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Natural Realism: The World and the Mind According to
Aquinas, Dretske, and Putnam

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ABSTRACT

Natural Realism: The World and the Mind According to
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Sister Mary Veronica Sabelli, R.S.M.

St. Thomas Aquinas' and Fred Dretske's accounts of mind and cognition are explored, compared, and contrasted. Similarities are found in their accounts of the mind's cognitive operation, in that both accounts recognize the presence of representations at the levels of perception and conceptualization, and both begin with external objects and move inward to sense perception, conceptualization, and the mind's knowledge of itself. However, their accounts of what the mind is differ sharply, in that Dretske holds a non-reductionist materialist position while Aquinas maintains that the human being has a composite character. Aquinas is not a dualist, however, in that he takes the mind to be a capacity, not a substance. Hilary Putnam's criticisms of representationalism and what he calls "traditional realism" or "metaphysical realism," as well as his support for a turn in philosophy to what he calls "natural realism," are explored in relation to the accounts of Aquinas and Dretske, neither of whose theories are found to propose either the sort of representationalism nor the sort of metaphysical realism criticized by Putnam. Rather, their accounts are found to be conducive to natural realism.

CONTENTS

INTRODUCTION	1
Chapter One	6
Dretske's Account	6
Aquinas' Account	14
Interrelationships Between the Two Accounts	22
Chapter Two	28
Putnam's Criticism of Representationalism	28
Putnam's Criticism of "Traditional Realism"	31
Putnam's Call for "Natural Realism"	38
Chapter Three	50
Representations and Natural Realism	50
Dretske and Aquinas: "Traditional Realism" or Natural Realism?	57
CONCLUSION	67
NOTES	74
BIBLIOGRAPHY	83

INTRODUCTION

". . .Though representations are in the head, the facts that make them representations . . . are outside the head."¹ So states Fred Dretske in his 1994 book, *Naturalizing the Mind*. ". . .The act of knowledge extends to things outside the knower; for we know things even that are external to us."² So states St. Thomas Aquinas in the *Summa Theologica*. Despite the radical differences between the contexts in which Dretske, a contemporary American philosopher who comes from a background in engineering, and Aquinas, a medieval European philosopher who was also a Dominican priest and theologian, were situated, these quotations point to one striking feature that is shared by them, namely, in twentieth century terminology, direct realism. Both, in other words, posit that what we perceive with our senses is actually existing things that are external to us. Indeed, in the prologue of his book, Dretske says that one advantage of his theory is its "distinguishing, in naturalistic terms, between *what* we experience (reality) and *how* we experience it (appearance)."³ Both philosophers posit that *what* we experience is really-existing objects in the world around us; and that *how* we experience them is first by means of our senses. Moreover, by means of such experience, we gain knowledge of external objects. Further, by reflecting on our process of gaining such knowledge, we gain knowledge of our own minds. Dretske and Aquinas, therefore, advance externalist philosophies of mind (according to late twentieth century terminology), that is, "mental facts are constituted, not by the intrinsic character of the events occurring inside, but by the *relations* these internal events bear to external affairs;"⁴ and this applies

not only to thoughts, but to sensory experience.⁵ Stated another way, "physically indistinguishable heads can harbor different thoughts"⁶ and phenomenal experiences.⁷ Both philosophers' accounts advance such a view in that they begin with the external object, and move progressively "inward" through the senses to the human mind itself. The contrasting view, that is, an internalist theory, would hold that thoughts and experiences "supervene[] on the constitution--and for materialists, this can only mean physical constitution--of the experiencer,"⁸ and thus, if the physical constitutions of the experiencers are identical, then their mental contents must be identical.

Another similarity between the two philosophers is that they both describe, in their accounts of human cognition, two tiers of representations, one that figures in the act of sense perception and the other that comes into play in the act of conceptualization. These representations do not, however, mitigate against their direct realist positions. That is to say, they do not hold that the object of our knowledge is the representation itself, thus taking the representation to be an "interface" between the external world and the subject that is as much a barrier between subject and object as it is a medium through which we have some sort of contact, even if oblique, with the world. Rather, they hold that the sense representation is the *means* by which our perception and cognition come into *direct* contact with the outside world.

The major difference between the two accounts lies in Dretske's biologism and materialism versus Aquinas' view that the human being is a composite of material and non-material principles, with the mind, or intellect, as Aquinas would call it, being non-material. Dretske, though an

anti-reductionist, holds that mind supervenes upon matter, while Aquinas would hold that intellection is only achieved in the human being through the blending of the operations of both sense perception (body) and conceptualization (mind). The latter would seem to be completely congruent with Kant's view that "intuitions without concepts are blind; concepts without intuitions are empty," but the difference between Kant and Aquinas is that Aquinas still maintains that external things-in-themselves are the very thing that is attained in human knowledge, while Kant holds this "noumenal world" to be unknowable. A point of interest, then, is that there are similarities in Dretske's and Aquinas' accounts of how perception and intellection *operate*, even though their views on *what the mind is* diverge considerably.

As indicated by the title of his book, Dretske's aim is "to promote a naturalistic theory of the mind and . . . a naturalistic account of experience."⁹ Such terminology was not current at the time of Aquinas, but one of the latter's twentieth century exponents, Etienne Gilson, refers to Aquinas' realism as "natural realism."¹⁰ The term "natural realism" has recently arisen in other philosophical quarters as well, notably in the writings of Hilary Putnam. In the 1994 Dewey Lectures at Columbia University, Putnam called for a turn in philosophy to "natural realism,"¹¹ as an antidote both to the blind alleys reached by other contemporary approaches to philosophy of mind, including, in Putnam's opinion, representationalist theories, and what Putnam considers to be the unacceptable encumbrances of what he calls "metaphysical realism" or "traditional realism." The latter is discussed both in the Dewey Lectures and in his 1994 book, *Words and Life*¹², where Putnam engages in a fairly

lengthy discussion of Aristotle's realism and, to a lesser extent, the realism of St. Thomas Aquinas. In the Dewey Lectures, Putnam's call for "natural realism," which he also terms a "second naïveté," is made in the context of the author's turning away from a point of view advanced by him earlier in his philosophical career that has come to be known as "internal realism" (an unhappy label, according to Putnam and others, such as Alvin Goldman, for something that is actually a form of anti-realism).¹³ This so-called internal realism was originally proposed as an alternative to "metaphysical realism." It is not our purpose here to explore Putnam's internal realism, but it should be noted that Putnam himself characterizes his turn to "natural realism" as a new alternative to "metaphysical realism" that should replace internal realism. In proposing "natural realism," Putnam gives a fresh criticism of "metaphysical realism."

In the course of this study, I will argue that the notions of representation espoused by Dretske and by Aquinas are not the notion of representation criticized by Putnam, that is, a view of representation that, by an unarticulated implication, necessitates the acceptance of a sense datum theory of perception. I will also argue that Putnam's description in the Dewey Lectures of what he means by "traditional realism" or "metaphysical realism" has very little in common with the metaphysics of at least the one scholastic philosopher already mentioned above, that is, St. Thomas Aquinas. I will also argue that the treatment in *Words and Life*, though generally very valuable, also contains some clear misstatements of Aquinas' position. I will contend that at least one view of Aquinas' account of perception and cognition, that is, the view propounded by Joseph Owens, in the tradition of Etienne Gilson's interpretation of Aquinas (a view that

is often referred to as "existential Thomism") is based on a radically different metaphysical account from what Putnam describes as "traditional realism."¹⁴ I will argue that Aquinas' account actually answers Putnam's call for a "natural realism." Putnam has, in fact, already identified in a partial fashion some ways in which Aquinas provides a natural realism. I will attempt to show, however, that Aquinas' account is a much more complete answer than Putnam has recognized.

Having discussed the ways in which Aquinas' philosophy answers Putnam's proposal of natural realism, a consideration of the points of agreement between Aquinas and Dretske will illustrate that natural realism is not incompatible with representationalism. By relating Aquinas' account to the positions of these two contemporary philosophers, I hope also to show the soundness of his account and its usefulness in the contemporary context.

CHAPTER ONE

Dretske's Account

What does Dretske mean when he speaks of a representation? His definition of a representation is as follows: ". . . a system, S, represents a property, F, if and only if S has the function of indicating (providing information about) the F of a certain domain of objects."¹ The notion of function gives representation a certain teleological aspect, in the sense that the system has the end or purpose of providing information about a certain property of a certain domain of objects. In light of the function, we can evaluate how well or badly the system works: does it perform its function of representing (that is, providing the requisite information about a certain property of a certain class of things) well or poorly? This notion of function allows Dretske's theory to account for misrepresentation, in the sense that a misrepresentation is the poor operation, failure in operation, or misdirected operation of a system in relation to the *function* that the system is expected to perform. Without the notion of function, implying as it does the notion of purpose or end, there is no representation or misrepresentation; there is only raw information.²

The notion of misrepresentation in turn points to Dretske's realism. Dretske distinguishes two kinds of misrepresentation: one in which the representational system represents something when there is actually no object present; and the other in which, where S = the representational system, "the object S represents to be blue is not blue."³ Veridical representation would be where "the object S represents to be blue is blue."⁴ These statements illustrate that Dretske posits that these

representations are about really existing external objects, which in themselves possess certain attributes. Our representations are veridical if they correspond to the attributes that really exist in the object. Dretske is thus expressing a notion of truth that is based on correspondence.

Dretske distinguishes natural from conventional representations. Conventional representations are those whose informational functions have been assigned to them by the intent of their human designers. Natural representations are those whose (biological) informational functions have been derived by means of the "design" of evolutionary history. He maintains that *all* mental states are *natural* representations.⁵ In other words, they have something they indicate that does not depend on our chosen purposes. This is central to Dretske's account, because according to him, this is why the senses and their "perceptual representations in biological systems--unlike those in laptop computers, speedometers, and television sets--make the systems in which they occur *conscious* of the objects they represent"⁶ (emphasis in original). The systems of computers, speedometers, and television sets are ones that use conventional, rather than natural, representations.

Dretske then goes on to distinguish the natural representations of our senses as *systemic* representations, or representations_s, and *acquired* representations, or representations_a. Natural representations are not only experienced by us; they also engender beliefs in us. These beliefs come about because of a conceptualization of the experience of the representation. For example, when we speak of the blue color of someone's shirt, this implies that 1) we have a sense experience in which visually the

shirt is represented_s as blue, *and* 2) we are *aware* that the shirt is blue, and that the blue thing is a shirt. In other words, we have formed a concept of the color blue and a concept of shirt such that we can identify the object of the sensory experience: "This is a blue shirt." The conceptualization is what Dretske calls a representation that is acquired, or a representation_a. Thus, the sense experience of this blue shirt is a representation_s, while the belief or the awareness that "this is a blue shirt," is a representation_a.⁷ Dretske calls experiences "representations_s," while he calls concepts and beliefs "representations_a." A representation_s is "fixed by the functions of the system of which it is a state,"⁸ while a representation_a is learned, and can be changed with further learning. Using the example of color, Dretske illustrates this with reference to our ability to experience at a sensory level hundreds of colors, compared with the relatively limited conceptualizations that we have for categorizing these colors into only several dozen categories.⁹ If one were to study the fine art of painting, however, one could, through learning, recalibrate these sensory experiences with much more precise and abundant conceptualizations of color.

Dretske illustrates the distinction between sensory representation and conceptual representation by using an example of animal versus human experience. He uses the case of a mouse and a human being (one who knows what a piano is) listening to a piano being played. The mouse hears the piano being played, but does not hear it *as* a piano being played, because it has no concept of a piano. Yet it would hear the sound, by means of a sensory representation. The human being would also hear the sound by means of a sensory representation, or representation_s. Yet a

human being would, in addition, hear the sound *as* a piano being played, because the human being also has a concept, or representation_g, of the piano. In other words, the human being also *believes* that a piano is being played.¹⁰

Dretske recognizes the difficulty posed when "we start describing ourselves as being aware of abstract objects--differences, numbers, answers, problems, sizes, colors. . . ." ¹¹ According to him, in such abstract descriptions, such as in the statement, "She is aware of the color of his shirt," the abstract noun "stands in for" ¹² a factual statement such as, "She is aware *that* the shirt is blue." ¹³ In other words, the abstract statement is derivative of the statement about the particular, concrete object.

Dretske also distinguishes natural representations that are *not* mental representations. To do this, he uses the analogy of a speedometer that represents speed based on the number of rotations of an axle that occur within a given time. The speedometer is calibrated according to the number of axle rotations in a given period of time in relation to the size of the wheel (since, in order to represent the same speed, each speedometer's pointer would have to be calibrated differently for wheels of different sizes whose rotations take different amounts of time). The system as a whole represents speed; but the axle itself, in the early stages of the process, only provides information about the number of axle rotations. When the speedometer represents speed, the information about the number of axle rotations is "absorbed into information about speed." ¹⁴ For Dretske, the axle rotation and the information that this provides (represents_g) is the analogue of the neurological functioning of the brain.

Although the latter is a natural representation, it is a *non-mental* representation_s, and hence it does not make us conscious and is also not accessible to consciousness. The speedometer is the analogue of sense experience. It represents_s speed, and is analogous to a representation_s that *is* mental; it makes us conscious of speed. The calibration of the pointer is the analogue of conceptualization, in that it represents_a speed; it causes us to have a belief about the speed at which we are traveling, but in a way that is subject to modification.

The significance of this is that Dretske distinguishes the mind from the brain. The brain's workings are like the axle; as said above, they do not make us conscious, and they are not available to consciousness. The mind, according to Dretske, is what makes us conscious, and includes mental representations_s (the senses), and representations_a (conceptualization).

Against this background, Dretske distinguishes mental representational facts from facts about mental representations. Mental representational facts tell us something about the mind. In contrast, facts about mental representations--for example, facts about the biological and electrical workings of the brain--do not tell us about the mind. Again, Dretske distinguishes mind and brain, and does not identify mental representational facts with brain functions.¹⁵ To illustrate this, he uses another analogy--that of a book and the story it tells. The book--with its pages and print--is the vehicle of a representation. The story told in the book is the content of the representation. Although the book is the vehicle of the story, one cannot see the contents of the story in the book; one only sees paper and ink. Analogously, the brain is the vehicle of our

mental representations, but if one looks inside the brain, one sees only grey tissue; the content of our mental representations are in us in the sense that they are in our minds, but the mind is not the brain. If you look inside the brain of the person who is experiencing the blue shirt, you will not find a blue shirt there.

What does Dretske conclude from this? He concludes that "what makes a mental state--and, in particular, an experience--the experience it is is what it is an experience of."¹⁶ In other words, one cannot discover in the brain what it is that neurological activity represents; rather, what makes our experiences what they are is that which they have the function of indicating.¹⁷ In other words, it is the object that is being represented that makes our experiences what they are. Thus another highly significant aspect of Dretske's identification of natural representations that are non-mental is that representations_s are not what they are because of the way in which our minds construct them; they are what they are because they reflect the attributes of the external things that are their objects.

Sense experience is the primary locus of consciousness. . . . Phenomenal experience--the look, sound, taste and feel of things--dominates our mental lives. . . . My experience of an object is the totality of ways that object appears to me, and the way an object appears to me is the way my senses represent it.¹⁸

From this conclusion Dretske draws his account of qualia:

. . . Qualia are supposed to be the way things seem or appear in the sense modality in question. So, for example, if a tomato looks red and round to S, then redness and roundness are the qualia of S's visual experience of the tomato. If this is so, then . . . it follows that qualia, the properties that define what it is like to have that experience, are exactly the properties the object being perceived *has* when the perception is veridical.¹⁹

Since the properties of the objects of experience are what make an experience what it is, Dretske's account concludes that in order to know what it is like for another human being or even another creature altogether to experience the object, we need only to know something about the properties that that object has. So, if we want to know what it is like for this other subject to experience the tomato, all we have to know is something about its properties, that is, redness, roundness, etc.²⁰ In this way, Dretske accounts for objectivity and commonality of experience among different subjects.

This account would seem to exclude any component of subjectivity in experience. This is not the case, however, because it does not exclude the possibility of first person privilege, that is, the special knowledge of, and privileged access to, our own conscious states. This is because each human being has *direct* knowledge of his or her own conscious states, and no other has this direct knowledge of that human being's experiences. Dretske's challenge is to demonstrate, given his assertion that knowing what an experience is like means to know the properties of the external object of the experience, how it is that one's own access to one's experiences could be any more direct than anyone else's. Dretske meets this challenge by recognizing introspection as a metarepresentation, that is, a representation of a representation *as* a representation. He then explains that our looking at the metarepresentations tell us about the object of the original representation, much the same way that the pointer on a scale tells us about our own weight, by a process that he calls "displaced representation." Just as looking at one property (the pointer position) of one object (the scale) tells me about another property (the

weight) of another, primary object (my own body), so the properties of my metarepresentation tell me about the properties of the object of my original representation.²¹ But I am the only one who has direct access to my representations and metarepresentations; others can indeed have access by other means to what my experience is like (as was explained above), but by a much longer and more complicated process. In this way, Dretske accounts for subjectivity, while adhering to the objectivity of his externalist system.

Metarepresentations also have great significance in Dretske's account of our awareness or (alleged) lack of awareness of our experiences. According to Dretske, experiences that we tend to call "unconscious," such as the experience of having driven for miles pre-occupied with thoughts of something else and arriving at one's destination with no memory of having traversed whole long stretches of road, are really conscious after all. The driver's senses were in full operation; all the necessary adjustments to road signs, traffic signals, other vehicles and so forth were being made. In other words, representation_s was in full swing. In this sense, the driver was conscious, aware through the senses of all that was taking place and responding appropriately. To state it another way, the driver was clearly conscious and not asleep or in a blacked-out state. What was lacking was not consciousness; rather, it was reflective consciousness that was absent. The driver was representing, but was not *metarepresenting*. So, sometimes when we use the word consciousness in every day speech, what we mean is not consciousness *per se* but a particular kind of consciousness: it is the consciousness of being

conscious of some object. A similar double usage occurs with the word "aware."

Aquinas' Account

In order to consider Aquinas' account of the human mind, it is necessary first to examine his use of the word "mind." There is evidence in Aquinas' *Summa Theologica* that Aquinas uses the Latin words "mens" (translated as "mind" in English) and "intellectus" (translated as "intellect" in English) as equivalent terms. In I, 75, 2 c, he refers to "the intellectual principle which we call *the mind or the intellect*" (emphasis added). In the same paragraph, within the third sentence following the above quotation, he again uses the phrase "the intellect or the mind." In I, 79, 2, ad 1 and ad 3, he twice uses the words "mind" and "intellect" interchangeably. Again in I, 84, 2, ad 1, Aquinas says of the capacity for making a certain kind of judgement, "This is the *mind or intellect*" (emphasis in original). This evidence is reinforced by the fact that, although in the *Summa Theologica* Aquinas favors the term "intellect," in the *Quaestiones disputatae de veritate*,²² he tends to favor the term "mind." The equivalence of these terms for Aquinas is apparent from the fact that many questions that are disputed in the *De veritate* using the word "mind" are parallel to similar questions and arguments in the *Summa Theologica* which use the word "intellect."

Having established the equivalence of these terms for Aquinas, we turn to the consideration of his account of the mind. At the outset, we must note that Aquinas makes a sharp distinction between the operations of sense perception on the one hand, and the operation of the mind on the

other. According to Aquinas, the operation of the senses is a necessary condition for the operation of the human intellect. As Aquinas notes, "The principle of knowledge is in the senses."²³ By "principle" is meant origin or source. Therefore, an exposition of Aquinas' account of the mind must begin with his rendition of the operation of the senses in the act of perception.

"Phantasm" is the name that Aquinas (after Aristotle) gives to the percept in the human being's sensitive power of an external thing. According to Aquinas, ". . . It is impossible for our intellect to understand anything actually, without turning to the phantasms."²⁴ The phantasm represents the physical attributes of the particular, individual external thing. Aquinas speaks of "individual qualities *represented* by the phantasms"²⁵ (emphasis added). Owens and Brennan have also referred to the phantasm as a representation.²⁶ The phantasm is always particular, being a response to a singular, existent, sensible thing.

Aquinas holds that the phantasm is material in one sense, and non-material in another sense. One way in which the operation of the senses is material is that sensation involves a change in the organs of sense. He expresses this sometimes by saying that sensation is accompanied by a change in the organ, and at other times by saying that sensation makes use of a corporeal organ.²⁷ Another way in which Aquinas regards sensation as material is that it reflects²⁸ the physical attributes of a singular, existent, material thing.²⁹ It is always individual and particular. In this connection, Aquinas refers to the phantasm as a "material image."³⁰

In the sense, however, that neither the material object of perception nor its material attributes enters the sense organ of the percipient

materially when it is perceived,³¹ the phantasm is *not* material. That is to say, when the subject is perceiving, for example, a tree, neither can one look inside the subject's eye or optic nerve or brain and find a tree there; nor does any part of the eye or nervous system involved in sight become brown when looking at the brown of the tree trunk; nor can one find a physical picture of a tree in the sense organ or sensitive power. When Aquinas calls the phantasm a "material image," he does not mean that the "image" is itself a material thing in the percipient; rather, it is a material image in the sense that the phantasm is the percept of strictly material attributes of the object of perception. Thus, the phantasm is not a material thing in the percipient; rather, it is characterized as material with reference to its object as a singular, material, existent thing, and with reference to the kind of information that it imparts to the percipient, that is, information regarding material attributes.

Having examined Aquinas' account of sense perception, we now turn to a discussion of Aquinas' account of the mind. The operation of the intellect in relation to the phantasm is called by Aquinas "abstraction." As expressed by Joseph Owens, abstraction is the operation of "considering things according to what they have in common, while leaving out of consideration all that is not common to them. . . ." ³² According to Aquinas, the intellect abstracts from the phantasm what he calls the "intelligible species," ³³ which Owens identifies as another type of representation. ³⁴ The word "species" in this context is not used in its more familiar application in relation to the notion of "genus." ³⁵ Rather, the latter indicates "a certain likeness which *represents*, as to its specific conditions only, the thing reflected in the phantasm. It is thus that the

intelligible species is said to be abstracted from the phantasm . . ."36 (emphasis added). By "specific conditions," Aquinas indicates those conditions that specify the thing as what it is, versus other, non-constitutive characteristics. A word frequently used by Aquinas to designate this is "quiddity." "Quiddity" is derivative of the Latin "quid," meaning, "what." "Quiddity" therefore means the "what-it-is-ness" or "what-ness" of a thing. As he notes, "The object of our intellect in its present state is the quiddity of a material thing, which it abstracts from the phantasms. . . ."37 This "what-ness" that the mind abstracts from the phantasm is something that is present not only in *this particular, individual* instantiation, such as a tree (a natural thing) or a shirt (an artifact), but in other trees or shirts as well. In Aquinas' own words,

This is what we mean by abstracting the universal from the particular, or the intelligible species from the phantasm; that is, by considering the nature of the species apart from its individual qualities represented by the phantasms.³⁸

In relation to the operation of abstraction, Aquinas discusses two aspects of the intellect: the possible (sometimes called the passive) intellect, and the active intellect.³⁹ The mind is characterized as possible (or passive) insofar as it begins in a state of unknowing and is capable of proceeding to knowledge. The mind is characterized as active when it effects the abstraction of the what-ness of a thing from the phantasm. The mind is again characterized as possible or passive when it retains the what-ness, which is then available for comparison with other quiddities subsequently abstracted.⁴⁰

There are two different degrees of abstraction identified by Aquinas. There is an immediate grasp of the what-ness of a thing that takes place by a cognitive act of abstraction. Continuing the example of a tree or a

shirt, the tree-ness or shirt-ness, perceived presently in a particular instantiation, is immediately grasped and identified as a what-ness that is not only present in this particular entity, but also attributable to countless other entities that are similar with respect to that what-ness. It is understood in the particular entity, yet it is understood as *able* to be separated (conceptually only) from this individual instantiation. An illustration of this point would be the cognitive act of recognition that Socrates is a human being. The humanity of Socrates is still understood as present in this particular human being, Socrates, but humanity is also implicitly understood as being equally attributable to countless other human beings. Aquinas introduces the terminology of prescinding and not prescinding from individuating conditions in his explanation of the two degrees of abstraction in *De Ente et Essentia (On Being and Essence)*.⁴¹ Joseph Owens, in synthesizing Aquinas' doctrine on these matters, refers to the first degree of abstraction as "abstraction without precision" (the word "precision" here having the sense of "prescinding"), that is, abstraction of a what-ness without prescinding from, or "cutting off," the notion of the particular instantiating conditions.⁴²

The second degree of abstraction occurs when the what-ness, understood by the mind as universal, is considered apart from any of its individuating conditions, and is thus conceptualized. According to Joseph Owens, "The corresponding representation is no longer individual and mixed with the other features, but expresses the one aspect only. It is called the concept. . . ."⁴³ Again, Owens, synthesizing Aquinas, refers to this degree of abstraction as "abstraction with precision."⁴⁴ Thus, in the above example, upon reflecting on the recognition of humanity in Socrates,

the intellect can exclude all other characteristics except that of humanity itself. In the *Summa Theologica*, St. Thomas expresses the notions of abstraction with precision and without precision in the following manner:

The universal can be considered in two ways. First, the universal nature may be considered together with the intention of universality. And since the intention of universality . . . is due to intellectual abstraction, the universal thus considered is a secondary consideration. . . . Secondly, the universal can be considered in the nature itself--for instance, animality or humanity as existing in the individual.⁴⁵

Abstraction can take place not only with regard to the quiddity of a thing, but also with regard to other, more incidental characteristics of it. Taking up again Dretske's example of the blue shirt, after the initial, immediate identification of the blue color of the shirt, blueness itself can be considered by the mind apart from the shirt. This is in contrast to the operation of perception, where the blueness exists in the shirt, and the blue shirt is grasped as one thing. In sense perception, blue exists only in blue things. In the mind, however, blue can be separated from things and conceptualized as a what-ness itself. As stated by Aquinas,

. . . If we understood or said that color is not in a colored body, or that it is separate from it, there would be error in this opinion or assertion. But if we consider color and its properties, without reference to the apple which is colored; or if we express in word what we thus understand, there is no error in such an opinion or assertion, because an apple is not essential to color, and therefore color can be understood independently of the apple.⁴⁶

In the progression of the cognitive process from sense perception involving the phantasm, to the first and then the second degree of abstraction, one can see a succession of degrees of immateriality.⁴⁷ As has already been noted, the phantasm is material in the sense that its object is a particular, existent, material thing, and in the sense that it represents the thing's material attributes. It is immaterial in that neither does the

matter of the object of perception enter the organs of perception of the percipient, nor do those organs take on the material characteristics of the object of perception, nor is there a physical "picture" of the thing in the sense organ. The first stage of abstraction pertains to a greater degree of immateriality in that it disregards the individuating material characteristics of a thing in order to attain an understanding of the what-ness of that thing, even while retaining the *notion* of individuality in that what-ness, as in progressing from the phantasm of Socrates actually perceived to the notion of a human being. The second degree of abstraction disregards even the notion of the individual human being, to attain the more abstract notion of humanity, thus arriving at a greater degree of immateriality.

It is important to emphasize that the universal concept thus abstracted is something that is in the mind of the subject, not something existing in the external world. Aquinas states this succinctly:

. . . Humanity understood is only in this or that man; but that humanity be apprehended without conditions of individuality, that is, that it be abstracted and consequently considered as universal, occurs to humanity inasmuch as it is brought under the consideration of the intellect, in which there is a likeness of the specific nature, but not of the principles of individuality.⁴⁸

Aquinas also accounts for the mind's knowledge of itself. According to him, the intellect is a capacity or power, rather than a thing. This distinction will be explored more fully in Chapter Two of the present study, but for the moment, it should be noted that, as a capacity, the mind can only be known when actuated through operation, and then it can only be known through reflection upon that operation. In turn, the mind can only operate when there is an external object upon which it can operate. One

thus cannot begin with consideration of the nature of the mind in itself, and then move outward to discover its relation to the external world. Rather, "that which is first known by the human intellect is [a material] object, and that which is known secondarily is the act by which that object is known; and through the act the intellect itself is known. . . ."49 It is for this reason that Aquinas' philosophy of mind should clearly be characterized as an externalist account.

It is apparent that in Aquinas' account of sense perception and of intellection, the intellective principle and the material principle are consistently considered as two distinct principles which, in composite, comprise the human person. With regard to perception alone, the combination of material and non-material processes involved in sensation point to Aquinas' position that sensation involves both a change in a physical organ plus the operation of a sensitive power present in the soul⁵⁰ of the human person.⁵¹ The intellect, by contrast, acts independently of any bodily organ,⁵² according to Aquinas. As he says, "the intellectual principle which we call the mind or the intellect has an operation *per se* apart from the body."⁵³ Moreover, its own proper operation, that of abstraction, considered in itself, is distinct from the operation of sensing. As Aquinas notes, "The body is necessary for the action of the intellect, not as its origin of action, but on the part of the object. . . ."54 However, with regard to human cognition, neither the intellect nor the senses can operate alone. The intellect's work of abstraction requires the phantasm as that upon which abstraction is exercised. Thus, with regard to both sensing and intellection, Aquinas holds that each is the act not just of the sensitive part or the intellective

part, respectively, but rather the act of the composite, the total human being acting as one unit. Aquinas states, "the sense has not its proper operation without the co-operation of the body; so that to feel is not an act of the soul alone, but of the *composite*"⁵⁵ (emphasis in original), and, "the operation of parts is through each part attributed to the whole. . . . We may therefore say that the soul understands, as the eye sees; but it is more correct to say that man understands through the soul."⁵⁶

The characterization of the mind as a capacity, together with the view that it is the composite, that is, the human being, that senses and understands both indicate that Aquinas is neither a materialist nor a dualist. Aquinas, as we have said, is not a materialist because he posits mind as a non-material principle. He is not, however, a dualist in the Cartesian or Platonic sense, because he does not posit mind as an independently existing thing or substance that in turn is coupled with the body, another independently existing thing or substance. The mind for Aquinas, as we have noted, and as we shall explore more fully in Chapter Two, is a capacity (or power, or faculty), not a substance. Neither can matter alone be the principle of continuity in the human being, according to Aquinas, since from one point in time to another, it is not the same matter that constitutes the body. This, too, will be explored in more depth in Chapter Two.

Interrelationships Between the Two Accounts

One of the most striking similarities between Dretske's and Aquinas' accounts is that both posit that the process of cognition begins with the perception by a physical sense organ of an exterior object, and builds

progressively to the point of conceptualization. As stated by Dretske, "Sense experience is the primary locus of consciousness. . . . Phenomenal experience--the look, sound, taste, feel of things--dominates our mental lives."⁵⁷ As stated by Aquinas, "The principle [that is, origin or source] of knowledge is in the senses."⁵⁸

Both philosophers posit that sense experience takes place by means of a representation. Dretske calls the first representation a systemic representation, or representation_s, while Aquinas calls it a phantasm. This representation is not seen by either of them, however, to be merely a mental construct whose attributes are primarily derived from internal factors in the human mind, and are merely triggered by external factors (as many causal theories of the human mind would maintain). Rather, as Dretske maintains, that which makes an experience what it is is the attributes of the object being experienced. Likewise, according to Aquinas, "the sensible image [that is, the phantasm] is not what is perceived, but rather that by which sense perceives."⁵⁹

Both philosophers also posit another operation that takes place beyond the first representation. This further operation according to Dretske is representation_a. For Aquinas, the corresponding action is that of the first phase of abstraction. Aquinas maintains that, in like manner to the phantasms, "the intelligible species [or what-ness that is abstracted from the phantasm] is not what is actually understood, but that by which the intellect understands."⁶⁰ Aquinas is explicitly saying here that the representation is not a mental construct and an interface between subject and object which itself becomes the object of knowledge. Rather, he is saying that it is a *means by which* the attributes that exist *in the external*

object are perceived by the subject. This no more leads to the conclusion that it is really only the representation that is perceived than saying that we see by means of the eye, or hear by means of the ear, leads to the conclusion that it is really only the eye itself that is seen, or the ear itself that is heard. What is perceived is the external object itself, not the representation. The reason that confusion arises on this point is that, as noted above, the mind is *also* able to reflect upon itself, and therefore, in addition to understanding the object, it can also understand its own act and the means by which it acts. The latter two are secondary, however, to cognition of the external thing. As Aquinas states,

...[T]hat *by which* the sight sees is the likeness of the visible thing; and the likeness of the thing understood, that is, the intelligible species, is the form *by which* the intellect understands. But since the intellect reflects upon itself, by such reflection it understands both its own act of intelligence, and the species by which it understands. Thus the intelligible species is that which is understood secondarily; but that which is primarily understood is the object, of which the species is the likeness⁶¹ (emphasis added).

Further implications of this will be explored in Chapter Three.

An additional correlation between Dretske and Aquinas exists where, in addition to representations_s and representations_a, Dretske recognizes a further level of abstraction that appears in descriptions that employ the use of such notions as difference, color, size, and so on. He acknowledges that these abstract concepts are a further derivation from the conceptualization that takes place in the initial conceptual identification of the concrete object. This would correspond to Aquinas' second phase of abstraction, where, from the what-ness or attribute identified in the particular, a concept of that what-ness or attribute, which is no longer considered in relation to any particular existent, is drawn forth.

Significant differences between the two accounts also exist, however, which find their focus in the relationship between the senses and the mind, and in the view of what the mind is (versus how it operates). Dretske is a materialist, maintaining that mind is biologically based, and he includes sense perception under the category of mental activity. Aquinas makes a distinction between the senses and the mind (or intellect). The sensitive power is dependent upon physical organs. The intellect, however, while it depends upon the senses (physical organ and sensitive power of soul working hand-in-hand) to make known to the mind the objects of its operation, is, in its own proper operation of abstraction, not dependent upon a bodily organ. Moreover, according to Aquinas, perception, the operation of the exterior senses, is distinct from intellection, the operation of the mind.

Aquinas is quite obviously a non-reductionist. Dretske, although a materialist, is also a non-reductionist. We saw that he argues against the notion that mental representations can be reduced to brain states. Yet, as a materialist, Dretske does maintain that the mind is supervenient, not upon matter alone, but upon the history that shaped the organism's central control circuitry.⁶² It does so, according to him, because natural, biological systems have come to indicate something about the environment that is important to the survival of the organism in a manner that is not merely "by-the-way." Rather, because of their evolutionary history, they have *as their function* the *purpose* of indicating that information.

There seems, however, to be nothing in Dretske's materialist account that really gives a satisfactory explanation of how consciousness comes about. Dretske says,

The senses, I assume, have information-providing functions, biological functions, they derive from their evolutionary history. . . . The representations they [perceptual systems] produce by way of carrying out their informational functions have a content, something they say or mean, that does not depend on the existence of our own purposes and intentions. This is why the senses . . . have original intentionality, something they represent, say, or mean, that they do not get from us. That is why the perceptual representations in biological systems--unlike those in laptop computers, speedometers, and television sets--make the systems in which they occur *conscious* of the objects they represent.⁶³

But does the fact that the biological systems of our senses have informational functions with content that does not depend on our purposes really explain why they make us conscious? It would seem not. Laptop computers, speedometers, and television sets all have informational functions that carry a content that they did not get from themselves; that doesn't make *them* conscious. Why would our getting our informational functions from evolutionary history rather than ourselves make us conscious, while the other machinery mentioned above getting theirs from us, rather than from *themselves* or from evolution, explain why we are conscious and they are not? Moreover, there clearly are biological entities that have representational systems whose indicator functions are natural rather than conventional, and which have such systems as a result of their evolutionary history, and yet which lack consciousness, let alone intellection. The fact that representations are natural and are evolved in biological systems does not explain the presence of consciousness or of mind.

Thus Dretske's account does not answer the question of how matter becomes sentient, that is, conscious (in the sense of aware), let alone how it becomes intellective. Aquinas' view of the human being as having a composite character is certainly no *less* explanatory than Dretske's view,

and seems in many ways to account for the phenomena more cogently than Dretske does, in the sense that the phenomena seem to indicate that there are in fact two very different principles at work in the human being. The picture is more complex, however, in that mind and soul are not equivalent in Aquinas' system. A further exploration of Aquinas' account of the soul will be undertaken in Chapter Two, in the context of Putnam's consideration of that notion in both Aristotle and Aquinas.

CHAPTER TWO

Putnam's Criticism of Representationalism

Hilary Putnam has grappled with the issue of realism and anti-realism throughout his philosophical career. He has adopted many positions on the issue over the decades, the full extent of which is too varied and complex to be explored here. In various writings, however, Putnam calls for something that he terms "natural realism". According to Putnam, the latter would contrast with both "metaphysical realism" and with representationalism.

In his 1994 Dewey Lectures, Putnam criticizes representationalism. He traces representationalism to the tendency in the British empiricist tradition in the early modern period to categorize sensory experience as a mental phenomenon. Once the sensory experience is considered to be a purely mental phenomenon, there is a tendency to conclude that because all of our experience is mental, mental representations of external things, rather than the external things themselves, are the only objects of experience. The representation, therefore, is considered as an interface between the perceiving subject and the perceived object. The connection between the subject and the external thing is only a causal connection; that is, the external thing causes "affectations of a person's subjectivity"¹ which in turn prompts the mental representation, which in turn is the object of experience. In other words, according to this view, we do not cognize the external thing itself; rather, "perceptual inputs are the outer limit of our cognitive processing; everything that lies beyond these inputs is connected to our mental processes only causally, not cognitively."² At

the crux of this problem, then, according to Putnam, is the progression in which "[t]he mind-body problem has become (among English-speaking philosophers) the problem of the relation between these apparently immaterial sensations (now thought of as the paradigm of the 'mental') to the physical world."³

According to Putnam, this view, although initially the result of the modern view that sensory experience is mental and non-physical, is fundamentally very similar to materialist views. Putnam states,

Early modern philosophers assumed that the immediate objects of perception were mental, and that mental objects are nonphysical. What is more, even their materialist opponents often put forward accounts of perception that closely parallel "Cartesian" accounts. Even in contemporary cognitive science, for example, it is the fashion to hypothesize the existence of "representations" in the cerebral computer. If anyone assumes that the mind is an *organ*, and one goes on to identify the mind with the brain, it will then become irresistible to (1) think of some of the "representations" as analogous to the classical theorist's "impressions" (the cerebral computer, or mind, makes *inferences* from at least some of the "representations," the outputs of the perceptual processes, just as the mind makes inferences from impressions, on the classical story), and (2) to think that those "representations" are linked to objects in the organism's environment only causally, and not cognitively (just as impressions were linked to "external objects" only causally, not cognitively).⁴

The materialist also would maintain that sensory experience is a subcategory of mental operations. To him/her, however, all mental phenomena are reducible to or supervene upon some material state of affairs, whether identified as a brain-state, or, for a functionalist, any material embodiment. Sensory experience, therefore, as a subcategory of mental states, would also be identified in this way. The sensory experience would continue to be understood as a representation, in Putnam's sense of that term. It would differ from the early modern view only in that it could no longer be

seen as non-physical. Putnam summarizes the similarities between the sense datum theory and current materialist theories as follows:

Although sense-datum theory itself has fallen into disrepute, the assumptions that underlay it remain very much in vogue. These include the assumption that there is a self-standing realm of experiences or mental phenomena; that these phenomena take place in the mind/brain; that the locus of this drama is the human head; and, finally, that perception involves a special cognitive relation to certain of these "inner" experiences, as well as the existence of "causal chains of the appropriate type" connecting them to "external" objects.³

The question of representations, then, is for Putnam a problem within the larger question of how human perception relates to the external world. Putnam believes that in recent decades, the question of perception has been neglected in analytic philosophy, with unfortunate results. He makes a link between the problem of representations and the problem of language, when he says,

How could the question 'How does language hook on to the world?' even appear to pose a difficulty, unless the retort 'How can there be a problem about talking about, say, houses and trees when we see them all the time?' had not already been rejected in advance as question begging or "hopelessly naive"? The "how does language hook on to the world" issue is, at bottom, a replay of the old "how does perception hook on to the world" issue. . . . Is it any wonder that one cannot see how thought and language hook on to the world if one never mentions perception?^b

Putnam here is indicating a further progression from the perception-as-mental turn in philosophy to the mental-as-linguistic turn. For a very concise expression of this last turn, one may look to the writings of Richard Rorty, who also rejects representationalism. Rorty recognizes that there has been a shift from a focus on mind to a focus on language, and that the representation question now focuses on "which sort of statements, if any, stand in representational relations to non-linguistic items."⁷ He speaks of representationalists as "those philosophers who find it fruitful

to think of mind or language as containing representations of reality."⁸ Rorty's view is symptomatic of that stance in philosophy which holds that there is no non-linguistic mental reality, or, stated differently, our linguistic categories shape our experience, such that there is no sensory experience that is in any sense distinct from these linguistic categories.

Ironically, although Rorty, like Putnam, is arguing against the notion of representationalism, he does so in a manner that Putnam is also criticizing, namely, by ignoring perceptions by subsuming them into the category of mental/linguistic phenomena. We shall later see, in section two of this chapter, how another, quite different notion of language and its relation to the external world, becomes the focus of Putnam's criticism of "traditional" realism.

For Putnam, representationalism and attention to language to the neglect of perception are both obstacles in philosophy, and for him, the former pitfall leads to the latter one. For Rorty, however, perception is neglected in favor of language because he accepts the notion of the impossibility of considering sense experience apart from linguistic phenomena. For him, it is the impossibility of considering even mental phenomena, let alone sense perceptions and the external world itself, apart from linguistic phenomena, that itself becomes the rationale for rejecting representationalism altogether. A consideration of whether these concerns pose difficulties for Dretske's or Aquinas' notions of representation will be undertaken in Chapter Three.

Putnam's Criticism of "Traditional Realism"

We now turn to the difficulties that Putnam has with "traditional realism." In the course of critically examining his claims, not only the

flaws of his evaluation of traditional metaphysics, but also some of the flaws in his and his colleagues' criticism of representationalism, will hopefully come into sharper focus.

In his 1994 Dewey Lectures, Putnam rejects what he goes on to refer to in these lectures as "traditional realism" because he believes that it is held in the grip of a "metaphysical fantasy."⁹ He then goes on to describe this fantasy:

The metaphysical fantasy is that there is a totality of "forms" or "universals" or "properties" fixed once and for all, and that every possible meaning of a word corresponds to one of these "forms" or "universals" or "properties." The structure of all possible thoughts is fixed in advance--fixed by the "forms."¹⁰

And, further down he reiterates, "Traditional forms of realism are committed to the claim that it makes sense to speak of a fixed totality of all 'objects' that our propositions can be about."¹¹

This view is not new for Putnam. He expressed this same picture of "traditional realism" in *Reason, Truth and History*¹², and has reiterated it in subsequent publications. In *Reason, Truth, and History*, he refers to "metaphysical realism" rather than "traditional realism," and expresses his conception of this view in three sentences: "The world consists of some fixed totality of mind-independent objects. There is exactly one true and complete description of 'the way the world is'. Truth involves some sort of correspondence relation between words or thoughtsigns and external things and sets of things."¹³

Putnam elaborates this view of "traditional realism" in his second Dewey Lecture:

Since knowledge claims are claims about the distribution of "properties" over "objects," and logical functions (negations, disjunctions, conjunctions, and multiple generalizations) of such claims, it follows, on this picture, that there is a definite totality of all possible knowledge claims, likewise fixed once and for all independently of language users or thinkers. The nature of the language users or the thinkers can determine which of the possible knowledge claims they are able to think or verbalize, but not what the possible knowledge claims are.¹⁴

Indeed, this characterization of the "traditional realist" picture includes the pitfalls of which Putnam complained in his consideration of representationalism, that is, that the question of how language "hooks onto" the world predominates, to the neglect of perception itself, without an understanding of which the language question is doomed to frustration; and the restriction of perception's contact with the external object to a mere causal connection.

From Putnam's description of representationalism, which held that sense representations are purely mental, and that they are only causally connected to the external world, one could very plausibly regard representationalism as a form of internalist philosophy of mind that would lend itself to a sort of idealism, anti-realism, or skepticism. Yet, in his criticism of "traditional realism," Putnam goes on to assert that "the epistemology that goes with this position most commonly involves a causal theory of perception."¹⁵ He goes on to summarize the causal connection account.

On that theory, the objects we perceive give rise to chains of events that include stimulations of our sense organs, and finally to "sense data" in our minds. In materialist versions of the theory, "sense data" are assumed to be identical with physical events in our brains; in recent variations on the materialist theme inspired by cognitive science, these events in our brains are said to be a subset of the "mental representations," or to be the outputs of certain "modules," etc.¹⁶

Thus, Putnam associates the causal connection theory not to idealism, anti-realism, or skepticism, but to "traditional realism." The reasoning behind this is brought into focus by Laurence BonJour in *The Structure of Empirical Knowledge*¹⁷ when he discusses Putnam's view of "metaphysical realism." He does so in the context of a discussion of a metaphysical correspondence theory of truth and an epistemological foundationalist theory of justification, and the significance of each for the viability of realism. BonJour holds that propositions can be true in that they correspond to some independent reality. Metaphysically, therefore, he allows that there can be a correspondence relation that constitutes truth. He also maintains, however, that we cannot have knowledge of these truths unless we can know why we are justified in believing them to be true, that is, unless we have evidence that demonstrates the correspondence between our beliefs and the mind-independent reality. Such evidence, however, is something that we cannot discover, according to the following, familiar rationale: since our only relation with external objects is through the senses, and since we can never get outside of our senses to verify, by some independent means, the state of this mind-independent reality, we can never verify whether or not our senses do correspond with an external world that is known by some other means than the senses themselves. Epistemically, therefore, BonJour rejects any version of foundationalism as a means of justifying our beliefs. Thus, even if it is possible that there is a metaphysical correspondence relation that establishes truth, epistemic justification of our beliefs must be based on a coherence, rather than a foundationalist, theory. Moreover, BonJour rejects the notion that sense

experience is simply a given, and that we can take it for granted that it puts us in touch with external objects.

In the midst of all this, Bonjour equates an externalist theory of justification with the notion of the causal connection. He argues that an externalist theory of justification relies on the notion of a causal connection between beliefs and external reality, even if the subject or anyone else does not and cannot discover what that causal connection consists in, or how it comes about.¹⁸ According to that view, Bonjour explains, those propositions that bear the correct or law-like causal connection to the external world are in fact true, and we are justified in believing them to be true, even if we have no notion of what the causal connection is or how it works. Bonjour believes that this sort of theory is woefully inadequate, but the interesting point for our purposes is that like Putnam, he relates the notion of causal connection to metaphysical realism. Although it might appear on its face, as noted above, that Putnam's description of representations as sense data that are only causally connected to the external world might just as well support an anti-realist or skeptical view, Bonjour demonstrates how it can be compatible with "traditional realism."

Against this background, we now return to Putnam's three sentence description of "traditional" or "metaphysical" realism and Bonjour's response to this description. Bonjour points out that only Putnam's first sentence expresses a purely metaphysical position: "The world consists of some fixed totality of mind-independent objects." (We will later consider some of the problems of this statement even as a metaphysical assertion.) The other two statements are in fact not strictly metaphysical at all;

rather, they enter into the realm of semantics, in that they describe a realism that is "a thesis about the *meaning of statements* of some specified kind."¹⁹ According to Bonjour, "Realism as thus specified is a thesis in the philosophy of language (or perhaps the philosophy of representational systems generally) and is quite distinct from metaphysical realism," so distinct, in fact, that Bonjour proceeds to designate it as "semantical realism."²⁰

Note that Bonjour suggests that "semantical realism" pertains to "representational systems generally." We have now come full circle with regard to Putnam's criticisms of both representationalism and "traditional," or "metaphysical" realism. Bonjour, having rejected the externalist theory of justification, has used Putnam's three sentences on metaphysical realism as a point of departure for turning to the consideration of representationalism as the partner of metaphysical realism. Bonjour has given an exposition of how an epistemologically idealist view (that the only objects reached by our knowledge are the appearances or representations of things that our minds construct, rather than what they are in themselves) is compatible with a metaphysically realist view (that there is a way in which the external world is in itself, and that this way that things are in themselves constitutes truth, even if our minds can never reach knowledge of this). This view is, in fact, one of Bonjour's pivotal assertions.²¹ It is well to note that Rorty, too, believes there is an association between this sort of representationalism and the realist/anti-realist question, both of which he regards as tied to an underlying or implicit assumption of a metaphysically realist view (a view which he staunchly rejects). It is because of this association that he rejects

representationalism, and calls himself an anti-representationalist.²² We saw earlier in this chapter, and we see again here, but from a different angle, that Rorty's opposition to representationalism is very different from Putnam's. Rorty is an anti-representationalist because he wants to eliminate the realism/anti-realism question altogether, whereas Putnam opposes representationalism because he wants to promote a turn to "natural realism."

A certain difficulty with Putnam's references to "traditional" or "metaphysical" realism is that it is frequently difficult to know who he believes it is that holds this view, or, more importantly for our current purposes, where he believes it originated. He seems usually to trace it to an early modern view.²³ In other places, Putnam seems to indicate that he associates this view with scholastic realism.²⁴ Of all the scholastic philosophers, St. Thomas Aquinas is the one who receives the most consideration by Putnam, both in the Dewey Lectures and in the opening chapters of *Words and Life*. One might tend to wonder, therefore, whether, if he associates his "traditional realism" with scholasticism, Putnam is referring primarily to Aquinas' scholasticism.

In fact, however, the picture Putnam has described and labeled "traditional realism" has very little to do with the metaphysics of St. Thomas Aquinas, including his account of how human perception and intellection take place. The "traditional realism" depicted by Putnam is in many ways directly opposed to the explicit position taken by Aquinas. Furthermore, the relationship demonstrated by Bonjour between this metaphysical picture, focusing as it does on statements--that is, linguistic representations--and the whole problem of representationalism as presented

by Putnam, gives intimations that if Aquinas' metaphysics is quite different from Putnam's "traditional metaphysics," then the character of representations, as well as the role that these representations play in his account (and Dretske's as well), might also be very different from the representationalist account to which Putnam so strenuously objects. This, in fact, is the focal issue explored in Chapter Three. Before we begin that investigation, however, we first turn to a discussion of Putnam's rendition of natural realism, followed by an exposition of the positive points in Aquinas' account that Putnam does recognize in *Words and Life*. Since Aquinas adopted much of Aristotle's account, Putnam's consideration of Aristotle's realism will also be examined, insofar as it is relevant to the realism of Aquinas.

Putnam's Call for "Natural Realism"

After having provided his evaluations of representationalism and "traditional realism," Putnam takes the position that philosophy must return to something that he calls "natural realism." This term is borrowed from William James, who Putnam claims "aspired to a kind of realism in philosophy that was free of the excesses of traditional forms of metaphysical realism."²⁵ James, says Putnam, believed that "progress in philosophy requires a recovery of 'the natural realism of the common man.'"²⁶ Putnam also recognizes that this natural realism is a "direct realism," although he prefers the former term.²⁷

Putnam recounts the contents of a letter written by James, in which the latter recounts the multiple ways in which a handful of beans strewn on a table could be described.

The beans can be described in an almost endless variety of ways, depending on the interests of the describer, and each of the right descriptions will *fit* the beans-minus-the-describer and yet also reflect the interests of the describer. And James asks: Why should not any such description be called true? He insists that there is no such thing as a description that reflects no particular interest at all..."And for this," James wrote, "we are accused of denying the beans, or denying in any way being constrained by them! It's too silly!"²⁸

The view that Putnam wishes to endorse, and that he has found in certain writings of William James, is one of espousing a realism that does not deny "that our thoughts have to fit reality to count as true,"²⁹ but that also recognizes that a given object in our environment "can be described in an almost endless variety of ways, depending on the interests of the describer, and each of the right descriptions will *fit* the [object]-minus-the-describer and yet also reflect the interests of the describer."³⁰ This sort of realism is one that would maintain the common-sense acceptance of the external world, its influence, and constraints upon us, but would not fall into the excesses of idealism, various forms of anti-realism, and "traditional realism." It would also recognize the fluidity of meaning in language, and would give due place to the influence of our own concepts, words, and interests in identifying and describing objects about us. This seems to be what Putnam himself is aiming at when he calls for a turn in philosophy to natural realism.

Further understanding of what Putnam is advocating in this notion of natural realism can be gained by examining his remarks on J. L. Austin, another philosopher whose writings he believes have made a great contribution to the development of this view, especially in his posthumous publication, *Sense and Sensibilia*³¹. This publication, a reconstruction of lectures from his notes and those of his auditors, is an emphatic argument

against the notion of sense data as an interface between the perceiver and the external object. Austin here attacks the most common examples used as a basis for the view that sense-data (another term for representations, as Putnam uses the term) stand between the perceiver and the external thing perceived. To take just one of these, consider the instance of a stick partially immersed in water. Austin argues that our everyday language expresses in down-to-earth fashion exactly what we see in this instance, that is, a stick partially immersed in water. Certain philosophers would stack the deck by calling these things "illusions" or "delusions" (terms which, according to Austin, are used erroneously as synonyms). When we see a stick partially immersed in water, Austin argues, we do not have the illusion that we are seeing a bent stick that is not immersed at all in water; rather, we see a stick-partially-immersed-in-water; moreover, we also see the water itself. Nor do we have a delusion that we see a bent stick, because according to Austin, a delusion is seeing something that isn't there at all. The stick surely is there, and we see the part that is not in water, and the part that is in water. Furthermore, says Austin, to conclude from any of this that all we see is a sense-datum, and not the stick, requires an astonishing leap.³²

The other crucial aspect of Austin's theory for Putnam is his objection to the term "material thing." At the crux, says Austin, of the whole sense-datum theory is the notion of "material thing." Once again, in ordinary language we do not speak of perceiving "material things." We speak, rather, of seeing a stick partially immersed in water, or the sky, or a mirror image, or a tree, or a chair, etc. Moreover, Austin questions whether something like a shadow or a rainbow can really be referred to as

a "material thing." He suggests that it is certain philosophers' application of this term to such affairs that causes them to conclude that what we see are not material things at all, and from there to conclude further that what we see are sense-data.³³ Realists, states Austin (and he does not specify these realists as, say, "traditional" or "metaphysical" realists), hold that we perceive material things; while the "typically *scholastic*"³⁴ (emphasis in original) view is the sense-datum view that he attempts to discredit. Austin would prefer to jettison the term "material thing" altogether, arguing that "there is no *one* kind of thing that we 'perceive' but many *different* kinds. . . ."³⁵

Austin's arguments strike directly at the two things that Putnam wishes to reject. Austin's objection to the sense datum is an argument against the notion that sense-representation is the outer limit of perception. His objection to the term "material things" parallels Putnam's opposition to the notion of a world consisting of definite, fixed objects.

Austin and James are the two philosophers cited by Putnam as pivotal in expressing what would be at the heart of natural realism. Both advocate the acceptance of a common-sense notion that what we perceive are things in the external world themselves, and not merely our own sensory or mental representations of them. Both also uphold a notion of things or objects in the world that are not absolutely fixed in themselves, totally apart from the influence of the perceiver. The objects of perception, then, are understood as being in some way existent in themselves, independently of being perceived by anyone, in a way that conditions, or places constraints, upon the percipient, such that the percipient must "be responsible to reality"³⁶ or "fit"³⁷ reality. As Putnam

says, "the world is as it is independently of the interests of its describers."³⁸ Yet objects of perception are simultaneously understood as being fashioned or influenced, in the way they are understood as things or entities and in the way that they are named and described, by the interests of the percipient. There is thus a fluidity in our identification of objects in our world. These seem to be the focal issues of the natural realism that Putnam is seeking.

As noted above, Putnam finds aspects of the philosophies of Aristotle and Aquinas to be sympathetic to his view of natural realism. There is no neglect of the pivotal role played by sense perception with these philosophers, a fact much appreciated by Putnam. As indicated above, Putnam's consideration of Aquinas comes in the context of his discussion of Aristotle's account of perception and the mind. Our reflection will focus mostly on Putnam's comments about Aquinas himself. Since these comments are situated within his reflections on Aristotle, however, Aristotle's views will be discussed here insofar as the issues involved figure in Aquinas' account of human cognition.

In "Changing Aristotle's Mind," a 1992 article co-authored with Martha Nussbaum and reprinted as Chapter Two of *Words and Life*,³⁹ Putnam and Nussbaum emphasize two major points that they find in the philosophies of both Aristotle and Aquinas. The first is that the activity of perception cannot be reduced to material changes in the body. The second is that for these philosophers, the senses operate in conjunction with the body, or, more precisely, are an activity of the soul that is realized, or constituted in, the body. We now turn to a fuller consideration

of what is meant by "soul" in the context of a consideration of Putnam's interpretation of the Aristotelian notion of "form."

In "Changing Aristotle's Mind," Putnam and Nussbaum demonstrate that Aristotle's notion of form follows from his philosophical point of departure and perspective. He does not begin his inquiry with the question, "What is the mind?" Rather, he begins with a general inquiry regarding the principles of persistence and change in material things, together with an inquiry with regard to objects in general regarding the question, "What is it?" The important point in these inquiries is that things undergo change, but in order to do so, there must be something that persists through the change, something that continues such that it can sustain change. This is called the substrate. This issue is related to the question, "What is it?" The "what-is-it-ness" of a thing is that which persists and which undergoes change. This is also what Aristotle would call the form of the thing. It is the material of the thing that changes, while the form remains unchanged. If the form itself were changed, the thing would cease to exist as what-it-is, and would instead be something else. Putnam uses the example of a sphere to illustrate this: the form of the sphere cannot change; otherwise, it would no longer be a sphere. But the matter can be changed, let us say from bronze to wood to plastic, and the sphere is still a sphere.⁴⁰

Putnam and Nussbaum go on to explain that soul, according to Aristotle, is the form, that is, the principle of continuity, the persistent substrate, of the human being.⁴¹ He also directly discusses Aquinas' agreement with this point.⁴² "Soul" is not a term that is in common use by late 20th century, English-speaking philosophers of the analytic

tradition; nor is form, for that matter. In fact, the term "form" is one that is regarded with great suspicion (although there does not seem to be such reticence with regard to use of the counterpart Greek root, "morphos" in coining philosophical terminology). In any case, Putnam uses both terms with ease, having found them to signify, as explained above, useful and highly plausible descriptions of phenomena that our experience presents to us. We will now examine Putnam's exposition of the relationship between soul and mind.

At the beginning of his consideration of Aristotle in *Words and Life*, Putnam asks, how old is the current notion of the human mind? He points out that there is, among philosophers, a tendency to think that, when the word "mind" was used by philosophers of the past, this stood for the same thing that is understood by "mind" today in the world of English-speaking philosophy. There is also a tendency to assume that there is a correspondence between ancient terms and the meaning of "mind" as mentioned above, when in fact, if the meanings of the terms are examined more closely, there are wide differences in their significations.

Before proceeding, it is well to note that Aristotle's term "psyche" is often translated as "soul." Aquinas uses the Latin term, "anima," which translates to the English "soul." Putnam at times uses the term "psyche" in the course of his discussion, and at other times uses the word "soul." Because the term "psyche" tends to have a different meaning in modern English from that of Aristotle's ancient Greek term, in order to avoid confusion, I will use the word "soul" consistently throughout this section. I believe "soul" also corresponds more clearly with Aquinas' term "anima,"

and it is the latter's account of human cognition that is, after all, the focus of the present study.

Although it may be tempting to look for such a correspondence between the current understanding of what the mind is and Aristotle's or Aquinas' understanding of soul, Putnam claims that no such correspondence exists between these concepts. Mind in our current understanding, according to Putnam, includes the senses and the emotions, but it would not include functions such as generation, growth, and digestion. For Aristotle and Aquinas, however, soul does include those functions, or, to express it more precisely as Aquinas would express it, those capacities or powers or faculties.⁴³ Here, Putnam seems to be comparing the modern notion of mind not with the Aristotelian notion of *mind* but with the Aristotelian notion of *soul*. He seems at times to confuse the terms "soul" and "mind" for Aristotle and Aquinas. It is the soul that contains the capacities of generation, growth, and digestion, not the mind, according to Aristotle and Aquinas. In fact, in their account, the mind is itself yet another capacity of the soul. Putnam even states at one point that Aristotle considers the soul (Putnam uses the term "psyche" here) as a capacity.⁴⁴ In this, he is mistaken. Whatever differences and developments Aquinas introduced into Aristotle's account in developing his own, both philosophers clearly understand the soul to be a substance, not a capacity.⁴⁵ It is mind that is a capacity, one of the many capacities, of the soul.

For Aquinas, as for Aristotle, the soul is a substantial form that has multiple powers. Focusing on Aquinas' account, the powers, or capacities of the soul include, as mentioned above, the vegetative powers of

generation, growth, and digestion.⁴⁶ They also include the sensitive power,⁴⁷ under which are found the five external senses of sight, hearing, smell, taste, and touch,⁴⁸ as well as four internal senses (the common sense, the imagination, the estimative power, and the memorative power);⁴⁹ the locomotive power;⁵⁰ the appetitive power,⁵¹ which includes the sensitive appetite under which are found all the passions (love, hate, desire, pleasure, sorrow, fear, daring, hope, and anger) and the rational appetite, which is called the will;⁵² and, finally, the rational power, or intellect, or mind.⁵³

For Aquinas, then, it is the soul, not the mind, that includes more than the current understanding of mind does. The mind for Aquinas actually includes less than most current views of mind, because the latter would include sense perception and the emotions (or passions), whereas for Aquinas, both the sensitive and the appetitive powers are capacities of the soul that are distinct from the intellectual power, or mind.

It bears repeating that for Aquinas, the mind is in the nature of a capacity, power, or faculty; it is not a substance in itself.⁵⁴ Although the mind is, along with the rational appetite (will), the distinguishing and defining property of the human being, which differentiates the latter from all other animals, Aquinas goes to great lengths to clarify that the mind is a power of the soul, not a substance in itself.⁵⁵ This will be significant in our consideration of the relationship between Aquinas' and Dretske's accounts, and the relationship of both to natural realism, in Chapter Three.

The latter is also an important factor in distinguishing Aquinas' understanding of mind from both current materialist views and early modern views. Current materialist views would hold that the mind has no

existence at all independently of the body, but rather is either entirely reducible to the biological material of the human body, or is an emergent or supervenient property of that material, or, for a functionalist, to some material system. The early moderns, by contrast, would tend to reify the mind, and see it as a substance in itself, totally separate from the body, but housed in the material substance of the body. They are dualists in that they posit two substances in the human being, mind and body. Thus, both the materialist and the dualist schemata are expressions of the "mind-body" problem. Putnam aptly points out that the modern "mind-body problem" is not to be found in Aristotle or Aquinas.⁵⁶ Aquinas' doctrine that the mind is a capacity of the soul, which is a substance and the principle of continuity of the body, cannot be characterized as either materialist nor dualist.

Summarily, then, we see that a great deal of Putnam's and Nussbaum's exposition of Aristotle is concerned with defending Aristotle's notion of form as the substrate or principle of continuity of a material thing, and his notion of soul as form of a living body. They also defend his view that although sense perception takes place in the soul, it is also an activity "realized or constituted in matter."⁵⁷ Moreover, Putnam and Nussbaum demonstrate that Aquinas also adopts these views.⁵⁸ They also acknowledge that both Aristotle and Aquinas identify the mind as distinct from the other powers of the soul insofar as, though it requires that a certain necessary condition be satisfied--in that the human intellect requires the sense phantasm of the material object in order to operate--the functioning proper to the mind does not require a bodily organ, and is not, in itself, material.⁵⁹ Indeed, these points are precisely what we have

already examined in more detail in Aquinas' account of cognition in Chapter One.

Our consideration has revealed that Putnam, in advancing natural realism, has emphasized two pairs of conditions that are pivotal to this approach: the one is the tenet that perception places us in direct contact with the objects of perception, even while our interests, experience, and already-acquired concepts influence what we identify as objects; and the other is the tenet that perception can neither be reduced to matter, nor is it purely mental according to a dualistic conception of the human being; rather, it is a shared activity of soul and body.⁶⁰ In Putnam's words, "The soul is not a thing merely housed in the body; its doings are the doings of body. The only thing there is one natural thing."⁶¹

Thus far, we have examined the accounts given by Dretske and Aquinas of the workings of the human mind. We have detected many similarities in their views: a correlation between the representation₃ and the phantasm; a correlation between the representation₂ and the first stage abstraction; and a correlation between the notion of metarepresentation in Dretske, and the assertion of Aquinas that the mind knows its own representations and then itself in reflecting upon itself in act.

We have also examined Hilary Putnam's concerns about representationalism and about metaphysics and realism. In particular, we have explored Putnam's disfavor toward two philosophical doctrines that he sees as detrimental to natural realism: 1) a representationalism that considers sense-data, rather than external things themselves, as the objects of perception, and 2) what Putnam calls "traditional" or "metaphysical" realism, which conceives of the world as containing a fixed

set of objects which correspond to a fixed set of possible words and propositions. We have distilled the elements that Putnam considers pivotal for a turn to natural realism: 1) an acknowledgement that sense perception puts the subject in contact with the external object; and 2) an understanding of conceptualization that acknowledges that concepts and language must "fit" reality, without making either objects in the world or the "fit" between these objects and our concepts/language too rigidly fixed. Finally, we have looked at those elements of the philosophies of Aristotle and Aquinas that Putnam finds conducive to natural realism, in particular, their attention to sense perception, their recognition of the intertwined activity of body and the sensitive powers of the soul in the act of perception, and their acknowledgement of the interaction of the senses and the mind in the act of cognition. We now proceed to examine more extensively the relationship between each of the accounts of cognition of Dretske and Aquinas, and natural realism.

CHAPTER THREE

Representations and Natural Realism

At a certain point in his consideration of Aquinas, Putnam identifies the phantasm as a representation.

The senses, in Aquinas' scheme, produce representations ... which Aquinas (using an Aristotelian term) calls *phantasmata*. Like Aristotle, Aquinas considers these sensory images to be material (although not in a modern reductive sense--there is no talk of neurons or of computer circuitry in the brain, of course). To modern ears, this conception of the sensory images as something virtually on a level with body is, perhaps, the strangest feature of the classical way of thinking. Since British empiricism virtually identified the mind with images (or "ideas" as they were called in the seventeenth century), we have come to think of images as paradigmatically "mental," and--unless we are materialists--as immaterial. Yet for the classical thinkers it was reason--*nous*--that was unlike body, and sensation that was clearly on the side of matter and body. (In Aquinas' psychology the *phantasm* is explicitly described as "material," from which the intellect extracts an "intelligible species" or--to make one of those over-simple equations I warned against--a concept.)¹

The purpose for quoting this passage at length is that here Putnam himself is identifying the phantasm as a representation, and yet he is emphatically distinguishing this notion of representation from the one to which he so strenuously objects. Putnam concedes that Aquinas' representation--the phantasm--is consonant with the aspect in the latter's and Aristotle's account of sense perception that Putnam defended in his 1992 paper with Nussbaum--the idea that sense perception is an operation realized or constituted in body, and relying on the shared activity of soul and body.

Representations, then, do not have to be of the type that Putnam denounces. Indeed, we saw in Chapter One that Aquinas, in giving his account of the phantasm, denies the result of the representationalism that

Putnam criticizes, that of repudiating the direct perception of the external object by the percipient. On the contrary, Aquinas explicitly affirms that the external thing is directly perceived; the phantasm is the means by which it is perceived.

Turning to Dretske's account, we find a similar differentiation being made between his notion of representation and the one disfavored by Putnam. Dretske himself makes some direct remarks about the traditional notion of sensation to which Putnam refers. He mentions sense data, but he does not refer to them as representations. Rather, he identifies the sense data account of mind as "a certain traditional picture" and "this familiar story."² He describes the role of sense data in that account as "subjective surrogates . . . that the mind becomes directly aware of in (indirectly) perceiving the external world."³ He also characterizes them as "internal image[s],"⁴ and as sometimes having an "external object that caused it"⁵ (referring to the notion of causal connection).

The mind . . . becomes directly aware of this datum--its color and shape--and only indirectly ("inferentially") of the properties of the external object that caused it. On this way of thinking about experience, an object's looking red is constituted by direct and infallible awareness of an internal object, the sense datum.⁶

It is evident that Dretske's presentation of sense data is very much like Putnam's.

Dretske goes on to characterize this account as an internalist theory of mind, describing it as "a view of experience that regards different experiences as experiences of different internal objects."⁷ He concludes that "if one conceived of sense experience in this way, if one took phenomenal appearance to be an internal object . . . it would be understandable why one would regard an externalist theory of experience

as incoherent"⁸ (emphasis in original). How does Dretske say an internalist would respond to a representationalist account? The internalist would "object to a representational account of experience because it is incompatible with a sense data theory of perception."⁹

It is clear that Dretske does not identify this philosophical stance with representationalism. Since Putnam identified representations with internal images or sense data, Dretske's notion of the representation must be something very different. We already established that Aquinas' notion of the phantasm is dissimilar. We thus turn to an investigation of the way in which representations are held by Aquinas and Dretske to play a different role in the cognitive process from that described by Putnam.

A central issue as we consider the "phantasm" is the danger of reification. If we recall that Aquinas holds that the sensitive powers, as well as the mind, are capacities, not things in their own right, then we are cautioned against regarding the phantasm itself as a substantial thing. The phantasm is the name given to an effect that takes place in the procession of operations that occur in the sense organ and sensitive power of the subject. A similar caution against reification is in order with regard to Dretske's notion of representation. In other words, "representation" tends to signify "the action of representing," or "the state that the representational system is in when performing the operation of representing." Dretske's definition illustrates this; it uses the verb rather than the noun throughout: "The fundamental idea is that a system, S, represents a property, F, if and only if S has the function of indicating (providing information about) the F of a certain domain of objects."¹⁰ When Dretske provides a chart giving a breakdown of the systemic and

acquired representations, he defines each as "states with systemic indicator functions" and "states with acquired indicator functions," respectively.¹¹

According to Aquinas, when one of the five senses operates, those attributes of the external thing that the particular sense has the function of conveying to the subject are in the sense faculty of the subject, in a way that is in one sense material, and in another sense not material. For example, for the sense of vision, the attribute would be color, for hearing, pitch and timbre, and so forth. The presence of these attributes in the subject is what is referred to as the phantasm. Because they are physical attributes of the external object, the phantasms are said to be "material images."¹²

But Aquinas also emphasizes that these attributes are in the sense faculty of the subject immaterially. They are not in the subject in the same way that they are in the external object. As he notes: "The sensible form is conditioned differently in the thing which is external to the soul, and in the senses which receive the forms of sensible things without receiving matter, such as the color of gold without receiving gold."¹³ An example: "The form of color is received into the pupil which does not thereby become colored."¹⁴

Both the materiality and the immateriality of the phantasm are important points in distinguishing it from the notion of sense datum. The way in which the phantasm is material is the sense in which it indicates the material attributes of the external object. In this sense, it is transparent to the external object and its sensible attributes. It is, so to speak, transparent, and puts the subject in contact with the external object. The sense in which it is immaterial is the obvious sense in which,

as stated by Aquinas, when we perceive gold, the eye or nervous system or optic center of the brain does not "go gold." It also indicates, however, that the phantasm is not a thing, an interface, a concrete picture that comes between the subject and the object. The immateriality also points to the fact that to be in or to be received into the sense faculty should not be understood in a spatial sense. Joseph Owens summarizes these distinctions aptly.

In sensation, the thing in its physical being remains entirely in the outside world. It does not pass over in any literal way, but remains exactly where it was. Yet it is given new being in and by the knower [in that it now "exists" *in a different way* in the knower]. Through the external senses a stone, for instance, is perceived as there in itself in the outside world, and not in any image expressed internally by the senses of sight or touch. But even when...it is imagined or remembered, it is still something that remains other than anything produced by the knower, other than the knower himself. It is in this case known in an internal image, but it itself is obviously something other than the image as a cognitional object. It, and not the image, is the object directly known.¹⁵

It is true that many of the same words used to describe sense data are at times used to allude to the phantasm. Aquinas at times calls the phantasm a representation,¹⁶ as we saw in Chapter One. He also alludes to it as an image, as noted above, and as a reflection.¹⁷ In the context of the immaterial sense in which the phantasm is in the subject, and of the affirmation by Aquinas that it is the external object, not the phantasm, that is the object of intellection, these terms are clearly not given the same meaning by Aquinas as that given to the term sense datum by others.

Turning now to Dretske's notion of representation, we have already noted that representation is the performance of an indicator function. In the case of sense perception, then, each sense faculty has the function of indicating certain kinds of attributes of external things. The very notion

that the purpose of representation is to indicate information about external things immediately sets it apart from the sense datum, since the latter, in itself becoming the object of perception, is itself considered to be the object of perception.

Dretske's attitude toward introspection sets his notion of representation apart from the sense datum view. Recalling the notion of displaced perception, which was discussed in Chapter One, an analogy for which is perceiving the weight of one's own body by looking at another object, namely a scale, Dretske says that introspection is an instance of displaced perception. In the case of introspection, one seeks to discover internally the character of one's own experience. In order to do this, however, Dretske claims that one must look at another object besides oneself. That is, one must look at that which is already the object of one's representations--the object whose attributes the representations already have the function of indicating. In other words, to find out about one's experience, one must look outward, at the external object that is already the object of experience, and about which the experience's purpose is to give me information.

One comes to know (the fact) that one is experiencing blue by experiencing, not the experience of blue, but some displaced object. As we shall see, this displaced object is (typically) the object the experience of blue is an experience of--i.e., the blue object one sees. Introspective knowledge of E requires no other sensory representation of objects than those already being represented by E--the experience one comes to know about.¹⁸

Such an idea is clearly at odds with the notion of representations being sense data. The sense datum is held to be entirely internal, and to be only caused by (in the sense of being triggered by) external things, rather than having the purpose of providing information about the external

thing. Moreover, being internal, it could only be known by looking inward, whereas Dretske's purpose is to show that to know about our internal sense experience, we have to focus outward, on the external thing that is the object of that sense experience. He uses the example of describing the experience of tasting a certain wine. As Dretske observes, "One finds oneself attending, not to one's experience of the wine, but to the wine itself. . . . There seems to be no other relevant place to direct one's attention."¹⁹ The most crucial point for our purposes is that Dretske is here denying that there is any intermediary, such as the sense datum is held to be, between the subject and the object of perception that could be identified as the "experience of the experience." If such a thing does occur, then it "has a completely transparent phenomenology. It does not 'present' experiences of external objects in any guise other than the way the experiences present external objects."²⁰

In addition to distinguishing Dretske's notion of representation from a sense data theory, this also illustrates once again that his account begins with the external object and moves inward to culminate in the mind's knowledge of itself. It also brings to the foreground an important point for both Dretske's account and Aquinas' account. For Dretske, representing_s is not some intermediary step or some sort of interface between the object and the subject in the process of perception. It *is* perception. To represent_s *is* to perceive. Similarly with Aquinas' account, "the operation of the senses takes place by the senses being impressed by the sensible,"²¹ which is precisely a description of the formation in the sense faculty of the phantasm. Thus, when one is looking at something,

to see that thing *is* to have a visual phantasm of it; to taste a thing is to have a gustatory phantasm of it, etc.²²

It is apparent that Dretske's and Aquinas' notions of representation within the process of sense perception are quite other than that criticized by Putnam. This view of representation serves, on the contrary, to affirm one of the central points of Putnam's natural realism, that is, that perception establishes unmediated contact between the percipient and the object perceived.

Dretske and Aquinas: "Traditional Realism" or Natural Realism?

Hilary Putnam's complaint regarding what he calls traditional realism is threefold: 1) he opposes the view that "the world consists of a fixed totality of mind-independent objects"²³ or a "totality of 'forms' or 'universals' or 'properties' fixed once and for all"²⁴; and 2) he contests the notion that "every possible meaning of a word corresponds to one of these 'forms' or 'universals' or 'properties',"²⁵ and that 3) consequently "there is exactly one true and complete description of the way the world is."²⁶ Our purpose in this section is to show that neither Dretske's realism nor Aquinas' realism is of this type, and that each of their realisms is more conducive to a natural realism than to "traditional realism."

We have noted from the outset and seen abundant evidence during the course of this study that Aquinas' account of the mind begins with the focus on the external object, moves first to the first grasp of the object by the external senses by means of a representation called a phantasm, then to the operation of the intellect, or mind, which abstracts concepts from the phantasm. Similarly with Dretske, the external object of

perception is identified as that which identifies the characteristics of our experience. It is from the perception of these external things that the concept is drawn away or extracted, so to speak.

There is nothing in the way that Aquinas' or Dretske's theories account for the formation of concepts that implies the rigid "traditional realist" picture of identification of "objects" (using the word here in the sense that Putnam uses it, to denote entities, rather than in the sense in which we have been using it up to now, to denote the terminus of intentionality) or properties. Nor does either account imply such a rigid fit between words or propositions and this supposedly fixed-in-advance number of entities or properties. Not only is it not implied by either account, but each actually contains elements that would be quite inconsistent with such a rigid picture of the world.

Turning first to Aquinas, we note that volumes have been written about his doctrine of analogy. While a thorough consideration of this topic is beyond the scope of the present study, we note that the very presence of this doctrine within the philosophy of Aquinas (and of Aristotle before him) is an indication that the insistence upon a one-on-one correspondence of every possible meaning of every word to an entity or property is not present in Aquinas' system. The very notion of analogy is based on the recognition that the same word is not always used univocally in all circumstances.²⁷ Words often are equivocal; they have different nuances of meaning in different contexts. The notion of analogy is meant to cover the instances where there is both some similarity and some difference between the concepts indicated by the same word used in relation to different things. For example, the word "good" has some similarity of

meaning when one speaks of a good man and a good dinner, but the word also carries differences of meaning as applied in each circumstance here. It must also be noted that there are also words that are given meanings that are purely equivocal, such as the word "pen" being used both to denote an enclosure for animals, and a writing instrument. These instances of pure equivocation, however, are not included under the notion of analogy, because no similarity of meaning is present at all. The latter nevertheless demonstrate, as terms with analogous meanings also do, that Putnam's description of "traditional realism" does not fit Aquinas' (or Aristotle's) account.

The objection might be raised that what has been said thus far is all well and good with regard to words and propositions, but the real source of the rigidity of the Aristotelian/Thomistic view of meaning is to be found at the level of the concept, not at the level of language. But here again, a clear understanding of abstraction, as the means by which concepts are acquired, will demonstrate that Aquinas' account of conceptualization does not exhibit the rigidity of Putnam's description of "traditional realism." Aquinas explicitly rejects Plato's doctrine of innate ideas²⁸, and adopts Aristotle's view of the *tabula rasa*.²⁹ He does not hold the view, which would appear to be a Platonic doctrine, that "there is a totality of 'forms' or 'universals' or 'properties' fixed once and for all." Aquinas vigorously opposes the Platonic view throughout his exposition of human cognition, and identifies Plato's errors as a source of much mistaken theorizing about the human senses and intellect.³⁰

In lieu of Plato's view, Aquinas adopts the view of Aristotle that "'forms' or 'properties' or 'universals'" exist only in individual things, not

as separate, non-sensible things having their own independent existence. He further adopts the Aristotelian view that "the active intellect. . . causes the phantasms received from the senses to be actually intelligible, by a process of abstraction."³¹

Aquinas also takes account, however, of the fact that concepts, even as abstracted from phantasms, are not rigid. Aquinas holds, in fact, that in the process of forming concepts, the more inclusive concept comes first.³² The human mind tends to conceive of a thing as a unity first of all, and then later to divide into parts. The unity identified will be more general at first, then more specific. So, for example, a figure seen at a distance might be identified as a human form at first, then as a man or woman of a certain age, after which details about complexion, hair, and eyes might be noticed, and so forth. Moreover, a concept abstracted from a phantasm might prove later to be erroneous, as the opportunity to perceive the entity improves. For example, one might see a jar of clear liquid and abstract from this phantasm the concept of water in a jar, only to discover, when the opportunity to smell the liquid prompts an olfactory phantasm in addition to the visual phantasm, that the liquid in the jar is white vinegar rather than water. Let us suppose now that it is a jar of water after all, and suppose it is a child who encounters this jar of water and abstracts the concept of water upon seeing, smelling, and touching the water. Now let us suppose that 10 years have passed, and in a high school chemistry class, the same child learns that, at the molecular level, water is identified as H_2O (to use a favorite example used by Putnam).³³ The student has now gone from the concept of water as a unity to an

understanding of its parts, that is, two molecules of hydrogen and one of oxygen.

The example of water also lends itself to an examination of what is meant by a unity when speaking about concepts. A unity is not necessarily something that has clear physical shape and boundaries. Rather, it is a unity of what-ness that is identified, or abstracted, from the sensations that are experienced. Water by itself does not have a clear shape and boundaries, but there is, nevertheless, a concept of water that is a unity. Similarly, we might take the example of the sky. The sky does not have clear edges, other than those provided by the horizon of the earth. The sky does not even denote a sense of being a physical substance, as water does. Its color is generally designated as blue, but when it is covered with clouds we say "the sky is grey." Here, the concept is revealed as being quite plastic, because there is a sense in which we make a distinction between the blue sky and the grey clouds "in" the sky, or "covering" the sky. Yet, we still sometimes speak as if the clouds are included as part of the sky by saying "The sky is grey." Yet, the concept of sky is still a conceptual unity that is surely derived from the sensual experience of looking upward when outside or through a window and seeing more or less uniform color (except when a partly cloudy sky contrasts white or grey with blue) that appears to be a great distance above. In this sense, the sky is indeed an object, not only in the sense of a terminus of sensitive intentionality, but also in the sense of a "thing." We all know where to look when someone says, "look at the sky." The concept "sky" may have included in the past the notion of a hard shell. The current era has abandoned the idea that the sky is a shell. Yet, we

can still understand how our ancestors may have drawn that concept from the sensory experience of looking at it. Our first sensory experience of the sky is similar enough to that description to make such a view understandable. However, other concepts derived from other sensory information gathered in the course of centuries of scientific investigation have convinced us otherwise. This has taken place in much the same way that one might have changed one's mind about the vinegar in the jar that was originally thought to be water. (Notice the figure "change one's mind;" it contains the implication that it is not the object that changes, it is the concept in our minds that changes. The world is as it is; it is our way of conceptualizing it that can change.) Even with our change in the way of conceptualizing, however, there is still a continuity to our concept of the sky. We know that it is the sky of which our forebears had the concept of a shell, and that it is the same sky that we now understand to be layers of gaseous atmospheric material that looks blue to us from the surface of the earth.

Two points are illustrated in the example of the sky. The first point so illustrated is the notion of analogy that was mentioned above. We are now in a position to see the relationship between the notion of conceptual unity and the notion of analogy. The word "object" is a conceptual unity that can be gathered from the experience of this attribute in diverse things. Yet "object" as attributed to the sky bears some similarity to the attribution of the word "object" to water, which in turn bears some similarity to the attribution of the word "object" to a human being, a tree, a cat, a mat, or a chair. But there are obvious differences as well. Our paradigmatic concept of an object is more like the cat or the chair. We

seem to apply the word "object" to the sky in a more attenuated sense. The application of the word "object" to the sky is an example of one type of analogy. The doctrine of analogy applies to the way in which things are known by human beings. Ralph McInerny, in his work on the Thomistic doctrine of analogy, says the following in relation to the Aristotelian roots of Aquinas' system: "When we are talking about equivocals, we are talking about something which happens to things thanks to our mode of knowing, not something that belongs to them as they exist *in rerum natura*."³⁴

Returning to our example of the sky, the second point is that this example introduces a different sense in which a concept can be a unity. The sky is arguably something that is a unity conceptually, but in material existence it is not a unity. This introduces the way in which our minds form concepts of attributes of entities, like cats and mats (natural things and artifacts), that do exist on their own as unities, apart from what anyone thinks about them. Attributes, such as the color of a thing, its shape, its size, its odor, its texture, its position, and its relation to other things, are also conceptualized by us as unities. The fact that they can be named attests to this. Yet none of these attributes have existence in themselves as a unity.³⁵ To return to Dretske's example of a blue shirt cited in Chapter One, where Dretske says that one can represent_a the color blue in the shirt because one has a concept of blue, this blue is conceptualized as a unity. Yet this unity is not, in itself, an existent. Blue is not a thing that exists on its own, according to Aquinas and Aristotle (and again, here is where they stand against Plato's notion of separate forms). It is a unity that exists only in our minds, not in the external world. In the external world, one only finds blue things, not

simply blue by itself. Moreover, blue, like other conceptual unities, can be broken down, so that different shades of blue can be recognized, for instance. There may be people, such as artists, that have developed a much more refined conceptualization of different hues and shades of blue and how to produce these in different materials. The artist and the scientist may have a much more cultivated conceptualization of how different frequencies of light waves are perceived as different colors. Yet there is a unity to the concept of blue. But this is indeed a unity that is made by the mind and that does not exist as a unity in the external world.

Dretske's account would be consonant with this. We saw in Chapter One that, according to Dretske, the sensory information is represented_s to us, but we acquire concepts or beliefs about this sensory information--beliefs according to which the sensory information is represented_a as something. So the sense of hearing of both the mouse and the human being represent_s the smell of toast burning, but only the human being represents_a the smell as the smell of toast burning. Similarly, the layperson and the artist might both represent_s 30 shades of blue, but only the artist represents_a them as 30 shades of blue.

Dretske points out that, although the representation_s is the same in both one who has acquired more refined conceptualizations and one who has not acquired them, to the one who has not acquired the concept (who does not represent_a), awareness of the representation_s will not be accessible. He uses the example of himself listening to a piece of music that involves a change of key at a certain point. Not being well versed in music, he hears (represents_s), as he listens to the music, the change of

key, but he does not recognize it; he does not hear it *as* (represent₂) a change of key. He is therefore completely unaware that he heard it at all. It is as if he did not hear it at all. Yet the representation₃ still provides the information that, if he later is trained to do so, will be represented₄ as a change of key. Aquinas would agree with this view. He states, "To be cognizant of the natures of sensible qualities does not pertain to the senses, but to the intellect."³⁶

These observations regarding both Aquinas' and Dretske's accounts illustrate that neither philosopher would agree with the third statement that Putnam associates with "traditional realism," that is, that there is exactly one true and complete description of the way the world is. Dretske's description of a piece of music would be vastly different from that of a highly trained and accomplished composer of music. A small child's description of water would be very different from a chemist's description. Aquinas and Dretske would agree with William James and with Putnam that many different descriptions could be given of the world, and all could be true. They might both hold that the world is as it is apart from our perception of it or our thoughts and propositions about it, but that is quite a different matter from saying that the world is made up of a fixed set of objects or that there is only one true description of the world.

Dretske and Aquinas would seem to hold that conceptualizations based on the sense experience, though they can vary widely, are still grounded in the sense experience itself; they are not arbitrary. But isn't this exactly what Putnam was seeking when, as cited in Chapter Two, he quoted James as saying that beans on the table can be described in any number

of ways, but affirmed that all the different ways may be true, and they still have to somehow "fit" the beans? For any phantasm, there are a multitude of conceptual unities that could be abstracted from the phantasm. Which ones will be attended to are partly a matter of the "interests" of which James spoke. And, according to Dretske, it is also a matter of whether the conceptualization is available to (has been acquired by) the subject, such that the subject can represent_a the object of perception *as* that which the object *is*.

Our investigation in this section has revealed that neither Aquinas' nor Dretske's accounts of the human cognitive powers is consonant with the view depicted by Putnam as "traditional realism." These views in fact are much more consonant with the elements of a natural realism that we were able to glean in the discussion in Chapter Two of Putnam's treatment of James and Austin, namely, 1) an acknowledgement that sense perception puts the subject in contact with the external object; and 2) an understanding of conceptualization that acknowledges that concepts and language must "fit" reality, without making either objects in the world or the "fit" between these objects and our concepts/language, too rigidly fixed.

CONCLUSION

In this study, we have endeavored to show that neither Dretske's nor Aquinas' notion of representations is of the type opposed by Putnam, that is, one that is, in effect, a sense datum that constitutes an interface between the percipient and the external object of perception. We have also endeavored to show that neither the realism of Aquinas or of Dretske fits the description of "traditional realism" that Putnam presents and then contests. We have attempted to demonstrate, rather, that both Dretske's and Aquinas' accounts of cognition promote a natural realism.

In the course of this investigation, we have demonstrated that there are many areas of correspondence between the accounts of cognition given by Dretske and that given by Aquinas, the most important ones being that: 1) their accounts of cognition begin with the external object, move inward to sense perception and the subsequent formation of the concept, and finally culminate in self-reflection on this process yielding self-awareness of the workings of the mind itself; and 2) they both posit two types of representation that take place successively in the cognitive process, the first occurring in sense perception and the second occurring within the process of conceptualization, with the second of type admitting of two degrees.

We have also seen two significant differences between their systems. The first of these is the difference between Dretske's materialism and Aquinas' theory of the composite nature of the human being. The second is the difference in the functions that are considered to be mental functions. For Dretske, sensory perception is treated as part of the mental

function of the human being, whereas for Aquinas, sensory perception is a distinct capacity from the intellective capacity, or mind. We closed Chapter One with the observation that Dretske's materialist view does not really account for what is the source of consciousness. We noted also that Aquinas' theory is neither a materialist nor a dualist view, and that it accounts for the phenomena that we experience in connection with sense perception and intellection comprehensively and coherently.

In Chapter Two, we examined Hilary Putnam's concerns about representationalism and about metaphysics and realism. In particular, we explored Putnam's disfavor toward two philosophical doctrines that he sees as detrimental to natural realism: 1) a representationalism that considers sense-data, rather than external things themselves, as the objects of perception; and 2) what Putnam calls "traditional" or "metaphysical" realism, which conceives of the world as containing a fixed set of objects which correspond to a fixed set of possible words and propositions. We distilled the elements that Putnam considers pivotal for a turn to natural realism: 1) an acknowledgement that sense perception puts the subject in contact with the external object; and 2) an understanding of conceptualization that acknowledges that concepts and language must "fit" reality, without making either objects in the world or the "fit" between these objects and our concepts/language too rigidly fixed. Finally, we looked at those elements of the philosophies of Aristotle and Aquinas that Putnam finds conducive to natural realism, in particular, their attention to sense perception, their recognition of the intertwined activity of body and the sensitive powers of the soul in the act of perception, and their

acknowledgement of the interaction of the senses and the mind in the act of cognition.

In Chapter Three, we examined the theories of representation in the operation of sense perception of both Dretske and Aquinas in more depth, and found ample evidence to demonstrate that their representations are not the interface or sense datum that itself is thought to be the object of perception, rather than the external object itself. Rather, the phantasm and the representation_s are the means by which the subject attains sensory contact with the external thing, which always remains the object of perception.

We then examined Aquinas' and Dretske's theories of abstraction and representation_a as the process by which concepts are formed. We looked at the plasticity and changeability of these concepts and the role in the mind in forming unified concepts where such unities do not exist as unities, but yet are grounded in the experience of them in existent singulars, such that the formation of these conceptual unities is not arbitrary, but rather is grounded in the experience of external things. We concluded from the investigation of Aquinas' and Dretske's accounts of representations and of conceptualization that their theories are fundamentally incompatible with the "traditional realism" that Putnam disparages. Rather, they are conducive of a natural realism.

At the outset of our consideration, we looked at the reasons for which Putnam sees the need in the 1990's to argue against a sense datum theory, even though he recognizes that such a theory has fallen into disrepute for decades. In Chapter Three, we saw that Dretske recognizes a similar need. Dretske identifies an implicit acceptance of the assumptions

a sense datum theory as the reason for resistance to an externalist theory of mind. Putnam recognizes in the acceptance of these assumptions an obstacle to the natural realism that he is calling for. They thus respectively point to two areas in which the sense datum theory is powerfully implied, both of which are very current. One is internalist theories of mind, and the other is the persistence of debate over philosophical skepticism.

With regard to internalist theories of mind, it is not difficult to see that such a theory implies an acceptance of the assumption that what we perceive is an internal interface between subject and object, rather than the object itself. If an internalist theory of mind rejects the notion that is at the crux of externalist theories, that is, that mental content is at least partly determined by external factors, or by the relations of internal events to external factors, and if sense perceptions are a component of mental states, then an internalist theory must also reject the notion that the content of sense perception is at least partly determined by external factors. This amounts to an implicit acceptance of the assumptions of a sense datum theory.

The assumptions of a sense datum theory can also be found implicitly in philosophical skepticism. In order for the skeptic to assert that it is logically possible that one can be deceived by all of one's perceptions to believe that an external world exists where one does not exist, there must be an assumption that those perceptions may not be conditioned at all by external factors, but only by internal states. Again, this amounts to an implicit assumption of the assumptions of a sense datum theory.

Insofar, therefore, as some philosophers oppose externalist theories of mind and espouse internalist theories, and insofar as philosophical skepticism continues to be debated, the assumptions of a sense data theory of perception are alive and not dead, as Putnam and Dretske maintain, even though the sense data theory has ostensibly long been discredited. This explains why it has been important to demonstrate that Aquinas' and Dretske's notions of representation are not of the type that implies the assumptions of a sense data theory.

This study has emphasized those elements that are similar in the accounts of how cognition--that is, sense perception and intellection--operate in the human being given by Dretske and Aquinas. We have also noted briefly, however, the difference in their views of what the mind is. An area for further research would be how such similarities in the accounts of cognition could exist in the face of such different accounts of what the mind is.

We have examined the phases of cognition that grasp the individual, existent thing (e.g., Socrates), and the phases that form concepts from the grasp of the latter such that the what-ness of things is grasped, first as understood as individual (a human being), and then as a universalized concept (humanity). We have seen that these universalized concepts of what-ness usually exist as unities in the mind only. The what-ness only has real existence in the singular, existent thing. This recognition that there are things which can only be in the mind versus things that can have actual existence in the world points to another area of further research, namely, whether the skeptical problem in philosophy does not arise because of a confusion of these two realms, and the application of the

constraints of the purely cognitive realm to the realm of existent things. To phrase the question another way, is the skeptical problem a result of the attempt to give proof of the realm of the existent within the realm of the purely cognitional, that is, logic? Is such a proof impossible from the outset, precisely because logic and the existent pertain to different realms, neither of which can offer proof for the other? Is it legitimate to, as Gilson says, "demand that empirical fact should fulfill the requirements of the logic of abstract concepts"?¹

We briefly mentioned St. Thomas Aquinas' theory of analogy. Although we have not concentrated on language in this investigation, we note that Aquinas and Dretske would both appear to consider language as something that follows conceptualization in the sequence that we have examined throughout our considerations. Dretske considers language to be a conventional representation, in contrast to concepts, which he holds to be natural representations.² Aquinas states, "Words signify the concepts of the intellect. . . ."³ Thus, another area for further research would be an investigation of the relation of Dretske's or Aquinas' views on language, including Aquinas' doctrine of analogy, to other contemporary views of "how language hooks onto the world," especially those that hold that there is no extra-linguistic reality.

Summarily, then, we have seen that the externalist accounts of the role played by representations in the theories of cognition given by Aquinas and of Dretske provide for the grounding of mental activity in external reality, while also allowing for the variation in conceptualization and verbal description of the world that saves their realism from the rigidity against which Putnam cautions. They thus provide a coherent

explanation of cognition that is consistent with a natural realism that holds that there may be many descriptions of the world, all of which are true, and all of which must also be responsible to, must fit, the world, which is as it is independently of mind and language.

NOTES

Introduction

1. Fred Dretske, *Naturalizing the Mind* (Cambridge, Massachusetts: MIT Press, 1994), 124.
2. St. Thomas Aquinas, *Summa Theologica*, 5 vols., trans. Fathers of the English Dominican Province (New York, Benziger Brothers, 1948; reprint, Westminster, Maryland: Christian Classics, 1981), I, 84, 2 c, (hereafter cited as *ST*).
3. Dretske, *Naturalizing the Mind*, xiii.
4. Dretske, *Naturalizing the Mind*, 40.
5. Dretske, *Naturalizing the Mind*, 127, 140-41.
6. Dretske, *Naturalizing the Mind*, 127.
7. Dretske, *Naturalizing the Mind*, 127, 140-41.
8. Dretske, *Naturalizing the Mind*, 145.
9. Dretske, *Naturalizing the Mind*, 123.
10. Etienne Gilson, *Thomist Realism and the Critique of Knowledge*, trans. Mark A. Wauk (San Francisco: Ignatius Press, 1986), 173.
11. Hilary Putnam, "Dewey Lectures - Sense, Nonsense, and the Senses: an Inquiry into the Powers of the Human Mind," *Journal of Philosophy* 91 (September 1994): 454.
12. Hilary Putnam, *Words and Life*, ed. James Conant (Cambridge, Massachusetts and London: Harvard University Press, 1994).
13. Dewey Lectures, 461, n.36; Alvin Goldman, *Epistemology and Cognition* (Cambridge, Massachusetts and London: Harvard University Press, 1986), 144.
14. It is well to note that many twentieth century philosophers adopt interpretations of Aquinas' philosophy that differ widely, even on fundamental points, with regard to his theories of metaphysics, ethics, and psychology. It is not my purpose here to argue for the interpretation of Gilson/Owens which I am using in this study. It also not my intention to engage in a discussion of the philosophical controversies of Aquinas' own time, and the disagreements that existed between Aquinas and his contemporaries. Any responsible treatment of either of these issues would take us too far from the purpose of the current investigation.

Chapter One

1. Dretske, *Naturalizing the Mind*, 2.
2. Dretske, *Naturalizing the Mind*, 4-5.
3. Dretske, *Naturalizing the Mind*, 27.
4. Ibid.
5. Dretske, *Naturalizing the Mind*, 8.
6. Ibid.
7. Dretske, *Naturalizing the Mind*, 10-14.
8. Dretske, *Naturalizing the Mind*, 15.
9. Dretske, *Naturalizing the Mind*, 18.
10. Dretske, *Naturalizing the Mind*, 9.
11. Dretske, *Naturalizing the Mind*, 10.
12. Ibid.
13. Dretske, *Naturalizing the Mind*, 11.
14. Dretske, *Naturalizing the Mind*, 20.
15. Dretske, *Naturalizing the Mind*, 3.
16. Dretske, *Naturalizing the Mind*, 36.
17. Dretske, *Naturalizing the Mind*, 37.
18. Dretske, *Naturalizing the Mind*, 1.
19. Dretske, *Naturalizing the Mind*, 83-84.
20. Dretske, *Naturalizing the Mind*, 84-85.
21. Dretske, *Naturalizing the Mind*, 43-44.
22. St. Thomas Aquinas, *Truth*, trans. Robert W. Mulligan, S.J. (Chicago: Henry Regnery, 1952).
23. Aquinas, *ST*, I, 84, 6 c.
24. Aquinas, *ST*, I, 84, 7 c.

25. Aquinas, *ST*, I, 85, 1, ad 1.
26. Joseph Owens, *Cognition* (Houston: Center for Thomistic Studies, 1992), 152; Robert E. Brennan, O.P., *Thomistic Psychology: A Philosophic Analysis of the Nature of Man* (New York: Macmillan, 1941), 136.
27. ". . . sensation and the consequent operations of the sensitive soul are evidently accompanied with change in the body . . ." (Aquinas, *ST*, I, 75, 3 c); "Now sense, imagination and the other powers belonging to the sensitive part, make use of a corporeal organ" (Aquinas, *ST*, I, 84, 7 c).
28. "the thing reflected in the phantasm" (Aquinas, *ST*, I, 85, 1, ad 3).
29. "Phantasms . . . are images of individuals, and exist in corporeal organs . . ." (Aquinas, *ST*, I, 85, 1, ad 3).
30. "material images, namely, phantasms" (Aquinas, *ST*, I, 85, 1 c).
31. ". . . color is received into the pupil which does not thereby become colored" (Aquinas, *ST*, I, 78, 3 c); See also Joseph Owens, *An Elementary Christian Metaphysics* (Houston: Center for Thomistic Studies, 1985), 227.
32. Owens, *An Elementary Christian Metaphysics*, 63.
33. "This is what we mean by abstracting the universal from the particular, or the intelligible species from the phantasm" (Aquinas, *ST*, I, 85, 1, ad 1).
34. Owens, *Cognition*, 152-53, 157-58.
35. Brennan, *Thomistic Psychology*, pp. 116-17.
36. Aquinas, *ST*, I, 85, 1, ad 3.
37. Aquinas, *ST*, I, 85, 8 c; see also *ST*, I, 84, 7 c; 8 c; 85, 5, ad 3; 6 c; 86, 2 c; 87, 2, ad 2; 88, 3 c. But see *ST*, I, 85, 1 c, where form, rather than quiddity (which is essence, or form plus common matter) is identified as that which is abstracted. Elsewhere, Aquinas explains the term "species" as Plato's "forms of natural things . . . he called . . . *species or ideas*" (*ST*, I, 79, 3 c, emphasis in original), although Aquinas adds that "Aristotle did not allow that forms of natural things exist apart from matter . . ." Ibid. Aquinas adopts Aristotle's view that the forms do not exist separately. This brings one back to the notion of quiddity - the form plus the common matter.
38. Aquinas, *ST*, I, 85, 1 c.
39. Aquinas, *ST*, I, 79, 2 c; 3 c.
40. ". . . it is of the nature of the memory to preserve the species of those things which are not actually apprehended . . ." (Aquinas, *ST*, I, 79,

6 c); ". . . it belongs to the nature of a passive power to retain as well as to receive" (Aquinas, *ST*, I, 79, 7 c).

41. "So it is clear that the nature of man, considered absolutely, abstracts from every being, but in such a way that it prescind from no one of them; and it is the nature considered in this way that we attribute to all individuals" (St. Thomas Aquinas, *On Being and Essence*, 2nd ed., trans. Armand Maurer [Toronto: Pontifical Institute of Medieval Studies, 1968], Chapter 3, sec. 4, p. 47). See also Aquinas, *On Being and Essence*, Chapter 2, sec. 13, p. 44.

42. Owens, *An Elementary Christian Metaphysics*, 63, 132; Owens, *Cognition*, 145-52, 155-57.

43. Owens, *Cognition*, 152.

44. Owens, *An Elementary Christian Metaphysics*, 63, 132; Owens, *Cognition*, 145-52, 155-57.

45. Aquinas, *ST*, I, 85, 3, ad 1.

46. Aquinas, *ST*, I, 85, 1, ad 1.

47. Etienne Gilson, *The Christian Philosophy of St. Thomas Aquinas* (New York: Random House, 1956), 202.

48. Aquinas, *ST*, I, 85, 2, ad 2.

49. Aquinas, *ST* I, 87, 3 c.

50. Here is introduced the notion of the soul, which will receive fuller treatment in Chapter Two, in the context of a consideration of Hilary Putnam's discussion of Aristotle's and Aquinas' notions of soul.

51. ". . . sense, imagination, and the other powers belonging to the sensitive part, make use of a corporeal organ" (Aquinas, *ST*, I, 84, 7 c). This distinction and interaction of sense organ and non-material, sensitive power of the human soul will be explored more fully in Chapter Two.

52. ". . . the intellect, being a power that does not make use of a corporeal organ . . ." (Aquinas, *ST*, I, 84, 7 c).

53. Aquinas, *ST*, I, 75, 2 c.

54. Aquinas, *ST*, I, 75, 2, ad 3. The following passage is also relevant: "But Aristotle held that the intellect has an operation which is independent of the body's cooperation. . . . According to this opinion, then, on the part of the phantasms, intellectual knowledge is caused by the senses. But since the phantasms cannot of themselves affect the passive intellect, and require to be made actually intelligible by the active intellect, it cannot be said that sensible knowledge is the total and perfect cause of intellectual

knowledge, but rather that it is in a way the material cause" (Aquinas, *ST*, I, 84, 6 c).

55. Aquinas, *ST*, I, 84, 6 c.
56. Aquinas, *ST*, I, 75, 2, ad 2.
57. Dretske, *Naturalizing the Mind*, 1.
58. Aquinas, *ST*, I, 84, 6 c.
59. Aquinas, *ST*, I, 85, 2 sed contra.
60. Ibid.
61. Aquinas, *ST*, I, 85, 2 c.
62. Dretske, *Naturalizing the Mind*, pp. 161-62.
63. Dretske, *Naturalizing the Mind*, 7-8.

Chapter Two

1. Putnam, Dewey Lectures, 454.
2. Putnam, Dewey Lectures, 460.
3. Putnam, *Words and Life*, 10-11.
4. Putnam, Dewey Lectures, 452-53.
5. Putnam, Dewey Lectures, 475.
6. Putnam, Dewey Lectures, 456.
7. Richard Rorty, *Objectivity, Relativism, and Truth* (Cambridge: Cambridge University Press, 1991), 2.
8. Ibid.
9. Putnam, Dewey Lectures, 448.
10. Ibid.
11. Putnam, Dewey Lectures, 449.
12. Hilary Putnam, *Reason, Truth and History* (New York: Cambridge University Press, 1981).
13. Putnam, *Reason, Truth, and History*, 49.

14. Putnam, Dewey Lectures, 466.
15. Putnam, Dewey Lectures, 467.
16. Ibid.
17. Laurence BonJour, *The Structure of Empirical Knowledge* (Cambridge, Massachusetts and London: Harvard University Press, 1985).
18. BonJour, *The Structure of Empirical Knowledge*, 55.
19. BonJour, *The Structure of Empirical Knowledge*, 161.
20. BonJour, *The Structure of Empirical Knowledge*, 162.
21. BonJour, *The Structure of Empirical Knowledge*, 159–63.
22. Rorty, *Objectivity, Relativism and Truth*, 2.
23. Putnam, *Words and Life*, 467, 468.
24. Putnam, Dewey Lectures, 448.
25. Putnam, Dewey Lectures, 447.
26. Putnam, Dewey Lectures, 469.
27. Ibid.
28. Putnam, Dewey Lectures, 447–48.
29. Putnam, Dewey Lectures, 447.
30. Ibid.
31. J.L. Austin, *Sense and Sensibilia*, ed. G. J. Warnock (Oxford: Oxford University Press, 1962).
32. Austin, *Sense and Sensibilia*, 22–24, 29–30.
33. Austin, *Sense and Sensibilia*, 8–9.
34. Austin, *Sense and Sensibilia*, 3.
35. Austin, *Sense and Sensibilia*, 4.
36. Putnam, Dewey Lectures, 452.
37. Putnam, Dewey Lectures, 447.
38. Putnam, Dewey Lectures, 448.

39. Putnam, *Words and Life*, 22-61.
40. Putnam, *Words and Life*, 23-28.
41. Putnam, *Words and Life*, 42-43.
42. Putnam, *Words and Life*, 50-55.
43. Putnam, *Words and Life*, 3-4.
44. Putnam, *Words and Life*, 3.
45. Aquinas, *ST*, I, 75, 2; Aristotle, *De Anima*, trans. W.S. Hett (Cambridge, Massachusetts: Harvard University Press, Loeb Classical Library, 1964), 412a 20-23.
46. Aquinas, *ST*, I, 78, 1 c; 2.
47. Aquinas, *ST*, I, 78, 1 c.
48. Aquinas, *ST*, I, 78, 3.
49. Aquinas, *ST*, I, 78, 4.
50. Aquinas, *ST*, I, 78, 1.
51. Ibid.
52. Aquinas, *ST*, I-II, 22-48.
53. Aquinas, *ST*, I, 78, 1; 79.
54. Aquinas, *ST*, I, 79, 1.
55. Ibid.
56. Putnam, *Words and Life*, 4.
57. Putnam, *Words and Life*, 28.
58. Putnam, *Words and Life*, 52.
59. Putnam, *Words and Life*, 39, 52.
60. Putnam, *Words and Life*, 38-39.
61. Putnam, *Words and Life*, 43.

Chapter Three

1. Putnam, *Words and Life*, 4-5.
2. Dretske, *Naturalizing the Mind*, 127.
3. Dretske, *Naturalizing the Mind*, 127-28.
4. Dretske, *Naturalizing the Mind*, 128.
5. Ibid.
6. Dretske, *Naturalizing the Mind*, 128.
7. Dretske, *Naturalizing the Mind*, 129.
8. Ibid.
9. Ibid.
10. Dretske, *Naturalizing the Mind*, 2.
11. Dretske, *Naturalizing the Mind*, 19.
12. "material images, namely, phantasms" (Aquinas, *ST*, I, 85, sed contra); "images of individuals" (Aquinas, *ST*, I, 85, 1, ad 3).
13. Aquinas, *ST*, I, 84, 1 c.
14. Aquinas, *ST*, I, 78, 3 c.
15. Owens, *An Elementary Christian Metaphysics*, 227.
16. "individual qualities represented by the phantasms" (Aquinas, *ST*, I, 85, 1 ad 1).
17. "the thing reflected in the phantasm" (Aquinas, *ST*, I, 85, 1, ad 3).
18. Dretske, *Naturalizing the Mind*, 44.
19. Dretske, *Naturalizing the Mind*, 62.
20. Ibid.
21. Aquinas, *ST*, I, 85, 2, ad 3.
22. This is not to deny that Aquinas recognizes phantasms that are produced by the subject from stored phantasms in the sensitive memory. See Aquinas, *ST*, I, 2, ad 3. It is only to affirm that, in the case of present perception, to have the phantasm of a thing is to perceive the thing.

23. Hilary Putnam, *Realism with a Human Face* (Cambridge, Massachusetts and London: Harvard University Press, 1992), 30. This is Putnam's paraphrase of his own statements originally found in his *Reason, Truth and History*.
24. Putnam, *Dewey Lectures*, 448.
25. *Ibid.*
26. Putnam, *Realism with a Human Face*, 30. Again, this is Putnam's paraphrase of his own words in *Reason, Truth and History*.
27. George P. Klubertanz, S.J., *St. Thomas Aquinas on Analogy: a Textual Analysis and Systematic Synthesis* (Chicago: Loyola University Press, 1960), 6; Ralph M. McInerny, *The Logic of Analogy: An Interpretation of St. Thomas* (The Hague: Martinus Nijhoff, 1961), chaps. 1, 2, 5, 6, 7 *passim*.
28. Aquinas, *ST*, I, 84, 3 c.
29. Aquinas, *ST*, I, 79, 2 c.
30. Aquinas, *ST*, I, 84, 2 c; 3 c; 6 c.
31. Aquinas, *ST*, I, 84, 6 c.
32. Aquinas, *ST*, I, 85, 3.
33. Putnam, *Realism with a Human Face* 54-79; Hilary Putnam, *Representation and Reality* (Cambridge, Massachusetts and London: MIT Press, 1988), 30-33; Hilary Putnam, *Mind, Language and Reality: Philosophical Papers, Vol. 2* (Cambridge: Cambridge University Press, 1975), 223-27.
34. McInerny, *The Logic of Analogy*, pp. 67-68.
35. Klubertanz, *St. Thomas Aquinas on Analogy*, 112-13.
36. Aquinas, *ST*, I, 78, 3 c.

Conclusion

1. Gilson, *Thomist Realism and the Critique of Knowledge*, 181.
2. Dretske, *Naturalizing the Mind*, 8.
3. Aquinas, *ST*, I, 85, 5, *sed contra*.

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