intellect. As found in the mind, the species is universal, for it is a single content that potentially stands for many. Complexity is found in the fact that it is possible to abstract in a variety of ways. Here the ruling principle seems to be that what is not relevant in a particular context can be left aside. But the primary point is that abstraction consists in identifying the significant; “simple and absolute consideration” is to focus on one or more elements in the data, and what is focused on depends on the question which one is asking. So phantasms are “in a way the matter of the cause of knowledge,” but agent intellect is the primary cause.

Species as That By Which We Understand

It is time to take stock, to remind ourselves where the problem lies. After

24. Because the universal is always and everywhere, some have concluded that they are eternal (*ST* 1.16.7 arg. 2). To this Aquinas replies that universals are everywhere and always in that they “abstract from time and place” (ad 2). It does not follow from this that they are eternal, unless there is an eternal intellect. So there is eternal truth only in God’s mind. “Because our intellect is not eternal, neither is the truth of enunciative propositions, which are formed by us, eternal, but it had a beginning in time. Now before such truth existed, it was not true to say that such a truth did exist, except by reason of the divine intellect, wherein alone truth is eternal” (ad 4).

explaining that the universal does not exist apart from us but “has its basis in things and is abstracted from them and expressed in a concept by the activity of mind,” Bavinck asserts that “in entertaining concepts we are not distancing ourselves from reality but we increasingly approximate it.”²⁵ To many, he suggests, it will seem that “in the process of forming concepts and judgments and conclusions, we are increasingly moving away from the solid ground beneath the edifice of our knowledge and are soaring into the stratosphere.” But having assured the reader that this is not the case, he reveals his own uncertainty in the matter.

It seems strange, even amazing, that, converting mental representations into concepts and processing these again in accordance with the laws of thought, we should obtain results that correspond to reality. Still, one who abandons this conviction is lost.²⁶

And so, as we have seen, Bavinck appeals to the doctrine of the Logos as the source of reality and the laws of thought to guarantee “an organic connection and correspondence between the two.” While Aquinas agrees that God is creator and hence source of reality, including the human mind, which as we saw is a participation in the divine knowing, he does not use this fact to build a bridge between the mind and reality, to defend the objectivity of knowing. The question here is this: why does Aquinas

25. *RD*, 231 (amended). The following citations are from the same passage.

26. It is significant that in this context Bavinck has lumped together the forming of concepts with forming judgments and conclusions. The formulation reveals a lack of awareness of the difference between the first and second acts of the intellect as described by Thomas and noted above. In short, it is one thing to come up with a concept—this was the focus of the first six articles of *ST* 1.84, whereas the last two turn to the conditions of judging, which for Thomas is the affirming or denying of the content that has been acquired. In Bavinck’s formulation, forming concepts obviously refers to what Thomas calls the first act of the intellect, and “conclusions” is another way of speaking of the second act of the intellect. What the process of forming “judgments” is for Bavinck is unclear in the passage. It may refer to the fact that we form propositions, for in understanding any image several concepts will be needed to identify the relevant aspects one has grasped and to specify the relationship among them. The point is that Bavinck is not clearly separating the process of formulating what one has grasped in the quest to understand from the process of evaluating such content, of asking whether it is so.

not feel the need to invoke the Logos doctrine in order to guarantee objectivity? The answer, I believe, is because Aquinas has a well worked-out doctrine of judgment, of the first and second acts of intellect. Further evidence for this claim is found in his discussion of the role of the intelligible species in knowledge.

The above account of abstraction as an action of the agent intellect producing a content or species in the possible intellect raises a new issue. With regard to the content produced in the possible intellect, is this content or likeness what is understood, or is it that by which we understand? In modern philosophy, beginning with Descartes philosophers held what Locke called “the Way of Ideas.” What we know are our ideas, and what is uncertain, and for some even impossible to determine, is their relationship to things. Bavinck writes in a context in which the modern conception is the received view, and his way to resolve this problem is, as we have seen, is to invoke divine assistance. Critical to understanding how Bavinck differs from Aquinas is to recognize that on this issue Aquinas takes the opposite position from modern philosophers. The content or species in the mind is that by which we understand. Why Aquinas takes this position and how he defends it is our next topic.

“Some,” Aquinas writes, “have asserted that our intellectual powers know only the impressions made on them. . . . According to this theory, the intellect understands only its own impressions, namely, the intelligible species which it has received” (*ST* 1.85.2). For two reasons he rejects this view. First, if what we understand is the intelligible species in the soul, science would be concerned not with things but only with our ideas. Secondly, then it would follow that “contradictories could be true.” In fact, “every opinion . . . would be equally true.”

Instead, Aquinas asserts, the intelligible species must be “that by which it [the intellect] understands.” Thomas argues the point with care. First of all, he reminds us that there are two types of actions. Some actions are oriented toward some external end. Heating and cutting are cited as examples. In general, any art which results in the making of some object illustrates the point. Through their actions carpenters make buildings, sculptors statues, and so forth. “Each of these actions proceeds

in virtue of some form.” The thing produced will be a likeness of the conception with which the craftsman was working. Understanding is an action that generates a likeness that remains within the agent: “the form from which proceeds an action remaining in the agent is a likeness of the object.” And it is by this likeness that the intellect understands:

Hence, that by which the sight sees is the likeness of the visible thing; and the likeness of the things understood, that is, the intelligible species, is the form by which the intellect understands.

In other words, the result of conceiving an idea is an intelligible species, a content, and this is the means by which the mind understands. But by virtue of understanding being a conscious act, it is also possible to focus on the operation of understanding and the product of understanding.

[S]ince the intellect reflects upon itself, by such reflection it understands both its own act of understanding, and the species by which it understands. Thus the intelligible species is secondarily that which is understood; but that which is primarily understood is the thing, of which the species is the likeness. (*ST* 1.85.2)

“The intellect reflects upon itself,” Thomas says. As we saw above, understanding is not only a conscious act, an act of which we are aware, but also it understands its own act. Here you will recall that Thomas draws a distinction between intellect and the senses. We are conscious when we sense things, so we can answer the question, “Did you see that?” However understanding goes further: we are not only aware of having some understanding, experience the fact that we understand, but we want to know whether our understanding is adequate; are the conditions specified in our conception an account of what is found in the thing as given through the data of the senses? The intelligible species, therefore, is not what is understood but rather is what the mind produces in itself in order to grasp reality. And so “we say that the thing actually understood is the intellect in act, because the likeness of the thing understood is the form of the intellect...” (*ST* 1.85.2 ad 1). So, the “abstracted intelligible species” is not what is actually understood; rather “it is the likeness thereof” (ad 2).

To drive the point home, Aquinas offers yet another clarification. The phrase can have two meanings: “the thing which is understood, and the fact that it is understood.” Similarly:

The words mean two things, the nature of a thing and its abstraction or universality. Therefore the nature itself which suffers the act of being understood, or the act of being abstracted, or the intention of universality, exists only in individuals; but that it is understood, abstracted, or considered as universal is in the intellect. (ad 2)

So far, the discussion has focused on the reception of a content by the intellect and the conditions of the generation of such a content. But the mind is not merely receptive of content; once we have understood we want to give expression to our understanding.

Here Thomas once again begins with analysis of the situation with the senses in order to explain the operations of intellect. There are, he remarks, two operations in the sensitive part of the soul. One operation is limited to “immutation,” to reception of some content. “[T]hus the operation of the senses takes place when the senses are impressed by the sensible” (ad 3). There is, however, on the same level an operation which he calls “formation.” There is “formation, inasmuch as the imagination forms for itself an image of an absent thing, or even of something never seen.” Similarly, both of these operations are found in the intellect.

For in the first place there is the passion of the possible intellect as informed by the intelligible species; and then the possible intellect, as thus informed, then forms a definition, or a division, or a composition, which is expressed by language. And so, the notion signified by a *term* is a definition; and a *proposition* signifies the intellect’s division or composition. Words do not therefore signify the intelligible species themselves; but that which the intellect forms for itself for the purpose of judging of external things. (ad 3)

Terms and propositions are our means of expressing what we have come to understand.²⁷ They are an expression of a content grasped by mind

27. For Aquinas language is the outer presentation of the truth found in the mind: “The truth of enunciations is nothing other than the truth of the intellect. For an enunciation resides in the intellect and in speech. Now according as it is in the intellect, it has truth of itself, but according as it is in speech, it is called enunciable truth, according as it signified some truth of the intellect, and not because any truth residing in the

through receiving the species of what one sought to understand. As with the intelligible species so the expression of that understanding in words is only a means or is what is secondarily understood, for it is a likeness in the mind of the nature itself in the thing. Here is a realism which is rooted in the mind's awareness of its own nature—that its aim is to be conformed to reality, to mirror reality.

The Range of Reflection and Judgment

At a time when intellectual virtue is a lively topic of debate in some quarters, I would be remiss if I did not add a few comments on Aquinas's view of this matter. It is one thing to refer to reflection and judgment, or the second act of the intellect, and to locate it in relation to the first act of the intellect, but more is needed to lay out its significance.

Aquinas holds that there are habits and virtues not just in the practical or moral order but also in the intellectual order. There are habits of mind which enable us to function well in the quest for truth, which is the good that intellect seeks. He identifies three habits of speculative mind or intellect: wisdom, science, and understanding (*ST* 1–2.57.2). Truth can come into the mind either as “known in itself” or as “known through another.” Now “what is known in itself is like a principle, and is perceived immediately by the mind.” The habit which enables the intellect to consider such a truth is called, “understanding.” It, Aquinas adds, is “a firm and easy quality of mind which sees into principles.” On the other hand, there are truths which are known through another, and here there are two cases: “A finish at an ultimate in some class; second; at an ultimate with respect to all human knowledge.” The first case is called the “habit of science,” which consists in the capacity of reasoning “to what is ultimate in this or that class of knowable truths.” The second is wisdom,

which considers the highest and deepest causes, as is described in the *Metaphysics*. Rightly, then, it judges and orders all things, because there can be no complete and embracing judgment except by going back to first causes. (*ST* 1–2.57.2)

enunciation, as though in a subject” (*ST* 1.16.7).

In relation to Bavinck, this account of wisdom, science, and understanding brings us into the realm of the Logos doctrine and the associated claims regarding the common notions. For Aquinas this means that mind is intelligent, not merely intelligible; that it operates according to internal norms, and these he typically calls “naturally known first principles.” While the mind operates according to these principles from the time one begins to understand, to give an account of them requires a sophisticated self awareness, the capacity to be aware of one’s intellectual operations and being able to describe them and their relationship to one another. Spontaneously, we wonder even as children, and as understanding develops we gradually become aware of our own intellectual operations with their preconditions and effects.

With regard to what Aquinas calls “naturally known first principles” and what Bavinck names “common notions,” while Bavinck tends to speak of the common notions as innate, it appears to me that there is no significant difference between this and Aquinas’s description of them as naturally known. Both authors typically refer to the whole being greater than the part as something naturally known, and neither, so far as I am aware, attempts to give a complete enumeration of these principles.

Enough has been said to grasp the sweep of Aquinas’s analysis. Reflection and judgment are found everywhere when we move from merely entertaining an idea to affirming its content. More extensive analysis would detail the differences between understanding and science and between degrees of certitude found in different discussions. Here it is enough to recognize that mind seeks to know everything about everything. Its goal is being, all that is—from the most trivial details about particulars to the divine majesty. Nothing is beyond the range of the human desire to know. But it is also recognized that we are not pure intellects. For us knowledge comes by reflecting on experience, initially of the outer senses but also on our experience within. According to Aquinas, though we will never master all there is to know, nevertheless in various areas and in varying degrees we are able to know truth. And this is our situation, the human situation, as *homo viator*.

Conclusion: Bavinck's Thomistic Realism

From the foregoing analysis it is abundantly clear that Sytsma is correct in asserting that Bavinck's realist epistemology is largely Thomist in inspiration, utilizing materials not just from Thomas but also his predecessor, Aristotle, and some of Thomas's followers among the Reformed Scholastics. And yet the above analysis leads to another conclusion also; namely, that there are some significant differences between Aquinas's and Bavinck's views. We will conclude then by noting these similarities and differences, identifying the source or sources of these differences, and evaluating their significance.

With regard to similarities, according to Bavinck rationalists hold that only thinking yields knowledge, empiricists hold that sense perception alone is the source of knowledge, and realism recognizes that both the senses and the mind contribute to knowing. For a realist the intellect begins as a *tabula rasa* and so derives its content from the senses, but it also has its own nature and own way of operating and so is not simply passive as modern empiricists have held. Clearly Aquinas is in full agreement with these general features of realism as Bavinck describes them. The fact of broad agreement is undeniable.

Bavinck's emphasis on natural certainty as the starting point of a theory of knowledge fits with Aquinas's perspective. As we saw Aquinas holds that first principles are naturally known and that we are aware of knowing even if giving an account of it is a subtle and difficult matter. And yet in this matter there is also a difference of emphasis that can provide insight into how Bavinck differs from Aquinas. There are various elements at work in the emphasis on natural certainty.

First, Bavinck's insistence on natural certainty is a consequence of his concern to oppose the influence of materialism. Thus he asserts natural certainty on the intellectual level, which is not to be explained on the physiological or neural level. This pre-rational certainty arises through the operation of the senses, through natural processes which are not the cause of perception, for "perception is a psychic mental act, not to be explained on the level of neural process" (*RD*, 228). In a similar manner Aquinas asserts that sensing is an act of the composite, and the operations of the

senses are caused by an impression of the sensible on the sense “by some kind of operation.” Thus both authors acknowledge that there is some kind of physiological process involved in sensation, but both recognize that explanation of perception is not to be found on that level. Thus they avoid the tendency to reductionism.

Second, natural certainty is a claim about the reliability of the senses. For Bavinck natural certainty is a rejection of skeptical views that appeal to the unreliability of the senses. Bavinck has almost nothing to say about the problem of the senses being deceptive. Every human being, he remarks, accepts the reliability of the senses. In this regard he is again very much like Aquinas who treats error in the senses briefly. As already noted, Aquinas holds that there is truth in the senses, but not as known by sense, and falsity exists in them in the same way. In other words, the sense is true when it apprehends things as they are, but falsity may also exist through the senses “through their apprehending or judging things to be other than they really are” (*ST* 1.17.2). With the proper objects of the senses error occurs, according to Aquinas, “accidentally and rarely” because of the organ being indisposed and the like. The issue is not a major one for Aquinas, because he assumes a self-correcting process of learning which enables one to separate the faulty impressions from the correct ones. Also, complete certitude is not anticipated on the sense level. This is a point we will return to later.

A third aspect of natural certainty according to Bavinck is that it is “the indispensable foundation of science.” In this regard natural certainty seems to be the certitude common in ordinary, everyday experience, the communication involved in daily life. “Scientific knowledge,” continues Bavinck, “is not a destruction but a purification, expansion, and completion of ordinary knowledge” (*RD*, 223). In general, in this regard also Bavinck agrees with Aquinas. Bavinck rejects the claim that science deals with things as they are in themselves and that in daily experience we deal only with secondary qualities. While Aquinas did not face this issue in its modern form, he similarly rejected the views of the ancient materialists, especially the atomists, whose account of thought, soul, and the like being really composed of atoms was similarly a claim that reality is composed of

atoms as opposed to the way things appear to us—an earlier version of the distinction between primary and secondary qualities.

Fourth, another aspect of natural certainty for Bavinck is that it supplies a starting point for knowing. Natural certainty is “not born out of a syllogism, nor is it supported by proof; it is immediate, originating spontaneously within us, along with perception itself” (*RD*, 223). It is, to use a term from contemporary philosophic discussions, properly basic. Here one finds Bavinck’s parallel to Aquinas’s analysis of understanding as a grasp of the starting points of the various sciences.

Fifth, another feature of natural certainty for Bavinck is that it is “the foundation and starting point for all other certainty” (*RD*, 223), including mind. Here Bavinck, parts company with Aquinas, for he construes the certainty of intellect to be similar to that found on the level of sense. Because the senses are passive and the objects of the senses active, the sensible representation depends on, or is a product of, what is external.²⁸ Thus Bavinck asserts that in the mental representation “there must be an element that points directly back to reality.” Aquinas makes no such claim, rather he asserts that “understanding has an operation in which the body does not share” (*ST* 1.84.6). For the mind seeks truth as known, and this is not reached until there is both some content which has been discovered (the first act of the intellect) followed by reflection and judgment (the second act of the intellect). In judgment there is a return to the data. This means that when the conditions specified by the propositions are found to be present in the data it is possible to affirm; or alternatively, if the conditions are not found to be present because some elements remain unexplained, then one denies or withholds judgment.

Bavinck makes no mention of judgment, the second act of the intellect. It appears to me that the result is that he tries to find in the mental representation itself a justification for its truth, hence his positing in it an element that points directly back to reality. Bavinck does not say;

28. Note the fact that often we look, or listen, etc., for some content does not contradict this point. Even when the senses are directed by understanding, their operation remains a receptivity of an active object.

nor does he identify this “reality pointing” element. Indeed, he does not say that there *is* such an element, but that there *must be* this element. He also calls it “the essential distinguishing mark” that indicates that a representation “represents that reality ideally.” But what is this element? One might agree that this content points back to reality because it is derived from sense data. But this will hardly suffice. What one wants to know is not its origin, but rather whether what has been formulated is an adequate representation of the sensed object. To use one of Aquinas’s terms, has the intellect been properly measured by the thing? If not, then mind has failed in its quest to mirror reality.

The reason Bavinck’s description is not clear is, I think, is because his model for understanding is taken from the senses. This can be seen also in the fact that the issue of natural certainty arises again:

In the case of the concepts that the intellect forms from mental representations, one again faces—but now with even greater urgency—the question raised earlier in the case of the images of perception: What is the relation between these intellectual concepts and the world of reality? (*RD*, 230)

This question is an urgent one for Bavinck, and not an issue for Aquinas, because Bavinck lacks an account of judgment. For Aquinas in reflecting and judging the mind grasps reality. Bavinck, by contrast, having no worked out account of judgment attempts to find in the concept a basis for affirming the real.

I have described the difference between Bavinck and Aquinas as stemming from the fact that Bavinck describes sensing and knowing as being essentially similar, whereas Aquinas holds that there are similarities but also a fundamental difference between the two. Another way to describe the difference between the two authors is to note that there is an empiricist element in Bavinck’s view. Here I will borrow Bernard Lonergan’s description of empiricism. According to Lonergan, empiricism arises from confusing “extroversion with objectivity.”

For man observes, understands, and judges, but he fancies that what he knows in judgment is not known in judgment and does not suppose an exercise of understand-

ing but simply is attained by taking a good look at the “real” that is “already out there now.”²⁹

In claiming that the representation includes an essential distinguishing mark that indicates that it represents reality, Bavinck is subsuming the content of judgment into the natural certainty of the representation.

This conflation of the presence of the thing with objectivity has consequences elsewhere. These consequences are evident when we compare Bavinck’s and Aquinas’s accounts of abstraction. For Bavinck it is the process in which “the intellect isolates from sense perceptions that which is universal,” for sense grasps the particular, and science is of the universal (*RD*, 229). For Aquinas, by contrast, abstraction is the process in which the mind (the agent intellect) grasps an intelligible element in the particular and makes it come to exist in itself (the possible intellect). What comes to exist in mind is a content—call it *essence*, *idea*, *representation*, *concept*, or what have you—which has been removed from its individuating conditions. This resulting content is universal in nature, for it is a content that may be applied to other sense experiences where the individuating conditions are different but the content grasped is the same; hence the possibility of a new application of the content without a new, different understanding.

Instead of focusing on the shift from the individual to the universal, Aquinas explains abstraction as being a function of the question that is being asked, as the selectivity of mind at work. And so, depending on the question being asked different aspects of the same thing may be abstracted. But whatever element is abstracted—in other words, whatever element is isolated for consideration—no falsity is implied so long as it is not claimed that the abstracted aspect exists apart from the other elements present in the particular. From this fact follows the relevance of the types of abstraction discussed earlier.

29. F.E. Crowe and Robert Doran, eds., *Collected Works of Bernard Lonergan*, vol. 3, *Insight: A study of Human Understanding*, 5th ed. (Toronto: University of Toronto Press, 1992), 437.

Bavinck's analysis provides a case study of what happens when one simplifies the knowing process by omitting judgment and patterning the knowing process on sense, specifically on the sense of sight. Abstraction comes to have a different meaning, and there is no indication of how the abstracted content conforms to reality. And so the Logos doctrine is used to justify objectivity. In essence this view is a variation of the Augustinian claim that we see the truth in God.

Unlike for Aquinas for whom abstraction is an operation of agent intellect, and therefore intelligence at work, for Bavinck abstracting the universal appears to be an unconscious process which is followed by the intellect assimilating this universal component and incorporating it into itself, which makes it a possession of mind. "Realism," thus writes Bavinck,

...was doubtlessly correct in assuming the reality of universal concepts, not in a Platonic or ontological sense prior to the thing itself (*ante rem*), but in an Aristotelian sense in the thing itself (*in re*) and therefore also in the human mind subsequent to the thing itself (*in mente hominis post rem*). The universality we express in a concept does not exist as such, as a universal apart from us. In every specimen of a genus, particularly individualized and specialized, however, it has its basis in things and is abstracted from them and expressed in a concept by the activity of intellect. (*RD*, 231 [amended])

The complexity in Bavinck's description arises from the fact that he has not completely broken with an assumption shared by rationalism and empiricism; namely, that knowing is essentially a specialized kind of looking. In other words, as asserted above, Bavinck patterns knowing on sensing. If knowing is, as Plato was fond of saying, seeing, then it is true that "science always consists in a logical relation between subject and object" (*RD*, 214), for knowing will be conceived as a kind of confrontation with an external object. By contrast, for Aquinas the focus is on how the mind assimilates reality, so that the goal of mind is to become all things.

Since in the act of sensing we are aware of sensing, and since as Aquinas noted sense does not know its proportion to its object, there follows from Bavinck's way of conceiving of knowing the problem that "we remain inside the circle of our representations and never come into contact with the thing itself, only with our representation of the thing"

(*RD*, 216). Even more problematic with this conception is knowledge of our own self, for “[w]e cannot put ourselves at the window in order [simultaneously] to see ourselves pass in the street” (*RD*, 216; quoting Scherer). As we have already noted in detail above, for Aquinas, we do not remain inside the circle of our representations, because they are the means by which we know, and they are themselves known only reflexively. They are fashioned by the mind in order to grasp what is essential in the thing as revealed through data from the senses, both outer and inner; but it is also possible to switch from focusing on the content of knowing to the operations of knowing—the present analysis being a case in point. But representations are means because they are needed in order to reflect and make a judgment. And it is in reflection that there is a return to the data. Only when the conditions specified by the representations are found in the presentations of sense, then we naturally affirm “it is so”; or when the conditions are not met, we naturally deny. To affirm when the data do not support one’s conception is unjustified, perhaps even rash. To fail to affirm when evidence from the senses is adequate is to be obtuse, or even stupid.

Although Bavinck affirms that “in entertaining concepts we are not distancing ourselves from reality but we increasingly approximate it,” he expresses surprise that this is so. The question is why he finds this surprising, because for Aquinas this would not be surprising in the least. For Aquinas further understanding is always a return to the source, to penetrate ever more deeply into the matter supplied by experience. Being, as was already noted, is for Aquinas what “intellect first conceives as, in a way, most evident and to which it reduces all its concepts.” In other words, from beginning to end, the operations of understanding are oriented toward the goal of discovering *what is*. It appears that for Bavinck the situation is different. For him forming concepts and judgments appears to move away from the solid ground, the natural certainty of sense experience. “It seems strange,” he writes,

even amazing, that, converting mental representations into concepts and processing these again in accordance with the laws of thought, we should obtain results that correspond to reality. (*RD*, 231)

This amazement makes sense if one's conception of objectivity is rooted in empiricism. For as already noted, natural certainty as Bavinck describes it has an affinity to empiricism, whose criterion of what is real is what is out there (hence available to the senses). For Aquinas, by contrast, natural certainty properly understood is simply grasping that the conditions specified by everyday understanding are confirmed by experience. In other words it is another example of the pattern of experience and understanding culminating in a judgment that affirms that the conditions specified are in fact fulfilled.

Bavinck's account of knowledge is certainly realist in intent, but the psychology implicit in his account fails to describe how knowing is different from sensing. The result is an account of knowing in which the basic underlying metaphor is borrowed from the sense of sight. From this factor follow the difficulties that have been noted and a number of others as well.³⁰ Bavinck's final word is that things remain outside of us. "Being itself therefore can never be approached by us; it is a fact that has to be assumed and constitutes the basis of thought" (*RD*, 231). For Aquinas it is not so; being is what first enters into the intellect, for even if we know nothing else and we cannot identify what we are perceiving, we are still able to say there is something appearing to us in experience. As our grasp of a thing expands, we penetrate ever more deeply into its reality. And even though every understanding is limited and partial, for we are able to grasp only one thing at a time, still when one question is answered another can be raised, and what was matter—incidental and abstracted from in the first case—may become the aspect of the thing that is the focus of succeeding investigations. Far from agreeing that being itself can never be approached by us, Aquinas would assert that the aim of all knowing is to grasp being, that our knowing is progressive, penetrating ever more

30. For example, the problem just mentioned by Scherer: self knowledge. If knowing is conceived of as being like sensing, then one cannot both be in the street and in the window at the same time. However, if knowing is conceived of as an assimilation of mind to reality, then one of the things that can become the focus of understanding is one's own experience of understanding including its conditions, operations, and results.

fully into the realm of being. Admittedly, the quest for knowledge will never come to an end, for we humans begin knowing nothing, with a *tabula rasa*, and so we will not in this life reach complete knowledge of everything; we remain persons desiring to understand, *homo viator*.

To conclude, Bavinck's epistemology is certainly inspired by Thomas, but in surprising and significant ways he departs from his thirteenth-century mentor. Bavinck's account of knowledge lacks the clarity found in Aquinas. Thomas articulates clearly how understanding contrasts with sensing. Bavinck does not. The result is that Bavinck is at loss to explain the objectivity of knowledge, and so he develops the Logos doctrine to defend the objectivity of thought. For Aquinas the human mind is also a participation in the divine intelligence—"the light of Thy countenance O Lord, is signed upon us"—but for him this means that through the capacity created in us including the capacity to judge, to affirm or deny, or withhold judgment, "all things are made known to us" (*ST* 1.84.6).