A Thomistic Argument against the Simulation Hypothesis

An Application of the Doctrine of Signs in John Poinsot

Daniel O'Malley Independent Scholar Lyceum Institute Member

ABSTRACT: In this paper we will explore how the action of signs underlying all human experience precludes the possibility that we are being systematically deceived in our perception of reality. The simulation hypothesis, as well as similarly motivated skeptical scenarios, such as the brain-in-a-vat hypothesis and Descartes' evil demon thought experiment, wrongly presuppose a modern, dualistic theory of knowledge, as well as a neuroreductionist model of sensation. However, we will see how the action of signs in human cognition presupposes the existence of a relational mode of being, namely, esse intentionale ("intentional being"), which is immaterial and incapable of subjection to technological manipulation. Furthermore, sensation, the origin of all human knowledge, and ens primum cognitum ("being as first known"), the condition of all human knowledge, both defy materialistic explanations. The doctrine of signs, as masterfully articulated by John Poinsot (John of St. Thomas), recognizes the triadic nature of relations underlying the full range of human experience. A proper understanding of the relationship between mind and world, as well as a recognition of the mistaken presuppositions underlying much of modern philosophy, will help

to disillusion those who are convinced by the simulation hypothesis and other similarly motivated skeptical scenarios.

I. Introduction

Have you ever wondered whether reality, as you currently perceive it, might be the product of some grand illusion? Could it be the case that, despite what commonsense might suggest, none of your experiences are veridical (i.e., truly related to the way things **really** are)? How would you respond to someone who claimed that we are all just living in a simulation and that there is nothing you could say or do to convince them otherwise?

To most people, these sorts of questions might seem quite trivial or even nonsensical, but such fanciful speculation is actually becoming increasingly commonplace in today's society. Take, for example, Elon Musk, who was quoted in 2018 as saying "We're most likely in a simulation". To justify this bold claim, he noted that, "If you assume any rate of improvement at all, games will eventually be indistinguishable from reality". Likewise, astrophysicist Neil deGrasse Tyson recently lamented, "I wish I could summon a strong argument against it, but I can find none." Even in today's popular culture, movies such as *The Matrix* depict human beings as essentially "brains in vats" living in a simulated reality, unbeknownst to the people being manipulated, whose physical bodies remain kept alive at some "base level" reality. And in a scene from a recent comedy television show, *Ted Lasso*, Coach Beard drunkenly remarked to a friend, "if this is all indeed a simulation, which everything in my experience suggests that it is, then all we can do is tip our caps to the rascal pulling the strings." Moreover, as

¹ Powell 2 October 2018: "Elon Musk says we may live in a simulation. Here's how we might tell if he's right" in *NBC News*, online <

https://www.nbcnews.com/mach/science/what-simulation-hypothesis-why-some-think-life-simulated-reality-ncna913926 > Retrieved 29 July 2023.

² Ibid.

³ Ibid.

⁴ "Beard After Hours." *Ted Lasso*, created by Sam Jones, season 2, episode 9, Ruby's Tuna, 2021.

the mental health crisis of the U.S. population steadily continues apace, ridiculous theories such as the simulation hypothesis are not altogether blameless for this situation. In fact, one of the diagnosable forms of obsessive-compulsive disorder (OCD), known as "existential OCD", deals precisely with people who incessantly ruminate over deep philosophical questions about the nature of reality, and one such obsession includes worries about the simulation hypothesis being true.⁵

While skeptical worries about one's perception of reality can plausibly be traced as far back as Plato (429–347 B.C.) and his famous "Allegory of the Cave", its modern roots are clearly found in René Descartes (1596–1650), known for his infamous "evil demon" thought experiment. In pursuit of a radical security in the certainty of his beliefs, Descartes tried to imagine an all-powerful evil demon systematically deceiving him, casting radical doubt upon the reliability of his senses, his memory, and even his ability to know basic mathematical truths. His purpose in raising such doubts was to find out whether there was anything which he could know or believe with such certainty that, even if he was being deceived by an all-powerful evil demon, he could not doubt its truth. At the end of this thought experiment, Descartes came to his well-known conclusion, "Cogito, ergo sum".6 I think, therefore I am. No matter what the demon might do to manipulate me, I can still know with absolute certainty that I exist, as the one being deceived and thinking these thoughts, since I cannot doubt the fact that I am actually doubting and thinking these thoughts. Based on this indubitable foundational belief, Descartes then attempted to restore the validity of the rest of his perceptions and beliefs by formulating an ontological argument for the

⁵ Gill 8 February 2021: "Existential OCD or a 'Deep Thinker'? How to Tell The Difference" in NOCD Inc., online < https://www.treatmyocd.com/blog/existential-ocd- <u>deep-thinker-how-to-tell-difference</u> > Retrieved 29 July 2023.

⁶ The precise phrase, "cogito, ergo sum", does not appear in the *Meditations* but rather in the Principles of Philosophy; in the Discourse on Method (the chronologically first of these three works) he writes "je pense, donc je suis." In the Meditations, he states "Ego sum, Ego existo, quoties a me profetur, vel mente concipitur, necessario esse verum" ("I am, I exist, whenever it is professed by me, or conceived by the mind, necessarily is true").

existence of God, whose existence as an all-good, all-powerful Being would conveniently ensure that he was not in fact being systematically deceived.

It is widely acknowledged that Descartes' attempt to provide an indubitable answer to global perceptual skepticism did not succeed. Instead, by prioritizing epistemology (the theory of knowledge) as first philosophy and relegating metaphysics (the study of being qua being) to a second-class discipline, Descartes ushered in an unprecedented "turn to the subject" and, along with it, most of the ills of philosophical modernity as we know it.

Descartes' evil demon hypothesis spawned its fair share of modern-day variations, including the brain-in-a-vat and the simulation hypotheses. The latter will be the focus of this paper, but by undermining the simulation hypothesis, we will likewise demonstrate the implausibility of all such radical skeptical scenarios. It is often mistaken presuppositions about the nature of cognition which lend credence to proposals such as the simulation hypothesis. The relationship between mind and world, contrary to certain modern epistemological presuppositions, is not one of "inner and outer" or "appearance vs. reality". It is instead a relationship of mutual interpenetration and signification. Moreover, the correct view of cognition recognizes our fallibility as finite human beings, but it does not compromise our basic contact with mind-independent⁷ reality, nor does it fail to recognize our ability to know things as they exist entitatively in physical reality.

That being said, **can** we be sure that we are not being systematically deceived by an evil demon or someone controlling a simulation? Can we know that we are in contact with "base level" reality, rather than some mere simulation thereof? If

⁷ "Mind-independent being" is that which truly has an existence in "the world of physical nature," whereas "mind-dependent being" is "being having existence objectively in the mind, to which no being in the physical world corresponds [and] while it posits nothing in the physical world and in itself is not a being, is nevertheless formed or understood as a being in the mind". These two definitions are suitable in light of the fact that "being" is itself "denominated from the act of being and in terms of an order to existence". Poinsot 1632: Tractatus de Signis: The Semiotic of John Poinsot (TDS hereafter), in the English translation by John Deely, 49 (page)/16-28 (line numbers).

one critically reflects upon the implications of the semiosic⁸ nature of cognition, the impossibility of these skeptical scenarios will become increasingly evident to the honest inquirer.

Instead of simply dismissing the concerns of the skeptic, we will examine how the semiotic nature of cognition sheds light on the mistaken presuppositions lending credence to the simulation hypothesis. The simulation hypothesis is often raised as a possibility, but it is virtually never argued against in a serious manner. For most people, the question is raised as a matter of harmless speculation, but for others, it can easily be used as an excuse for immoral behavior or even cause for existential anxiety. This paper will help to clarify the fundamental relationship between mind and world, a relationship which ultimately depends upon the very nature of experience itself. We will show how the very nature of experience itself is semiosic, rather than reductionistic or atomistic (as supposed by proponents of the simulation hypothesis). And we will ultimately show how one can verify for oneself that he is not in fact being fundamentally deceived in his experience of reality.

2. What is a Sign and Why Does it Matter?

What is a sign, and what do signs have to do with arguing against the simulation hypothesis? Put succinctly, a sign is "the irreducibly triadic mediation accomplished by a relation through a [sign-vehicle] between a fundament and a terminus ... [it is] the completed actuality of mediated relating between two beings through a third ... [It] produce[s] an object for some [knowing power]".9 Hence, a sign is made up of three irreducibly distinct elements: the sign-vehicle,

⁸ To clarify, "semiosis" refers to the action of a signs, "semiosic" refers to sign usage in a particular instance, "semiotics" refers to the doctrine of signs (it is also described as the normative science of truth, and even used as another name for logic), and "semiotic" is an adjective to describe the species-specifically human capacity to recognize the existence of signs as such rather than merely make use of signs (as do non-human animals).

⁹ Kemple 2019: The Intersection of Semiotics and Phenomenology (Intersection hereafter), 311.

the knowing power, and the object signified (the significate). Figure 1 below illustrates this relationship (in a simplified manner) diagrammatically (it also mentions typical alternative names for each of the three elements).

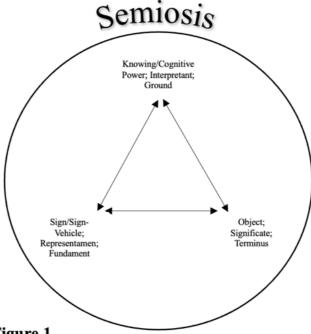


Figure 1

Usually, when one thinks of a sign, a stop sign is the first thing that comes to mind. Notably, however, a stop sign is technically a sign-vehicle, the "fundament" which founds a sign-relation (more appropriately called a "sign" in the fully robust sense of the term). According to John Poinsot (also known as John of St. Thomas, 1589–1644), a sign-vehicle is "[t]hat which represents something other than itself to a cognitive power." 10 As for the other two elements of the sign-relation, "the object" denotes a thing as cognized ("a thing in the regard it has been made an object by a relation to a power ... [it is] that which determines a sign to determine [a knowing power] in regard to the original object"), 11 whereas the "the knowing power" is that which cognizes the object (i.e., that which is determined by the

¹⁰ Poinsot 1632: TDS 25/11-13.

¹¹ Kemple 2018: Intersection, 306.

object and that to which representation is made in the process of signification). So, in the case of a stop sign, the stop sign (sign-vehicle) represents to a human being (knowing power) that he should bring his car to a halt as he approaches it (object signified).

The stop sign example represents an instance of instrumental signification. Signs, insofar as they are ordered to a cognitive power, are exhaustively divided between instrumental and formal sign-vehicles. ¹² An "instrumental sign-vehicle" is one that represents something other than itself to some knowing power by virtue of a pre-existing cognition of itself first as an object, whereas a "formal signvehicle" is one that represents something other than itself to a knowing power by its very nature, not by means of another (i.e., it is a pure means). The instrumental sign-vehicle signifies objectively (i.e., by virtue of being known first as an object, but as pointing to another), whereas the formal sign-vehicle signifies formally (i.e., as the rationale and form whereby an object is rendered known to a cognitive The paradigmatic case of a formal sign-vehicle is "the concept" (alternatively called the verbum mentis or the species expressa intelletcus). The formal sign-vehicle (the concept) is a "means-in-which" knowledge is achieved, i.e., "that in which another thing is seen, as when I see a man in a mirror." 13 As formal and intrinsic to the cognitive power, the concept is the means in which a thing understood is cognized.¹⁴ To put this in proper perspective, it is noteworthy that the very adequation of our mind to any known reality necessarily presupposes the operation of formal signification. Knowledge does not arise merely from the dyadic interaction of one physical entity bumping into another such entity in a physical environment; there is a much more dynamic relationship involved in our knowledge.

In addition to a proper understanding of the terms involved in a sign-relation, it is important to clarify upfront the meaning of the terms "objective" and "subjective" as used throughout this paper, especially for those unfamiliar with

¹² Poinsot 1632: TDS 27/8-9.

¹³ Ibid, 224/11-12.

¹⁴ Ibid, 224/7-28.

Latin scholastic verbiage or the work of John Deely (1942–2017). "Objective" and "subjective" are used here in the sense those terms were used by the Latin scholastics. Therefore, "objective" will refer to that which is mind-dependent, whereas "subjective" will refer to that which is mind-independent. While this may seem counterintuitive to contemporary English readers, that is only because the original Latin usage of these two terms was perverted over time. "Objective" went from signifying "a thing precisely in the regard it has been made an object by a relation to a [cognitive] power" (i.e., that which is mind-dependent) to designating "a thing considered precisely as independent of any such relation" (i.e., that which is mind-independent). 15 Likewise, "subjective" was previously used to signify "that which belongs to a subject, considered as a whole, including but not limited to the psychological subjective ... [i.e., the "subjective" referred to that which belongs to] something having its own internal principles of substantial constitution", whereas now it usually signifies "psychological subjectivity, which is to say, the realm of thoughts, feelings, emotions, desires, and whatever else one might wish to relegate to the domain of opinion or a private, personal, interior world" (i.e., that which is mind-dependent). 16 "Objective" and "subjective", as Brian Kemple rightly noted, ¹⁷

should not be understood ... solely or even primarily by their opposition to one another - however deeply ingrained a habit that is in most native English speakers today – but rather in their complementarity to one another. Every *subject* is determined in its environment, in its World, by relations to its objects, and every object is an object because of some subject.

With respect to the ubiquity of signs, there is no aspect of reality as experienced which does not in some way involve the action of signs ("semiosis"). We cannot encounter anything as human beings without that encounter necessarily occurring through various sign-relations. The three elements of a sign-

¹⁵ Kemple 2018: *Intersection*, 15, 306.

¹⁶ Ibid, 15 (emphasis added).

¹⁷ Ibid, 16 (emphasis added).

relation (sign-vehicle, knowing power, and object signified) are found throughout the entire scope of man's cognitive life. In this paper, we will focus on how knowing the semiosic nature of **experience** helps to disprove the simulation hypothesis. By fleshing out the nature of cognition, we will discover why the simulation hypothesis proposes a metaphysically impossible scenario and how one can verify for oneself that he is not presently being globally deceived in his experience of reality.

3. The Methods of Demonstration at Our Disposal

As John Deely once explained, answers to philosophical questions, especially those pertaining to the nature of reality itself, rest their case upon a "demonstration ad intellectum" ("an appeal to intelligibility"). Empirical scientific questions, by contrast, rest their case upon a "demonstrando ad sensus" ("demonstration by sensible effects," i.e., something able to be perceived by the senses). The method of demonstration at our disposal for arguing against the simulation hypothesis is the former (and, as will be shown below, can in principle only be the former). The demonstrando ad sensus is not to be confused with the experimental return to the external sense impression mentioned later in this paper; the demonstrando ad sensus involves sensorially perceiving the physical reality of that which one is attempting to prove (e.g., observing a rock fall from one's hand to the ground at a certain speed, scientifically proving the operation of the law of gravity), whereas the experimental return to the external sense impression involves a reflexive cognition of the intellect (note the appeal to intelligibility) recognizing the terminus of a previously perceived reality in an externally sensed object.

The simulation hypothesis cannot be disproven by pointing to any particular sensible phenomenon in one's experience of reality (i.e., a *demonstrando ad sensus*); according to the simulation hypothesis, any sensed phenomena would necessarily be part of the simulation for the one knowing/sensing such phenomena, thereby

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¹⁸ Deely 2001: Four Ages of Understanding: The first postmodern survey of philosophy from ancient times to the turn of the twenty-first century (Four Ages hereafter), 491.

making the hypothesis unfalsifiable and therefore trivial.¹⁹ Hence, we must show, by an appeal to intelligibility, why the simulation hypothesis is philosophically incoherent and does not accord with the nature of our experience as human knowers.

Furthermore, in terms of providing an explanation for anything whatsoever, logic demands that things be resolved to something ultimate and final, lest an infinite regress ensue and there be no resolution to the matter. ²⁰ At the two poles of human knowledge lie sensation and intellect, the former being the beginning of all human knowledge and the latter being the condition for all human knowledge.21 We will show here how the semiosic nature of sensation and the resolution of experience into ens primum cognitum both help to demonstrate the implausibility of the simulation hypothesis.

4. Signs of Sensation

In line with the thought of St. Thomas Aquinas (1225–1274), Poinsot says that "all our awareness originates from the [external senses]." 22 Even though ens primum cognitum is the final ground into which all our awareness is ultimately resolved (more on this below), sensation is the ultimate origin from which all our experience originates. And notably, even at this most basic level of cognition, the action of signs (semiosis) is present. As a semiosic process, the very nature of sensation precludes the possibility of the simulation hypothesis being true.

As for the **ontological** derivation of our cognition, "that which is in the senses is prior in the order of acquisition to that which is in the intellect."²³ Logically, therefore, it is to sensation that we must turn when seeking the true cause/origin of our experience. It is in sensation that things become initially objectivized. In

¹⁹ I owe this particular insight to Dr. Jim Madden.

²⁰ Poinsot 1632: TDS 22/15-21.

²¹ Guagliardo 1993: "Being and Anthroposemiosis" in Semiotics, 55.

²² Poinsot 1632: TDS 311n9 (emphasis added).

²³ Poinsot 1632: De Primo Cognito (DPC hereafter), in the unpublished English translation by Brian Kemple, 1/7-9.

fact, nothing becomes an object for the cognizing human being until something in the physical environment impresses itself upon the external senses. If it can be shown that the experience of "base reality" is intrinsically relational and incapable of being artificially simulated, then this will show the impossibility of the simulation hypothesis, since the hypothesis requires a situation wherein the human knower's experience of "reality" is entirely determined by the artificial stimulation of one's external senses.

It is important to recognize that even though we are not being globally deceived in our experience of reality by some sort of simulation, this does not mean that we experience reality in an intuitive, unfiltered manner. We always experience things from a particular point of view as finite, material human beings in a relationally constituted physical environment. One helpful notion in fleshing this out is the "Umwelt", an originally scientific theory based on the experimental work in biology of Jakob von Uexkull (1864–1940). As explained by Kemple, ²⁴

[the Umwelt refers to] the physical environmental surrounds turned into a total pattern of potential relations by virtue of the objectivizing capacity of some living being. Every being possessing perception has an Umwelt. Objects as they appear in the Umwelt of a non-human animal [or at the level of perception for human beings] are categorized according to their relation to the self by either being beneficial to the self [+], harmful to the self [-], or neutral to the self [0].

As a result, an ant experiences the world (its "Umwelt", or objective world) differently than a dog, and a dog experiences the world differently than a human.²⁵ A rock, however, does not experience the world at all, since

²⁴ Kemple 2018: *The Intersection of Semiotics and Phenomenology*, 313.

²⁵ For human beings, moreover, the objective world is constituted even further by "beings which are presenced on the basis of some subjectively-constituted and cognitionindependent reality [i.e., the "Lebenswelt"]," as well as "those beings which are presenced inter- and suprasubjectively through the cognitive and linguistically-communicative acts of human beings which we ascribe to culture [i.e., the "Bildendwelt"]." Ibid, 300.

it is not a living being and thus possesses no objectivizing capacity. Therefore, in light of our limited and perspectival knowledge of reality, rather than conclude we are living in a simulation or are subject to some sort of grand illusion, the concept of the Umwelt helps to properly situate the human being in its surrounding environment.

4.1. External vs. Internal Sensation

In Thomistic faculty psychology, human sense-perception is traditionally divided between external sensation (sensation) and internal sensation (perception). External sensation includes those sense faculties which put us in direct contact with the surrounding physical environment (they simply present what they receive without any use of mental imagery), ²⁶ including the senses of smell, taste, hearing, touch, and sight, ²⁷ whereas internal sensation includes the imagination, the common sense, the estimative power, and the memory (each of which involves the use of some mental imagery). ²⁸

Aside from the above generalizations, it is difficult to pinpoint a precise point at which external sensation becomes internal sensation in the order of acquisition, since as soon as anything is operative upon one's external senses, there is the immediate potential for it to be turned into an object of some kind (i.e., an object of perception). The nature of sensation, as rooted in materiality, simply requires that it "be borne to the thing located outside [in the physical environment], which

²⁶ See footnote 46 for further explanation of "mental imagery".

²⁷ Yves Simon, in his excellent book titled *An Introduction to Metaphysics of Knowledge*, cautions against "philosophical imperialism" in such matters, since any such list of the various external sense faculties, particularly lists based solely on an ontological analysis of the relation between the sense faculty and its object, will potentially be incomplete; "the empirical physiological data" alone can answer such questions. Simon 1934: *An Introduction to Metaphysics of Knowledge*, in the English translation by Vukan Kuic and Richard J. Thompson, 37n45.

²⁸ "Perception" generally refers to the action, whereas "internal sensation" refers to the faculties whereby such action occurs. Thank you to Brian Kemple for pointing out this distinction in response to an earlier draft of this paper.

is ultimately rendered sensible as it exists independent of sense."29 At the threshold between external sensation and internal sensation, "just as cognition insofar as it is an expression produces a word [species expressa intelletcus] ... so external sensation too produces a representation [icon] or specifying form, not within itself, but in the internal senses."30 External sensation and internal sensation are indeed closely intertwined, but they are also distinct in important ways. Always and in every case, "some knowledge in external sense must necessarily **precede** ... in order for the estimative sense [of the internal senses] to apprehend and adjudge," whether apprehending or adjudging something as harmful [-], beneficial [+], or neutral [0].31

Perception, as the next level beyond sensation in the tripartite hierarchy of cognition (sensation → perception → intellect/understanding), consists in the turning of something sensed into an object of actual conscious awareness. Sensation, as naturally determined, is necessarily presupposed by perception in that it supplies the material giving rise to a "phantasm" (the perceptual equivalent of an intellectual concept). A phantasm, like an intellectual concept, is a formal sign-vehicle, but it has a material, animal element which shapes and determines it in a way that the indeterminacy of the intellect is not so determined.

4.2. Signification at the Level of External Sensation

A sign-vehicle, according to Poinsot, "calls for nothing in the definition except that it should represent something other than itself and should be a means leading to the other."32 The external senses, despite being "led from one thing to another without [the use of mental imagery]" and without "comparing and knowing the relation of the one thing to the other," make use of signs just as do the higher levels of cognition (perception and understanding).³³ This is proven

²⁹ Poinsot 1632: TDS 266/27-29.

³⁰ Ibid, 267/2-6 (emphasis added).

³¹ Ibid, 214/25-28 (emphasis added).

³² Ibid, 207/9-11.

³³ Ibid, 206/26-27; 207/12-14.

by the fact that external sensation "can discriminate between one object of its knowability and another".³⁴ For example, regarding the external sense faculty of sight, Poinsot mentions how "sight can discriminate between the color white and the color green," knowing the one thing "as it pertains to" the other (i.e., "a green [thing] as distinguished from a white thing").³⁵ Notably, even though semiosis is operative, this is not the sort of activity that requires use of either the intellect or perception.

The external senses make use of instrumental sign-vehicles specifically, rather than formal sign-vehicles. Recall that an instrumental sign-vehicle is one that represents something other than itself to another from a pre-existing cognition of itself first as an object, whereas a formal sign-vehicle represents something to another of itself. A formal sign-vehicle presents the object signified as that thing is in itself (although in another mode of existence), whereas an instrumental signvehicle presents the object signified through something unlike the thing itself. Instrumental sign-vehicles are external, stimulus objects, because by determining our external sense powers, they signify something beyond their immediate impressed specification. That being said, "a [sign's] representation must be manifestative for a knowing power, and not only actuative of the power for eliciting a cognition."36 A mere neurological "stimulation", as envisioned by the standard version of the simulation hypothesis, ³⁷ while potentially "actuative of the power" in terms of bare efficient causality, is not "manifestative" for a knowing power. The process of signification at the level of external sensation always involves a variety of stimulations: the sense organs transmit information to the neurological system, the neurological system conveys information to the brain, the brain conveys information to yet other parts of the body, and numerous other such interactions occur back and forth. While one can mentally separate these

³⁴ Ibid, 206/33-34.

³⁵ Ibid, 206/34-36; 207/3-4.

³⁶ Ibid, 259/46-49.

³⁷ See section 4.6 of this paper for a brief explanation of the different versions of the simulation hypothesis.

stimulations and transmissions of information into a multitude of different signrelations, doing this to the exclusion of a recognition of yet other sign-relations and the formal signification involved would ignore the totality of the ongoing semiosic process. This is why one must never forget that external sensation can really only be considered prescissively, "in a manner that is never directly given in common experience, namely, as on its own and in separation from perception". 38

As for the triadic, instrumental sign-relation at play in any particular case of external sensation prescissively-considered, the three elements can be broken down as follows: (1) the knowing power = the external sense faculty (exercised through the applicable organ of sensation); (2) the object/significate = the actual presence-to-the-organ of whatever causes the stimulation of the applicable nerves; and (3) the sign-vehicle = the stimulation of the nerves (i.e., the stimulation itself). Integral to the sign-relation as a whole is the specific relation of sign-vehicle to knowing power, wherein "the power respects the object [here, the sign-vehicle] and depends upon and is specified by it ... [and] the respect between the two is immediate."39 This one-to-one, immediate respect, however, is not enough in itself to constitute the rationale of a sign-relation. The actualized relation in human cognition is never a purely dyadic, subject/object relationship. There must be the significate toward which the sign-vehicle points and for which it serves as vicegerent. Notably, this is not something which can be somehow artificially "intercepted" or replicated, which is something the simulation hypothesis would require in order to get off the ground. A sign-vehicle is always caught up in a suprasubjective, 40 triadic relation, since it directly respects a

³⁸ Deely 2007: Intentionality and Semiotics: A Story of Mutual Fecundation, 7n9.

³⁹ Poinsot 1632: *TDS* 136/41-51; 137/1 (emphasis added).

^{40 &}quot;Suprasubjective" describes the mode of being proper to relation, namely, a "being toward" (ad esse) that is over and above the subjective foundations of both minddependent relation ("which is suprasubjective but not necessarily intersubjective") and mind-independent relation ("which is intersubjective as well as suprasubjective but not necessarily objective, that is to say, not necessarily involved within cognition"). Deely

signified **and** indirectly respects a cognitive power (although this latter respect is immediate, as between those two terms), since it "respects the thing signified as that which is to be manifested to a cognitive power."⁴¹

4.3. Experimental Certitude and a Return to The Thing Itself

The Thomistic tripartite hierarchy of cognition, divided as it is between sensation, perception, and intellect/understanding, ultimately terminates at sensation, in the order of resolution. When one seeks to verify the physical reality of something perceived, it is ultimately to sensation that one must turn, since that which is in the intellect originated first in the senses. ⁴² In order to distinguish in one's own understanding between that which is mind-dependent and that which is mind-independent, one must first be able to distinguish between that which originated from the external sense reception and that which originated from some mind-dependent constitution. However, due to the human knower's necessary reliance on the internal sense faculties, even the simplest object of perceptual or intellectual knowledge remains always entangled in a certain process of indeterminacy. ⁴³ Because of the potential falsehood which can enter into any process of phantasm-formation (i.e., whether in the process of composition or

2001: Four Ages, 425, 427. Hence, signification "is always something over and above its foundation in some individual being or material object, something superordinate thereto, something of its very nature **intersubjective**, either actually or prospectively. Signs act through their foundation, but **the actual sign as such** is not the foundation but the relation which exists over and above that foundation linking it as sign-vehicle to some object signified ... the sign as such consists purely and simply in the **relation between** sign-vehicle and object signified, effected as such through an interpretant, an actual or prospective observer". Ibid, 431.

⁴¹ Poinsot 1632: TDS 137/2-4.

⁴² Ibid, 311n9.

⁴³ And even though external sensation is not subject to this same level of indeterminacy (given that it makes no use of mental imagery and simply presents what it receives), there is nevertheless a certain sort of indeterminacy with respect to **which** specific objects will impress themselves on the external senses at a given time and manner.

division), there is a certain unreliability in relying upon these as terminal points to one's investigation; one must be able to go to the thing itself in order to confirm the physical reality corresponding to one's perceptions.

One of the unique characteristics of external sensation is that "[it] does not form an icon or expressed specification in which it cognizes its object ... [because it] is essentially experimental [i.e., experiential]". 44 All of the other levels of cognition beyond external sensation require the use of some mental imagery or editorializing on the part of the knower in their objectivization, wherein some mental imagery is utilized to represent the object to oneself. With respect to external sensation, however, it is "necessarily the case that [it] does not attain the object in some self-formed image, but attains the object rather immediately in its own being", and as was noted earlier, it is from sensation that "all our knowledge is ultimately resolved as being originated therefrom."45

As Deely masterfully explains this distinction between (external) sensation and perception:46

[Sensation] is founded on relations directly consequent on physical interactions between our bodies and surrounding bodies. The awareness resulting does not involve mental representations [i.e., imagery or editorializing], but provides rather, within perception, the basis upon which only secondarily as interpretations of direct experience mental representations are introduced, representations which (carefully note) are otherrepresentations (i.e., psychological qualities which serve to found relations), not self-representations (objects which terminate the relations founded upon our psychological qualities or states). 'On this principle, as in a root' (namely, the distinction in principle between sensation prescissively considered within perception and perception as [a] whole presenting a world of objects variously interpreted), Poinsot states, is founded the knowability of being as having

⁴⁴ Ibid, 312n10 (emphasis added). In other words, it is the very epitome of trustworthy experiential knowledge for us as human beings, at least in this life.

⁴⁵ Ibid (emphasis added).

⁴⁶ Deely 2013: Modern Epistemology and Solipsism, in The New Catholic Encyclopedia.

within our awareness a directly awareness-independent dimension concomitant with the objective interpretations we introduce through our mental other-representations or 'ideas'. Otherwise, Poinsot warned, there is no way out of our mind if mental representations are the *whole* basis of perception within experience.

As experimental, external sensation cognizes "the thing ... in itself as terminus of cognition without an image"; if it were otherwise, as it is for every other level of cognition, then any particular instance of cognition would still have yet to be "resolvable in terms of a comparison of that image with the thing itself of which it is the image."47 But if that is the case, then "how must it be finally judged through experience that it is the image of a given thing, without knowing the thing itself in itself without an image"?⁴⁸ Thus, if one is to know the thing itself, rather than an image of the thing, experience must ultimately be resolvable to that which is received by the external senses, which make no use of such imagery. It is upon the thing itself which experimental verification depends, not some image thereof, lest an infinite regress ensue. One can think of the artificial "stimulation" of the senses presupposed by the simulation hypothesis as analogous to "the image", since the stimulations are not meant to attain or present the thing itself but rather an artificial replication thereof (and thus, an irresolvable, infinite regress is found at the root of the hypothesis). As Poinsot will go on to mention, "experimental certitude cannot rest in the understanding [i.e., the intellect] forming a word [i.e., a concept] nor in the imagination forming an icon [i.e., perception]," because in either of these cases, "it can represent falsely", or even be subject to demonic manipulation (as will be explored further below).⁴⁹ Hence, experimental certitude must ultimately rest in the external senses.

The sort of awareness operative in external sensation is intuitive rather than abstractive. As Poinsot says, "all our cognition has birth from some external sense

⁴⁷ Poinsot 1632: TDS 312n10 (emphasis added).

⁴⁸ Ibid (emphasis added).

⁴⁹ Ibid, 247n22.

by means of an **intuitive** cognition."⁵⁰ Notably, however, intuitive awareness can actually be found in all the various levels of human cognition. What makes intuitive awareness at the level of external sensation unique is that the external senses do not and cannot have any sort of abstractive awareness (whereas all other levels of cognition can).⁵¹ Abstractive awareness is produced "by objects no longer present", whereas intuitive awareness is produced by the actual physical presence of the object.⁵² Intuitive awareness "calls not only for the **objective** presence of its object, but also for the **physical** presence".⁵³ And hence, "an intuitive seeing functions as does an experimental cognition, nay rather, it is the **paradigm case of experience.**"⁵⁴ A priori, as Poinsot points out, ⁵⁵

an exterior cognition of sense must necessarily be terminated at some object not as represented within the sense, [but] as situated outside or independent of the sense power. But that which is posited independently of seeing has a physical existence, or, if it does not exist, by this very fact sense will be without a terminating object, and therefore it will not have an object with which it is engaged, which is a contradiction.

Consequently, to avoid contradiction, one must acknowledge the physical presence of that which is received through the external senses (and thereby enters into one's awareness). Relating this back to the simulation hypothesis, we can now see how the very nature of experience itself does not accord with the

⁵⁰ Ibid, 304/12-14 (emphasis added).

⁵¹ Ibid, 304/15-18. In other words, perception (internal sensation) and understanding both have the capacity for cognition of objects which are no longer physically present to the knowing power.

⁵² Ibid, 304/7-8.

⁵³ Ibid, 305/34-36 (emphasis added).

⁵⁴ Ibid, 306/18-20 (emphasis added).

⁵⁵ Ibid, 311/1-8.

neuroreductionist view of cognition⁵⁶ presupposed by the simulation hypothesis. "Real" external sense impressions cannot simply be swapped out and replaced with "artificial" external sense impressions (as represented by the more extreme versions of the simulation hypothesis), nor can "real" external sense impressions be manipulated such that one is unable to distinguish between virtual reality and the "real" world of physical nature (as represented by the case of an extremely convincing virtual reality (VR) headset). The former case ignores the fact that to cease receiving physical impressions via the external senses would be, in effect, to forfeit one's bodily existence (i.e., to be dead) and no longer experience the world as a human being.⁵⁷ Both cases ignore the fact that the multiplicity of external sensations requires a coordination among them to result in an intelligible experience and the fact that, in addition to external sensation, one simultaneously experiences the world perceptually and intellectually (the intellect being an immaterial faculty unsusceptible of direct manipulation). Neural stimulation is not the sole determining factor involved in sensation, let alone human cognition in its entirety. There is an underlying continuity to human experience and our manner of encountering the world through sensation, but the simulation hypothesis posits a radical break in that experience.

⁵⁶ This view of cognition holds "all human consciousness or conscious experience to consist in nothing more than the neurochemical interactions occurring within the brain (and, perhaps, its related systems), which somehow (it has not been explained, merely handwaved at with the words 'emergence' and 'complexity') give rise to the quality-laden experiences we have." Kemple 2023, *On Signs and Simulations*, 8.

⁵⁷ Note, however, that this is not meant to discount the reality of the soul's continued existence after death prior to the resurrection of the body. The souls in heaven, hell, and purgatory, prior to the resurrection of the body, still "experience" reality but they do so in a manner which relies upon God for the infusion of knowledge and which is frankly beyond our comprehension as finite, material human beings living in time and space (although it is certainly unmistakable for the "experience" of reality in a simulation, which is meant to "simulate" the experience of such a finite, material human way of being).

Given, as Poinsot says, that "all our awareness originates from [the external senses] and is resolved into them, it is necessary for the external senses to be moved by the objects by receiving from them specifications, and again it is necessary for cognition to be terminated at the things themselves according as they are outside." As a consequence of the latter fact, the physical presence of the sensible "things themselves" is required; moreover, it is required as they are outside, meaning in real, intersubjective relation to that which is received by impressed specification. Given that the external senses are an experimental, intuitive form of cognition, they cannot "see the object through reflexion upon themselves or in some other interior or exterior power by which they are moved", but rather "they are the ultimate or final powers among all the powers of knowing," immediately attaining "the object in itself". Poinsot, rooted as he is in reality, recognizes the simple fact that experimental cognition lies principally in external sensation, since "we have the greatest experience of something when we contact it through external sense."

Ultimately, experience (the paradigmatic case being external sensation) is the "final ground into which our awareness is resolved", and this resolution yields knowledge of "the very object as it is in itself independently of mind". ⁶¹ If it were otherwise (for example, if it resolved into an image, icon, simulation, or some other medium), then "it would yet remain to match this medium or icon with the thing itself or object to which it belongs in order to determine whether it were true or not." ⁶² Consequently, "it proves necessary to the having of experimental certainty and evidence to come down to a cognition that of its own proper nature tends toward the things existing in themselves, and this is the cognition of

⁵⁸ Ibid, 311n9 (emphasis added).

⁵⁹ Ibid (emphasis added).

⁶⁰ Ibid (emphasis added).

⁶¹ Ibid, 311n9 (emphasis added). And independently of technological manipulation, for that matter.

⁶² Ibid (emphasis added).

external sense".⁶³ Such is the nature of human cognition, and external sensation is a root which cannot be severed without destroying the very fabric of human experience (and yet this is exactly what would be required for the simulation hypothesis to get off the ground). Fortunately, one can rest assured that their experience originates from the physical world and is ultimately resolvable thereto, by reverting to one's sense impressions in an experimental manner.

While it is possible to subject our experiences to a critique by an experimental return to one's external sense impressions, it is not possible to subject sensation itself to such a critique.⁶⁴ The external senses are "the ultimate or final powers among all the powers of knowing", essentially constituting a first principle in human cognition.⁶⁵ If one were to doubt the validity of any particular sensation, one would necessarily need to verify the validity of that act of sensation by comparing it to yet another such "sensation". This, however, would entail an infinite regress akin to the one pointed out above, demonstrating the logical priority proper to external sensation. Man can only use the faculties of knowledge granted to him, and it is through particular acts of external sensation that we have "the greatest experience of something".⁶⁶ As John Henry Newman once wrote, "We are what we are and we use, not trust, our faculties."⁶⁷

4.4. The Intrinsically Relational Nature of Sensation

Even though human cognition ultimately originates in the external senses, it does not do so by means of an atomistic or reductionistic process. External sense reception is a process unfolding over time and in a physical environment, but even so, external sensation involves the action of signs (semiosis). However, one is not consciously aware of such sign-action (e.g., the sign-action of the knowing power

⁶³ Ibid (emphasis added).

⁶⁴ Cf. Wilhelmsen 1956: *Man's Knowledge of Reality: An Introduction to Thomistic Epistemology*, 66.

⁶⁵ Poinsot 1632: TDS 311n9.

⁶⁶ Ibid, 312n9.

⁶⁷ Newman 1870: An Essay in Aid of a Grammar of Assent, 61.

being led from a sign-vehicle to a significate/object) as sign-action in the moment. As mentioned above, this base level of signification is one of instrumental, rather than formal, signification.

With respect to the object(s) of the external senses, it is never a matter of merely one external sense faculty recognizing its object, but rather an irreducible mixture of "common sensibles" and "proper sensibles" are involved in constituting the material object signified by the external senses. The common sensibles include plurality, shape, position, movement, and size. The proper sensibles include color, sound, textures, taste, and odors.⁶⁸ Common sensibles are known by more than one sense channel, whereas each proper sensible is known only through one sense channel. The common sensibles are known simultaneously with the proper sensibles, but the former are logically dependent upon the latter. For example, the shape of a sensed object (common sensible) cannot be known unless and until the color of the object (proper sensible) is known. Deely summarizes the constitution of the object of external sensation well and situates it within the full range of human cognition:

the "proper sensibles" (differentiated light or 'color', sound, flavors, textures, odors), created by the impact of an environmental influence here and now physical in its own being but carrying information intentionally within that very physicality, function as sign-vehicles making present along with themselves in the animal's awareness the "common sensibles" (shape, size, solidity, rest or motion, position, number or plurality, warm or cool), and the relations both of the proper sensibles to the common sensibles and of the common sensibles among themselves as given in the awareness here and now constitute as a whole the "material object signified" of the "external sensation" which the sensus communis will co-ordinate and pass up to the memory, imagination, and estimation, and (if the animal is rational as well), through those higher internal senses, to the ... activity of the intellect which will then so impress the [possible intellect] with a stimulus (namely, the

⁶⁸ Deely 2008: Descartes & Poinsot: The Crossroad of Signs and Ideas, 91.

phantasm, or collective product of memory, imagination, and estimation, presented under a formal mind-dependent relation of self-identity) as to awaken the possible intellect to an awareness of being expressed in concepts (*species expressae*), an awareness of an objective world able to be explored and understood according to what its component objects are "in themselves" and not only according to what they are for me as an animal of a particular bodily type or "species" in the biological sense.

In light of the further fact that any finite being is always in real relation to something else, sensation cannot be atomistic, as it is always enmeshed in a complex network of naturally determined, semiosic relations, none of which can intelligibly exist in absolute isolation from all the others. What prevents the isolation of a given "sense datum" is its suprasubjective semiosic link tying proper sensibles to common sensibles and its real relation to physical stimuli from the surrounding environment.⁶⁹

As noted above, the external senses are traditionally divided into five different faculties. The exact number is a matter of empirical debate, but what is **not** empirically debatable is the fact that there are indeed **multiple** external sense faculties. There is nothing in the created universe that is not somehow **in relation** (and this is befitting of creation as a reflection of the Divine, another vestige of the Trinity in creation). To In the case of human cognition, it is the whole human being that knows, not simply one or another sense faculty. And sensation is always only the **partial** objectivization of things as existing here and now; it is never from a "God's-eye" point of view; things are always sensed **as related** to us. The stimulation of the external sense organs is not the only operative reality in human cognition nor is it a simple one-to-one/input-output relation whereby the mere stimulation of the sense faculties produces a genuinely human experience. It is difficult to even imagine what an experience of mere sensation would be like.

⁶⁹ Ibid, 119.

⁷⁰ St. Thomas 1266-68: Summa Theologiae prima pars (ST Ia hereafter), q.45, a.7.

⁷¹ ST Ia, q.75, a.2, ad.

The closest approximation to this may be plant life, wherein there is not even an awareness of the object(s) outside itself (a far cry from the complexity and richness of experience allegedly produced under the simulation hypothesis).

Despite the immediacy and indefectibility of external sense cognition, every human cognitive power, including the external sense faculties, is of its very nature (in this life at least) indeterminate in some way as to **which** object it relates. Even supposing the actuality of an external sense stimulation, it exists always as part of a complex perceptual system bearing upon a whole human being's orientation towards an object. Many of the external sense faculties operate simultaneously with each other, resulting in awareness of an object that appears to us under a diverse range of respects and formalities. These acts occur in a cooperation which is irreducible to any one of the particular external sense faculties. Each external sense faculty is what it is by virtue of its participation in the greater whole of the knowing human being.

External sensation consists in a real relation of "physical interaction". The But beyond the pure presence-at-hand (to borrow a phrase from Martin Heidegger (1889–1976)) of entities dyadically bumping against each other in the physical environment, external sensation founds a further suprasubjective relation of actual (as opposed to merely virtual) semiosis "in consciously attaining its object by the further real relation which first separates the actual semiosis of cognitive life from the virtual semiosis of nature anterior to and supportive of that life, and productive of its sensory specifications." As Deely goes on in his commentary on Poinsot, "[t]he act of sensing takes place through an interaction in which the activity itself as a quality is a transcendental **relation** categorially related to its object precisely as producing in the sense its specification … The real relation **in which external sensation consists** immediately involves sign-relations and is inseparable from them." To quote Poinsot in full, 75

⁷² Poinsot 1632: *TDS* 302n25.

⁷³ Ibid.

⁷⁴ Ibid (emphasis added).

⁷⁵ Ibid.

External sensation consists in a certain twofold real proportioning, the one in first act, the other in second act. In first act, it consists in a right proportioning of the organ and of its animal spirits:⁷⁶ if these are disrupted, sensation is impeded. In second act, external sensation is real relation consciously attaining its object ... and for this reason external sense cannot be destroyed and damaged by an intentional or representative action alone, except in the context of some physical alteration and disruption adjoined to or eminently contained in the intentional action [whereby sensation attains its objects *apprehensively* and not just as effects related *causally* to environmental stimuli].

4.5. How Do the External Senses Cognize Their Proper Objects?

So, in what manner does one "know" anything through external sensation? Or in what sense do the external senses themselves know? "To know", like being, can be said in many ways. As mentioned above, the external senses cognize their objects through instrumental signification, and when it comes to a particular sense faculty's orientation toward a sign-vehicle and that which the sign-vehicle instrumentally signifies, "[the] thing signified through a [sign-vehicle] is seen in the very [sign-vehicle]". External sense "cannot know the significate apart from the [sign-vehicle] and in itself." For example, when confronted with an image of something, one can know things such as "this is an image of a man and not of a horse, [or] that is an image of Peter and not of Paul." The significate in each of these cases ("a man" and "Peter", respectively) is known, not immediately in of itself, but through a sign-vehicle (here, an "image"). Furthermore, "sense cognizes the significate in a sign in the way in which that significate is present in the

⁷⁶ "Animal spirits" is simply a term for the physical causes that convey physiological phenomena to the brain.

⁷⁷ Ibid, 206/6-7. In other words, knowledge of the object signified is not dyadic and unmediated.

⁷⁸ Ibid, 207/18-19.

⁷⁹ Ibid, 207/37-38.

sign."⁸⁰ So, the external senses would know the significate (Peter, for instance) differently in a painting of Peter than they would in a statue of Peter (each being a different sort of image of Peter). The object signified is always known in a certain respect, not in every possible respect (which helps to explain why there is always more to learn about the essence of any given thing).

With respect to the object known (the significate) in external sensation, it is attained "as conjoined to the [sign-vehicle] and contained in it, not as existing separately and as absent."81 The latter sort of knowledge (to know something as existing separately and as absent) "requires an act of comparison knowing a relation under the concept and formality of respecting, and comparatively to the term", but this sort of knowledge is not proper to the external senses. 82 The object or focus of attention for an external sense power "is not formally mindindependent being or entitative reality, according as the object has being in itself, but [rather] the proportion and adaption to the power" (hence, on its own, it is really only "knowledge" in an analogous sense). 83 Therefore, for our purposes, the sense powers themselves could not "know" whether they were living in a simulation or not. To come to such a realization, one's object must be "formally mind-independent being or entitative reality", an object which is proper only to the intellect (as will be explained further below). Nevertheless, the "proportion and adaption" attained as a result of external sense cognition must necessarily reach mind-independent being "as it subjectively exists in a thing". Rather, what is regarded by the external senses as such is "that [the object] exists objectively relative to the power".84 It makes no difference to the external senses themselves whether they are sensing a flesh-and-blood human being, another person's "avatar" in a virtual reality simulation, or a mere hallucination thereof. In each of these cases, "the very proportion and adaptation to a cognitive power which alone

⁸⁰ Ibid, 208/34-36.

⁸¹ Ibid, 208/45-47.

⁸² Ibid, 208/30-32.

⁸³ Ibid, 190n35.

⁸⁴ Ibid.

pertains essentially to an objective rationale is there". Even a "fictive being," though it does not exist mind-independently or entitatively in one's actual physical environment, "is nevertheless not fictively objectified and understood, but terminates a true act by a true termination". Notice too, moreover, that in the case of any mind-dependent object, "it has a **real** fundament" (the element which founds the sign-relation) and the object's existence must be "borrowed and appropriated" from mind-independent (real) being). Hence, even the most technologically sophisticated simulation would necessarily produce objects for cognition only derivative of actual mind-independent reality, to which one must always return. As Poinsot observes, "human experience always depends upon surrounding conditions of the physical environment."

External sense knowledge, at its core, is "a simple act of knowledge [simple apprehension] which does not become discourse or collation [i.e., discursive knowledge]", but it does attain "the object which is immediately proposed or apposed to sense [and] that which is contained in that object" (as was seen in the examples of Peter and the painting mentioned above). ⁸⁹ This form of external sense knowledge Poinsot calls a "negative abstraction", whereby one "grasps one feature while passing over another—for example, the color in an apple apart from [its] odor." ⁹⁰ Primordially, however, for each of the various external sense faculties, the formal object "is some accident in the concrete, e.g., color, sound, heat, etc." ⁹¹ But the sensible singular itself, as imbibed in the concrete, "is only able to be known by our intellect reflexively". ⁹² Even though the operation of the external sense is "the final perfection uniting object [here, the sign-vehicle] to [knowing]

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⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid (emphasis added).

⁸⁸ Ibid, 307n1.

⁸⁹ Ibid, 212/36-40.

⁹⁰ Ibid, 307n1.

⁹¹ Poinsot 1632: DPC 8/31-32.

⁹² Ibid, 7/35.

power, yet the operation does not accomplish the union [between the instrumental sign-vehicle and the knowing power] representatively, because ... it is a union in the mode of a tendency toward the object from the side of the power, not in the mode of a form substituting for the object". ⁹³ External sense cognition, rather, ⁹⁴

on account of its imperfection and materiality, can attain neither itself nor [even] the accidents that are independent of sensation, but **only** objects as here and now physically acting upon the sense.

And yet, this is all that is required to undercut the simulation hypothesis, which holds that there are no such objects, as physically present things, ⁹⁵ acting upon the senses.

4.6. Reception of the Species Impressa

In the terminology of John Poinsot, whatever is contained in an "expressed specifying form" (which, in fact, is all of our intellectual and perceptual knowledge) is derivative in some way from various "impressed specifying forms" (but only inasmuch as related to the origins of our cognition). The impressed specifier is synonymous with that which is received by external sense impression. The reception of a *species impressa* (impressed specifier) constitutes a "simple apprehension", which cognizes infallibly with respect to its proper object as conveyed by the impressed specifier. It is important to note, however, that one never really **knows** anything from a *species impressa* alone, since there must always be a subsequent **expression** to truly know anything. An impressed specifier

⁹³ Poinsot 1632, TDS 267/43-46, 268/1-2.

⁹⁴ Ibid, 86n16 (emphasis added).

⁹⁵ "Thing" in the Latin sense of *res*, meaning that which exists independently of cognition, whereas "object" means that which exists as cognized (hence, "not all things are objects and not all objects are things, but rather **to be a thing** is to exist regardless of whether or not something is cognized, whereas **to be an object** is to be precisely as cognized – perhaps also as a thing, but perhaps not."). Kemple 2018: *The Intersection of Semiotics and Phenomenology*, 16 (emphasis added).

"represent[s] ... to a cognitive power in order that a cognition [as a whole] might be produced ... [whereas] an expressed specifier represents both to the [knowing] power and to the cognition [as a whole], because it is a terminus of the cognition and it is also a form representing to the very cognition." ⁹⁶

The simulation hypothesis presupposes an erroneous atomistic view of sensation, one in which the aspects of the physical environment received and coordinated by the various external sense faculties (in the form of impressed specifiers) are somehow susceptible to artificial replication or reproduction. Traditionally, there are two versions of the simulation hypothesis, one in which we are purely simulated beings (i.e., there is no base, non-simulated level of reality), and the other in which we are real human beings existing at some base level reality, but wherein our sensations are artificially determined through stimulation by some sort of technological manipulation that makes our simulated perceptual awareness indistinguishable from a veridical perceptual awareness. The former case, in which we are purely simulated beings, would render the reality of cognition as experienced unintelligible, since there would be nothing to ultimately ground the objects of one's experience, and there would be no reason why any particular act of cognition should follow another in a coherent, continuous manner (despite the fact that this undeniably does occur). Moreover, it would entail an infinite regress and lack of any ultimate metaphysical grounding. In the latter case, in which our sensations are artificially determined/stimulated by some sort of technological manipulation while our actual bodies exist at some base level reality, this situation would likewise be unintelligible and metaphysically impossible, since it presupposes a view of cognition contrary to experience and insufficient in explanatory scope. It is true that whatever is contained in any **expressed** specifying form is derivative in some way from a multitude of different **impressed** specifying forms, but it is only true inasmuch as it relates to the **origins** of our cognition (i.e., external sensation), and the external senses are only receptive to the species impressa of the surrounding physical environment, which are imbued with form and rendered intelligible. There are plausible situations wherein the

⁹⁶ Ibid, 234/11-16 (emphasis added).

species expressa of one's cognition might not strictly correspond to the species impressa giving rise to that cognition, such as happens when one makes a perceptual error or when there is a deficiency in the operation of the internal senses, but the sort of global skepticism posited by the simulation hypothesis simply ignores the reality of how we experience things altogether. Rather than conform to reality as experienced and as known upon intellectual reflection, a superfluous and fanciful hypothesis is concocted to explain away the mindindependent reality of one's experiences. While perceptual errors and internal sense deficiencies are possible, it is not possible for an external sense faculty to ever be mistaken about its formal object. However, there can be faults in the sense organ itself, meaning, one's judgment about the object might be wrong, but one's sense impression of it is not wrong or mistaken as such. As Poinsot asserts, "the external senses must receive forms of specification from objects ... [so,] if the objects are not present to the very senses, [then] they cannot stimulate them and produce specifying forms. Therefore at least for this [the production of an intelligible experience] the **physical presence** of an object is required."97

If sensation, the very origin of **human** experience, were as simple as a matter of input/output, and human cognition did not also involve perception and understanding, then perhaps it would be possible to "simulate" a virtual world for someone by stimulation of the external senses. However, in addition to neglecting the ever-present influence of the two higher levels of human cognition (perception and understanding), this once again assumes an atomistic view of sensation and a materialist view of reality. By contrast, Poinsot recognizes, in addition to material reality, the existence of an intentional mode of being (*esse intentionale*) (i.e., an immaterial form of existence) as that which is necessarily presupposed in order for objective knowledge to occur at all, while simultaneously acknowledging the very real physical changes that take place in nature. This necessity of *esse intentionale* was insightfully described by Jacques Maritain (1882–1973):⁹⁸

⁹⁷ Ibid, 310/15-19 (emphasis added).

⁹⁸ Maritain 1959: The Degrees of Knowledge, 121.

we are forced, if we are to conceive of knowledge without absurdity, to introduce the notion of a very special kind of existence, which the ancients called esse intentionale, intentional being, and which is opposed to esse *naturae*, i.e, to the being a thing possess when it exists in its own nature. For after all, the scandals suffered by the principle of identity can only be apparent, and it is certain that, if it is proper to the knower to be another thing than it is, we must needs, to avoid absurdity, distinguish two ways of having existence; we have to conceive of an esse that is not the proper act of existing of the subject as such or of its accidents. In what manner is the knower the known? It cannot be what it is not in virtue of its own natural being. How does the thing known exist in the knower? The tree or the stone does not exist in the mind, according to its natural being. Another kind of existence must, then, be admitted; an existence according to which the known ... will be in the knower and the knower will be the known [in] an entirely tendential and immaterial existence, [an existence] whose office is not to posit a thing outside nothingness for itself and as a subject, but, on the contrary, for another thing and as a relation. It is an existence that does not seal up the thing within the bounds of its nature, but sets it free from them. In virtue of that existence, the thing exists in the soul with an existence other than its own existence. As Cajetan tells us, intentional being is there as a remedy for the imperfection essential to every created, knowing subject, to wit, the imperfection of possessing a limited natural being and of not being, of itself, everything else.

Poinsot says that an impressed specifying form has two dimensions, namely: "[1] to inform entitatively or physically, and this pertains to a specifier materially as what it has in common with all other accidents [i.e., determinations of subjectivity]; and [2] to inform intentionally, that is, as the form is representatively one with the object, and in this way the object informs intentionally in the same order as the specifier, that is to say, **formally**, even though the object is outside and the specifier is inside the cognitive power."99 The

⁹⁹ Poinsot 1632, TDS 183/41-49; 184/1 (emphasis added).

production of the impressed specifier therefore **always** occurs in a twofold manner: (1) that of the efficient producing cause (a material, natural immutation/change) and (2) that of the objective specification (an immaterial immutation/change). In the case of a natural immutation, a change is rendered in something according to its entitative, physical being (i.e., something is physically affected by imposition of a new internal determination from something extrinsic), whereas in the case of an immaterial immutation, a change is introduced which nevertheless does not destroy or replace that which was present before. Note, moreover, that even though these two types of immutation coincide in the impressed specifier, either of them may nevertheless exist without the other (otherwise, as absurd as it sounds, if every natural immutation entailed an intentional immutation, then even rocks would be knowers!). 100

Each of us at every moment is undergoing a diverse multitude of natural immutations upon our sense faculties which nevertheless are not rendering any intentional immutations actual (and thus do not arise to the level of impressed specification); intentional immutation requires something further to be made actual, namely, the act of attention (a mode of objectivization). And it is in the extrinsic specifying causality of this objectivization that the esse intentionale of an intentional immutation consists. Poinsot says that "it is true that a form of impressed specification is a representative similitude of an object, but in the mode of a principle of cognition, not in the mode of a formal awareness ... [and] for this reason [the impressed specifier] is called a virtual similitude."101 Hence, Poinsot identifies impressed specifiers with the intentional reception of the object's being, "whence arises a formal similitude and formal awareness." 102 Note well, however, that the mere presence of the impressed specifier does not suffice to make **cognition** (in the sense of formal awareness) actual; if it did, as Kemple mentioned in a seminar lecture delivered at the Lyceum Institute, that would make our cognition always reflective upon its own principle (meaning our

¹⁰⁰ 1266-68: ST Ia, q.78, a.3, c.

¹⁰¹ Poinsot 1632: *TDS*, 258/40-45 (emphasis added).

¹⁰² Ibid, 258/46.

knowledge would only ever be of past experiences of something previously impressed upon, and we would, effectively, live within our own minds).

The aforementioned twofold manner in which impressed specifiers inform cognition at the level of sensation ensures the integrity of human cognition, ruling out the possibility of a materialist dystopian reality wherein the simulation hypothesis is true. Note, however, that a "specifier" is an objective/formal, rather than an effective/efficient, type of cause. As Poinsot points out, "it does not pertain to a specifier to effect anything with regard to an object, but only to be surrogated (substituted) in the place of that object and render it united with and present to the cognitive power, which function bespeaks nothing of efficiency, but only imitation or similitude, which is reduced to the order of a formal cause whereby an object is rendered knowable and proximately habilitated to the power itself". 103 Even though the stimulus object does not itself undergo efficient causation, the object signified does presuppose an efficient cause at the physical/entitative level, since "the cognitive powers ... cannot be moved by objects unless those objects are impressed on the cognitive powers and specifying forms are **effectively** produced." Therefore, unless one is willing to deny that human cognition does in fact occur (as is evidenced by every waking moment of our existence), one must refuse to accept the simulation hypothesis as a plausible explanation for the world we experience, since the hypothesis presupposes a materialist view of reality that does not allow for an intentional mode of being.

4.7. Demonic Manipulation, Simulation Hypothesis, and Descartes' Evil Demon

While Poinsot and other Latin Age thinkers did not consider issues such as "the simulation hypothesis" *per se*, they did consider demonic manipulation of the senses. These considerations were not contemplated in the "evil demon" sense upon which Descartes infamously opined (although his thought experiment likely played no small role in contributing to the seeming plausibility of the modern-

¹⁰³ Ibid, 201n21 (emphasis added). This is what Poinsot calls a "stimulus object".

¹⁰⁴ Ibid, 172/22-24.

day simulation hypothesis), but they were instead considerations of the sort of demonic manipulation caused by actual demons (i.e., fallen angels). Demons, according to the traditional teaching, are not capable of direct manipulation of the intellect or the will, but they are capable of manipulation of man's interior sense faculties. Furthermore, by virtue of being purely spiritual beings, they possess a certain dominion over corporeal matter (thus explaining how angels in the Old Testament were able to appear to people under the guise of physically present human beings).

Descartes' evil demon hypothesis is just as implausible as the simulation hypothesis (if not even more so) because Descartes posits a demonic manipulator with the power of sheer creativity. By creativity, I do not mean artistic creativity, but rather the capacity to bring the nature of something into being or change the nature of a thing's being. This sort of creativity is a logical impossibility, since it implies that the evil demon operates outside the realm of logical possibility, having the ability to alter the very nature of certain immutable truths. For example, it could make 2 + 2 = 5 in reality, despite the appearance to us of it being otherwise. Hence, it would require even logical possibility to be otherwise than it actually is. In reality, however, demons lack such creativity, but they can manipulate the appearances of things. A demon can even deceive one's judgment as to particulars, such as one's sense-perceptual judgment of the physical presence of a specific object, but it cannot manipulate one's apprehension of universals (which are cognized by the intellect), except incidentally. Nevertheless, the demon must work within the nature it possesses and the nature of the corporeal beings it manipulates. In any case, it is important to realize that we do not really know the specific means by which demons do this. Moreover, demons do not operate unrestrained; the manipulation by any demon is only ever carried out under God's divine providence and allowance thereof. Because we are not purely immaterial beings, we cannot properly grasp the nature of the relevant causes as those causes are immaterial, but rather we can only infer possible explanations from the effects.

When a demon manipulates the outward appearance of something, one of two things is usually happening. The demon is either (1) manipulating the internal senses of the human being ("[eliciting] an imaginative seeing which considers or adjudges itself to see externally, to the extent that specifiers inwardly existing stimulate the organs of sense"); or (2) manipulating the physical environment in which one cognizes a given thing (e.g., by manipulating light as it reaches the human eye) ("[eliciting] of an external seeing"). ¹⁰⁵

With respect to manipulation of the internal sense powers, the manipulation usually causes one to imagine the presence of something which is not actually physically present. This sort of manipulation is always local (affecting our judgments of particulars rather than our apprehension of universals) and does not inhibit the operation of one's external senses. The external senses, by definition, are indefectible with respect to their proper objects and incapable of being deceived in themselves. According to Poinsot, this "comes about through the stimulus of the specifying forms or icons which are in the spirits¹⁰⁶ of the imaginative power, descending all the way down to the external organs, with the result that the imaginative power seems thence to be moved, [making] something ... appear to be seen." 107 Poinsot is not saying that the external senses are somehow mistaken as to their proper object or manipulated in themselves, but rather that the object itself as presented to the external senses by the imagination has already been subjected to manipulation. By contrast, when there is an actual physical defect in a sense organ (which might lead one to interpret their environment very differently), rendering the external sense faculty incapable of receiving its proper object, there is an obvious physical reason for the defect and no actual deception occurring. The judgment one makes consequent to the reception of the *species impressa* would be mistaken with respect to the object, but it would still be based upon natural (and therefore, mind-independent) signifiers. For example, in the case of someone who has "floaters", which are small flecks of collagen that occasionally cause dark shapes to float across one's vision when one's vitreous fluid changes its thickness, the external senses would not be deceived

¹⁰⁵ Ibid, 322/22, 23-24.

¹⁰⁶ See footnote 76.

¹⁰⁷ Ibid, 323/4-12.

when a dark and shadowy figure suddenly appears in the person's peripheral vision, but there very well could be a mistaken judgment of the internal senses consequent to the external sense reception. The imagination (one of the internal sense faculties) would be "deluded or moved by taking itself to see things which it does not see". The external senses, however, whether affected by a physical defect or presented with an object by the imagination, are never mistaken with respect to their proper object. The very nature of external sensation precludes the possibility of manipulation at this most basic level of cognition, whether the manipulation be demonic or technological.

According to Poinsot, as for the second manner in which demons can manipulate the outward appearances of things, "there is always some change in the environment or in some outside body, by a disturbance of the air there and the appearing of color ... [or] whenever visible things are seen multiplied by a refraction of specifying stimuli." 109 Hence, in this form of manipulation, one is still interacting with the physical environment (something which is not the case under the simulation hypothesis). This form of demonic manipulation therefore has no direct bearing upon the simulation hypothesis, since the simulation hypothesis does not even grant that one attains any external objects in the physical environment through the external senses, whereas this form of manipulation grants that the external senses are in contact with things as existing in the physical environment but posits some sort of manipulation of the matter of the physical environment (rather than of the external senses), making something to appear other than it actually is. Moreover, it would be contradictory "for a thing to be known by the sensing and experiencing of an external sensation (which differs from an imaginative sensation), [if it did not attain] something external in its external self and not as formed within the sense."110 These points show how the experiential nature of external sensation as attaining things in their external selves precludes the possibility of the simulation hypothesis.

¹⁰⁸ Ibid, 322/46-47.

¹⁰⁹ Ibid, 322/31-34, 322/43-44.

¹¹⁰ Ibid, 322/14-19 (emphasis added).

In helpful summary fashion, Poinsot put the matter thus:¹¹¹

when we say that the physical presence of the object is necessary, we are speaking in a formal sense, that is, of that which it properly and immediately possesses as object, such that it can well happen that in place of some object another is supposed, on which sense is actually borne, and the interior judgment is deceived thinking it to be another, yet the external sense in spite of this is borne onto *that external thing which is presupposed for sensation*. Similarly, sometimes a person can be deceived or deluded by the force of the imagination into thinking he truly sees or senses outwardly some thing which does not have a present existence. But in such a case the person neither sees outwardly nor senses outwardly, but fancies that he senses or sees. We are speaking of the case therefore when external sense truly and properly elicits an act; and of this case we say that the essential postulate is that **the exterior object on which sensations bears**, in which such an act is immediately terminated, **is physically present**.

5. Reflexive Cognition and Some Objections

When one explicitly comes to know that he is **not** living in a simulation (i.e., that he is not being globally deceived in his experience of reality), he does so by means of a reflexive, as opposed to a direct, cognition. A reflexive cognition makes use of a "reflexive concept", meaning a concept by which one knows oneself knowing ("a concept of another concept"), whereas a direct concept refers to a concept by which one knows any object aside from that very concept/knowing. ¹¹² As Poinsot states, "a **direct concept** is a similitude **of an object**, whereas a **reflexive concept** is a similitude **of the very concept** or of an act or of a power. ²¹¹³ In either case, the concept involved is a formal sign-vehicle. In fact, every single act of awareness requires the use of a formal sign. A formal sign is "the awareness itself

¹¹¹ Ibid, 307-08n2 (emphasis added).

¹¹² Ibid, 328/33.

¹¹³ Ibid, 328/5-7 (emphasis added).

or concept of a thing".¹¹⁴ Notably, when one reflects upon this fact, one realizes that it is impossible to provide a concrete example of a formal sign when asked, because everything we signify to one another is signified proximately by means of some instrumental sign. Any example produced would end up using some instrumental sign-vehicle, such as a word, image, or other phantasmal attachment, each of which is known objectively first rather than formally. This is so because the concept is "the inhering form by which an object is known, yet it is not itself an object endowed with that intelligibility which is required for our understanding, namely, intelligibility in the mode of a sensible essence."¹¹⁵ Moreover, given that "our understanding and its act are not objectively understandable in this life [but rather] are formally present", the veracity of one's knowledge regarding the very nature of cognition and its relationship to reality is the sort of thing one comes to know in this life only reflexively rather than directly.¹¹⁶

Cognition, properly speaking, is "an assimilative action by a power productive of an expressed specification." The "expressed specification" is simply "the concept". The "assimilative action by a power" refers to an impressed specification upon one's external senses, which is subsequently processed by the internal senses. This is then "productive of an expressed specification" first by the coordination of individual impressions into a sufficiently presentative phantasm, such that the agent intellect then produces of that expression a *species impressa intelligibilis*, and then by a similar such coordination at the level of the intellect, which results in the production of a *species expressa intelligibilis* (the concept). One can have a certain *species expressa intelligibilis* when thinking about the simulation hypothesis, for example, since the hypothesis proposes an explanation for the way in which one experiences reality and therefore presents an intelligible formal object for the

¹¹⁴ Ibid, 223/16-17.

¹¹⁵ Ibid, 331/29-33. In other words, human beings know things necessarily under the guise of some sensible essence (the "material quiddity" of a thing).

¹¹⁶ Ibid, 325/24-27 (emphasis added).

¹¹⁷ Ibid, 170n6.

intellect to grasp (although not a true one, in the sense that it does not adequate with reality). A reflexive concept, however, is used to judge whether the formal concept employed to cognize the simulation hypothesis reflects the way reality actually exists mind-independently. This sort of reflexive cognition also allows one to verify whether the object of one's cognition is the result of some grand illusion. By logically resolving my experience to its origins in the physically sensed environment (returning "to the things themselves"), I am able to verify that my experience is in fact externally-oriented and in contact with a physical, "base level" reality.

5.1. Ens Primum Cognitum and Infallible Cognitions

One might object, however, that it is not necessary to assume that the impressed specifications of one's objective experience are rooted in a physical reality outside of oneself. In order to sustain this objection, one must forfeit the ability to intelligibly ground human experience in a coherent manner. All experience is objective, and the proximate presupposition to this objectivity is **inter**subjectivity. In order for anything to become an object, in the sense of being in relation to a knowing power (i.e., something "as cognized"), there must be real differences of subjectivity anteceding that objectivization. In order for objective specification to occur (as it undeniably does), that which is signified (the terminus of the relation) must differ in its subjectivity from that to which it is signified (i.e., the knowing power of the one experiencing). It is always from other subjects, as subjects, that there originally arises objective relational fundaments whereby one's cognitive powers are stimulated and thereby determined; an extrinsic, subjective (mind-independent) being from which provenates a specificative causality (functioning as a stimulus object) is necessary for the determination of our passive faculties (namely, our external senses). In other words, these subjective determinations require the real relation of intersubjectivity in order that objectivity might come about in the first place.

¹¹⁸ Or, to borrow a phrase from Deely, "hardcore reality". 2009: *Purely Objective Reality*.

Representations to oneself of something other than oneself require, in principle, a prior contact with what is other than the knower, first in the partial representations to oneself of things as objects sensed, and subsequently as represented to oneself in perception and understanding. 119 Ens primum cognitum ("being as first known") is a key Thomistic concept for man's experience of reality. It describes the human being's recognition that being, as known by the human being, is somehow irreducible to oneself. Notably, however, it presupposes the activation of cognition via external sensation. As body-soul composites, ens primum cognitum governs all of our awareness. Things come to be known by us in a world which is objective first of all; something must be an object first in order for it to be known at all. Objects, however, presuppose the action of signs, and the action of signs presupposes the reality of relations—and ens primum cognitum, which underlies all awareness, presupposes the presence of at least one real relation, namely, the irreducibility of the object of knowledge to one's experience of it.

The human understanding is, as noted by Poinsot, 120

[neither] its own act of understanding [as is the case for God], nor is the first object of its act of understanding its own essence [as is the case for the angels], but the first object of human understanding is something extrinsic, namely, the nature of a material thing ... and the very act by which a material object is known is known secondarily, and through the act is known the intellect itself of which the very act of understanding is the perfection.

As for the object signified by being as first known, it is a kind of potential, allencompassing vagueness that does not designate any specific, precise object. Ens primum cognitum is always known "as concrete and imbibed in some determinate thing," but its formal object is absolutely indeterminate in every possible way (except for the fact of it being irreducible to one's experience of it, i.e., "the very

¹¹⁹ Deely 2008: Descartes & Poinsot: The Crossroad of Signs and Ideas, 80.

¹²⁰ Poinsot 1632: TDS 326/9-33.

fact of [the thing's] existence"). 121 It is into being as first known that one ultimately resolves the coherence of one's experience and in which the categories of mind-dependent and mind-independent being are experientially indistinct; the primary recognition at this base level of cognition is the possibility of questioning as such and distinguishing between mind-dependent and mind-independent being. How does all this discussion of *ens primum cognitum* relate to sensation? According to Poinsot: 122

the sense first and through itself respects accidents, upon which depends the individuation of the quiddity [the essence], while the intellect first and through itself respects the quiddity which is connoted and designated by such accidents and individuation, and therefore it is able properly and distinctly to grasp those [conditions of singularity], but nevertheless not immediately and directly.

In other words, there is a dependence of one form of cognition (the intellect) upon the other (the senses), and even though we do not directly **know** singulars **intellectually**, those singulars are still objects of our understanding, as seen under the light of the intellect (and it is the intellect which resolves things to being as first known).

Interestingly, being as first known is the **only concept** which we can know infallibly. **Simple apprehension** is also infallible, but conceptualization and apprehension are two different things. Our concepts, generally speaking, unlike simple apprehension, **can** be wrong (e.g., by being false in terms of their definition) because composition and division, which are both fallible, are involved in every operation of the mind. Being as first known is an exception to this rule because it is the only concept which does not involve composition or division. Simple apprehension is the reception of a *species impressa* discussed earlier. Neither *ens primum cognitum* nor simple apprehension involve the cognition of contentful, meaningful experiences on their own. They are, rather, what all of our

¹²¹ Poinsot 1632: DPC 11/32, 12/10-11.

¹²² Ibid, 29/14-21.

contentful, meaningful experiences presuppose. Generally speaking, even though the "connatural mode of proceeding which belongs to our intellect is to proceed from potency to act, and from the imperfect to the perfect", the way this plays out in actuality is usually not quite so linear. ¹²³ Instead, *ens primum cognitum* and external sensation, the former in its function as a logical instrument for resolving the coherence of one's objective awareness and the latter in its function as experimentally verifying the origins of the objects of one's awareness, both involve a sort of back-and-forth recursiveness. It is when people cease to realize this that they form erroneous habits of understanding and concepts that do not resolve back coherently to the mind-independent actuality of whatever it is from which they originated. Skeptical scenarios such as the simulation hypothesis only begin to look plausible when one fails to resolve one's experience back to being as first known.

5.2. Avoiding Skeptical Pitfalls of a Representationalist Theory of Knowledge

One might further object that the scheme of signification outlined above suffers from the same skeptical pitfalls as does a representationalist theory of knowledge. This objection, however, is mistaken, since it misunderstands the nature of signification and intentionality involved in cognition. A truly representationalist theory of knowledge is prone to perceptual skepticism because it holds that knowledge is only ever of the images/ideas of things (rather than the things themselves), as they are formed in our minds. Clearly, this is antithetical to the idea of resolution to the things themselves in external sensation that was discussed above. Nevertheless, one might mistake the triadic nature of signification involved in cognition for a "mirror-image" sort of cognition, whereby the sign-vehicle of formal awareness somehow impedes true knowledge of the object signified (the thing itself), the thing itself being merely "represented" by the sign-vehicle and the representation incapable of being verified as an accurate representation thereof. Poinsot, however, points out that "a concept does not

¹²³ Ibid, 13/16-18.

make cognition mediate."¹²⁴ Instead, "something is said to be known equally immediately when it is known in itself and when it is known by means of a concept or awareness."¹²⁵

For any object of cognition to truly remain an object distinct from the one experiencing it as an object, it must be conveyed to the knowing power without losing its distinct identity. And, as Poinsot makes clear, "since the object cannot go into the power and be united thereto of itself, it is necessary for this to come about by means of some form, which is said to be a specifying form". 126 The specifying form, in turn, "contains the object itself in an intentional and knowable mode [such] that it can render that object present and united to a cognitive power."127 This specifying form, as it relates to intellectual awareness, is none other than the concept itself. And the concept, according to Poinsot, "is the very object itself in intentional being [or, 'knowable existence']."128 From its very nature, the concept "acts as the vicegerent of an object", it is a pure means (a "means-in-which", to be specific). 129 Moreover, this does not "constitute a mediate cognition, because it does not double the object known nor the cognition ... [it is rather] a means representing an object ... as one intrinsic and forming the cognitive power." 130 This is because "an object is rendered present or represented to a power not from itself immediately, but by means of a concept or expressed specifier."131 Therefore, given the direct manner in which we know reality and the intentional form of existence presupposed by our knowledge of it, the simulation hypothesis loses its appeal as an explanatory model for our experience.

¹²⁴ Poinsot 1632: TDS 224/1-2.

¹²⁵ Ibid, 223/27-29; 224/1.

¹²⁶ Ibid, 254/7-10.

¹²⁷ Ibid, 254/11-13 (emphasis added).

¹²⁸ Ibid, 254/19.

¹²⁹ Ibid, 254/18.

¹³⁰ Ibid, 224/33-37.

¹³¹ Ibid, 225/5-8 (emphasis added).

6. Conclusion

In light of the above, what then are we to make of the simulation hypothesis? Clearly, as a hypothesis, it is false (and, better yet, metaphysically impossible). In the actual, physical reality in which we live, however, the simulation hypothesis (qua hypothesis) is a mind-dependent being, since the simulation does not exist entitatively in the manner in which the hypothesis supposes it does, but it is still nonetheless posited as a hypothesis. It is an enunciation which may be logically coherent in some way (i.e., there is no logical contradiction in the assertion of it) but which asserts something that is metaphysically impossible. One's ability to conceive of things is always measured by the things themselves, not the other way around. As Poinsot put it, the fact that "something can be considered positively, even if it does not exist entitatively independently of mind, is proper to relation ... a mind-dependent entity is a true relation [though] not by the truth of an entity and of an informing form, but by the truth of an objective and positive tendency toward a term." ¹³² A hypothesis, however ridiculous and despite being metaphysically impossible, can still be an object for our cognition. As a minddependent being, it can still be coherently resolved to being as first known (qua hypothesis), but it **cannot** be coherently resolved in the order of entitative, mindindependent being.

As human beings, we have a natural inclination and ability to employ signs, even before we consciously become aware of them as signs. We are semiosic in the very depths of our being¹³³ and at all three levels in the hierarchy of human cognition. While one may trace the origins of one's experience to that which was received in external sensation, one can never trace the process of semiosis itself back to an identifiable first point in time (even prior to one's own existence, there is going to be some sort of antecedent semiosic activity, both in nature and in the very parts that come to constitute one as a human being).

¹³² Ibid, 95/34-42.

¹³³ Or, as Charles Sanders Peirce (1839–1914) once wrote, "man is a sign". 1868: "Some Consequences of Four Incapacities", 54.

It is important to be mindful in any consideration of man's knowledge of reality that we realize we are not related to our objects of cognition so as to totally and exhaustively comprehend them. Our comprehension of objects, even those present in our physical environment, is only ever partial and incomplete. Moreover, even though our knowledge of things may progressively increase, one will never be able to resolve the entirety of one's knowledge thereof in a wholly, absolutely precise manner. Such a process would require that we mentally separate every single part of a given substance, properly distinguishing everything which belongs to it in actuality, and this is something both impossible and improper to us as human beings. That being said, we do have an experimentally verifiable contact with physical, mind-independent reality, and we can in fact have a reliable knowledge thereof, however provisional and incomplete. That is our lot as finite human beings—neither radical skepticism nor apodictic certitude, but a finite share in the knowledge of God's creation, originating in external sensation and resolving to being as first known.

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