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HOBBS STUDIES 27 (2014) 61-79

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Hobbes and the Phantasm of Space

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Abstract

This essay examines Hobbes' philosophy of space, with emphasis placed on the variety of interpretations that his concept of imaginary space has elicited from commentators. The process by which the idea of space is acquired from experience, as well as the role of nominalism, will be offered as important factors in tracking down the elusive content of Hobbes' conception of imaginary space.

Keywords

space – phantasm – nominalism – body

In contemporary scholarship dedicated to the analysis of the concepts of space, time, and motion in the seventeenth century, Thomas Hobbes' important role in the development of these concepts is generally underappreciated. Although Hobbes played a major part in the overthrow of the Scholastic legacy of spatiotemporal notions that had continued to dominate discussion well into the beginning of the century, it is hard not to conclude, from our contemporary vantage point, that his effect on the course of the development of the new ideas associated with space and motion has turned out to be fairly indirect. For instance, while many later philosophers were stimulated to varying degrees by Hobbes' work, and many of his unique contributions could be seen as adaptations on then current "mechanical school" approaches to natural philosophy, such as Descartes' program, Hobbes' own theory of space is much less well-known than either Descartes or Leibniz' theory. Nonetheless, there are many distinctive features associated with Hobbes' concepts that differ from the work of other seventeenth century philosophers, and thus a full

accounting of the rise of the new physical conception of the world would be incomplete without an assessment of his many novel hypotheses.

In this essay, we will provide an exploration of Hobbes' theory of space as presented in his major work on natural philosophy, *De corpore* (1655), as well as from other sources from the 1640s and later. The main emphasis will be placed on the notion of imaginary space and its ancillary concepts, such as phantasms and the imagination, as well as on the role that empiricism and nominalism play in the development of the imaginary space hypothesis.¹ Although our investigation will compare and contrast Hobbes' ideas with those of several predecessors, contemporaries and successors, an historical reconstruction of the genesis of his concepts is not the intended goal. Unlike, for example, Leijenhorst's fine study,² which specifically attempts to relate Hobbes' doctrines to developments in late Scholasticism, our inquiry will rather strive to shed some light on the problems associated with the concept of imaginary space, and the manner by which Hobbes reckons that imaginary space is obtained from our experience of the world. As will be seen, this particular aspect of Hobbes' theory of space poses the greatest challenge to commentators, and has elicited many divergent interpretations. One of the main goals of this study, in fact, is to document these different interpretations of Hobbes' theory of space, a divergence that almost certainly stems from the complexities involved with the cognitive functions implicated in his conception of imaginary space. A lengthy examination of the details of Hobbes' hypotheses concerning space will occupy much of section I, with section II taking up the interpretive task in greater proportion.

1 Phantasms and Imaginary Space

Hobbes launches his major treatise on natural philosophy in Part II of *De corpore* with a, for lack of a better term, "thought experiment" involving the complete annihilation of the material world, save for a single person. He concludes that "the memory and imagination of [bodily] magnitudes, motions, sounds, colours, &c. as also of their order and parts", would be retained by the man, but

1 Thomas Hobbes, *Elements of Philosophy, The First Section, Concerning Body in The English Works of Thomas Hobbes of Malmesbury*, 11 volumes, ed. Sir William Molesworth (London: John Bohn, 1839), vol I. Abbreviated as [EW], with volume, page number. Latin passages are from Thomæ Hobbes, *Thomas Hobbes Malmesburiensis opera philosophica quæ latine scripsit omnia*, ed. Sir William Molesworth (London, 1845).

2 C. Leijenhorst, *The Mechanisation of Aristotelianism* (Leiden: Brill, 2002).

adds that “[a]ll which things, though they be nothing but ideas and phantasms, happening internally to him that imagineth; yet they will appear as if they were external, and not at all depending on the power of the mind”.³ Interpreted as a general philosophical methodology, the assumption of a world devoid of body is not in itself a novel exercise, since these annihilation exercises had a long pedigree prior to Hobbes. Yet, it is unlikely that any later natural philosopher would ever again place such a strong reliance on this form of thought experiment to derive the general properties of space and place. He goes on to draw the following conclusion employing this methodology:

If therefore we remember, or have a phantasm of any thing that was in the world before the supposed annihilation of the same; and consider, not that the thing was such or such, but only that it had being without the mind, we have presently a conception of that we call *space*: an imaginary space indeed, because a mere phantasm, I return to my purpose and define *space* thus: *SPACE is the phantasm of a thing existing without the mind simply*; that is to say, that phantasm, in which we consider no other accident, but only that it appears without us.⁴

Hobbes’ famous (or infamous) line, that space is a phantasm of a thing that exists outside the mind, is open to a number of different interpretations, needless to say, not the least being how to understand his meaning of the term ‘phantasm’. Thus far, a host of mental items, so to speak, have been mentioned in the context of his theory of space: ideas, memories, imagination, conceptions—all somehow tied to the phantasm of space.

1.1 *Sense, Imagination, and Understanding*

Before proceeding to explore the details of Hobbes’ theory of space, it is imperative to briefly examine the general cognitive processes assumed in his natural philosophy. By this means, the significance of his claim that “space is a phantasm” may be better obtained.

In Part IV of *De corpore*, Hobbes specifically defines many of the cognitive terms mentioned above with respect to their general psychological and perceptual function. As pertains to sensation, he comments that “SENSE is a phantasm, made by reaction and endeavor outwards in the organ of sense, caused by an endeavor inwards from the object, remaining for some time more or less”.⁵

3 Hobbes, *Concerning Body* II.7.1, 91–92.

4 Hobbes, *Concerning Body* II.7.2, 93–94.

5 Hobbes, *Concerning Body* IV.25.2, 391.

Indeed, “phantasm” refers to sensations or sense ideas throughout this section of *De corpore*, and is coupled to the following explication of imagination:

But the object of the organ, by which a phantasm is made, is not commonly called sense, except the object be present. And the phantasm remaining after the object is removed or past by, is called *fancy*, and in Latin *imaginatio*; which word, because all phantasms are not images, doth not fully answer the signification of the word *fancy* in its general acceptation....

IMAGINATION therefore is nothing else but *sense decaying*, or *weakened*, by the absence of the object. But what may be the cause of this decay or weakening? Is the motion the weaker, because the object is taken away? If it were, then phantasms would always and necessarily be less clear in the imagination, then they are in sense; which is not true. For in dreams, which are the imaginations of those that sleep, they are no less clear than in sense itself.⁶

Phantasms, consequently, are inextricably entwined with sensation, since sense organs are the means “by which a phantasm is made”, with “fancy” and “imagination” correlating with the memory of sense perceptions, at least to some degree. The reference to motion in these passages refers to the motions in the sense organs themselves that bring about the sensations, or phantasms, and which are occasioned by the external objects that impact those organs. Nevertheless, since dreams are “the imaginations of those that sleep”, memory cannot be singled out as an entirely accurate rendition of Hobbes’ hypothesis of imagination either, for more is going on in the mind during a dream than a mere representation or re-display of previous sense perceptions; i.e., dreams incorporate an active recreation and elaboration of previous sense data. As a result, in addition to the interpretation of phantasms as decaying sense or memories, a second interpretation might be that phantasms also include illusions that the mind actively constructs.

Before leaving this topic, an intriguing historical resemblance of sorts to Hobbes’ hypothesis of imagination can be located in Hume’s concepts of an impression and idea, which launches his major work:

Those perceptions, which enter with most force and violence, we may name *impressions*; and under this name I comprehend all our sensations,

6 Hobbes, *Concerning Body* IV.25.7, 396.

passions and emotions, as they make their first appearance in the soul. By *ideas* I mean the faint images of these in thinking and reasoning;....⁷

Like Hume's understanding of an idea, which is "the faint image" of an impression, Hobbes argues that "the phantasms of things past are more obscure than those things present". In section II, the similarities between Hobbes and other philosophers will be explored in more detail, although an in-depth examination is beyond the bounds of this essay.

With both sense perception and imagination linked to phantasms, the nominalist streak in Hobbes' system next draws together imagination and the understanding. In various discussions in Part I of *De corpore*, Hobbes explains how language collects similar phantasms to form universal names, such that no separate active mental process of abstraction is required to form universal concepts: "names common to many things; and the conceptions answering to them in our mind, are the images and phantasms of several living creatures, or other things. And therefore, for the understanding of the extent of an universal name, we need no other faculty but that of our imagination, by which we remember that such names bring sometimes one thing, sometimes another, into our mind".⁸ Hobbes' use of the term 'phantasm' thus combines several mental faculties that many of his predecessors and contemporaries, not to mention his successors, would view as distinct cognitive functions. As he explains, "[men] err, which place some ideas in the understanding, others in the fancy; as if from the understanding of this proposition, *man is a living creature*, we had one idea or image of a man derived from sense to the memory, and another to the understanding".⁹ In what follows, it will be seen that much of the confusion evident in the various attempts by commentators to grasp Hobbes' concept of imaginary space stems from a failure to heed this many-sided cognitive component of his overall natural philosophy.

1.2 *Body, Accident, Real and Imaginary Space*

Having briefly explored Hobbes' cognitive philosophy, we can now return to the analysis of imaginary space. In order to draw further lessons about the status of space as a phantasm, and ultimately, the difference between real and imaginary space, it will be necessary to first delve into Hobbes' definition

⁷ D. Hume, *A Treatise of Human Nature*, ed. D. F. Norton and M. J. Norton (Oxford: Oxford University Press, 2000), 7. For a discussion of Hobbes' influence on Hume as regards a host of topics, see, P. Russell, *The Riddle of Hume's Treatise* (Oxford: Oxford University Press, 2010).

⁸ Hobbes, *Concerning Body* I.2.9, 20.

⁹ Hobbes, *Concerning Body* I.5.9, 61.

of body and accident. From the outset, body is tied to aspects of imaginary space:

Having understood what imaginary space is, in which we supposed nothing remaining without us, but all those things to be destroyed, that, by existing heretofore, left images of themselves in our minds; let us now suppose some one of those things to be placed again in the world, or created anew. It is necessary, therefore, that this new created or replaced thing do not only fill some part of the space above mentioned, or be coincident and coextended with it, but also that it have no dependence on our thought. And this is that which, for the extension of it, we commonly call *body*; and because it depends not upon our thought, we say is *a thing subsisting of itself*; as also *existing*, because without us; and, lastly, it is called the subject, because it is so placed in and *subjected* to imaginary space, that it may be understood by reason, as well as perceived by sense. The definition, therefore, of *body* may be this, *a body is that, which having no dependence upon our thought, is coincident or coextended with some part of space.*¹⁰

Many of the different cognitive faculties surveyed above, which are joined together in his single concept of a phantasm, can be seen at work here. His claim that, after the annihilation of body, those bodies “by existing heretofore, left images of themselves in our minds”, obviously supports the interpretation of “phantasm” as a perception of the observer. With his thought experiment involving the annihilation of body now finished, he proceeds to replace or “fill some part of [imaginary] space” with body, which he holds is “coincident and coextended with it”. Furthermore, body “depends not upon our thought”, since it subsists of itself, and is such that it is “subjected to imaginary space”. In this context, to claim that body is subjected to imaginary space, would seem to involve the abstractive aspect of his cognitive theory which groups phantasms under a common name, although a straightforward reference to memory may be the ultimate intention. To sum up, bodies are independent of the perceiver, but imaginary space, which is coincident with that independently existing body, is associated with the perceiver in diverse manners, since it is “understood by reason, as well as perceived by sense”.

Turning to accidents, space is, once again, the motivating concept, since his analysis is largely devoted to extension. He begins by noting that if “a body fills any space, or is coextended with it; that coextension is not the coextended

¹⁰ Hobbes, *Concerning Body* II.8.1, 101–102.

body”, nevertheless, he resists the conclusion that this coextension is anything that is independent of a given body, since “[t]hey are *accidents* of that body”.¹¹ Yet, what is an accident? Hobbes’ reply attempts to link accidents, at least in some fashion, to the perceptual/abstracted aspects of imaginary space just examined. After commenting that “most men will have it be said that *an accident is something*, namely, some part of a natural thing”, he replies that “[t]o satisfy these men, as well as may be, they answer best that define an *accident* to be *the manner by which any body is conceived*; which is all one as if they should say, *an accident is that faculty of any body, by which it works in us a conception of itself*”; and “I define an *accident* to be *the manner of our conception of body*”.¹² In other words, an accident is not a “something”, or a part of a thing, as various people would have it: rather, by contending that space, as an accident of body, can “work in us a conception of itself” in different ways, the suggestion would seem to be that there is more than one way that space can be an accident of body. Yet, if there is more than one way that an accident can provide a conception of itself, than an accident would seem to be dependent, to some extent, upon our cognitive capacities, a conclusion that several commentators have taken as supporting a phenomenological interpretation of imaginary space. In describing an accident as “the manner of our conception of body”, it thus becomes difficult to understand the exact difference between body and accident (more on this topic in section II).

Nevertheless, in contrast to this last suggestion, much in Hobbes’ treatment of accidents supports the standard substance/accident scheme that he inherited from the scholastics. He argues that “as magnitude, or rest, or motion, is in that which is great, or which resteth, or which is moved, (which, how it is to be understood, every man understands), so also, it is to be understood, that every other accident *is in* its subject”.¹³ Interestingly, not only are magnitude, rest, and motion “in” their subjects in accordance with the traditional subject-accident dichotomy, but Hobbes’ analogy would seem to leave open the possibility that there is little difference between the accident of extension, on the one hand, and the other accidents linked to body. But this last suggestion is not plausible either: after agreeing with Aristotle’s hypothesis that an accident is neither a part of the subject, and is such that the subject will continue to exist in the absence of the accident, he adds “that there are certain accidents which can never perish except the body perish also; for no body can be conceived to be without extension, or without figure” (we will return to the role of

11 Hobbes, *Concerning Body* II.8.2, 102.

12 Hobbes, *Concerning Body* II.8.2, 103–104.

13 Hobbes, *Concerning Body* II.8.3, 104.

rest/motion as an additional primary property in section II).¹⁴ This observation comes close to, but is not identical with, Descartes' conceptual distinction between space and body: "the same extension which constitutes the nature of body also constitutes the nature of space, and that these two things differ only in the way that the nature of the genus or species differs from that of the individual".¹⁵ Hence, despite hinting towards phenomenalism as regards bodily accidents (i.e., as they pertain to our cognitive faculties), and an apparent blurring of the distinction between primary and secondary properties, the central importance of magnitude and motion in Hobbes' scheme would seem to undermine this more radical line of interpretation. We will return to these issues in section II.

Many of the distinct threads in Hobbes' analysis of space, examined above, come together in the next sections of *De corpore*: "The *extension* of a body, is the same thing with the *magnitude* of it, or that which some call *real space*. But this *magnitude* does not depend upon cogitation, as imaginary space doth; for this is an effect of our imagination, but *magnitude* is the cause of it; this is an accident of the mind, that of a body existing out of the mind".¹⁶ Real space, as the extension and magnitude of a body, "does not depend upon cogitation", and is regarded as a "peculiar accident of every body". Imaginary space, on the other hand, which is equated with place, is both "an effect of our imagination" and is *caused* by magnitude.

On the whole, Hobbes' detailed discussion of the manner by which imaginary space is obtained from real space fails to resolve many of the mysteries that have guided our investigation thus far, for it is still unclear what specific cognitive functions are involved, and how, in his notion of imaginary space (as "an effect of our imagination"). As noted previously, there are a number of alternatives from which to choose. First, imaginary space would seem to incorporate a method of *abstraction*, a process whereby the mind creates a generic idea of extended space from the experience of particular extended bodies. Hence, the faculty of the understanding would then correspond to Hobbes' term 'imagination' in this situation. Second, and less plausibly, imagination operates in a manner similar to the formation of such concepts as ghosts or unicorns, namely, as an illusion of sorts that the mind actively creates (i.e., which does not represent any actual thing or state-of-affairs, and is thus

14 Hobbes, *Concerning Body* II.8.3, 104.

15 René Descartes, *Principles of Philosophy*, trans. V. R. Miller and R. P. Miller (Dordrecht: Kluwer, 1991), II.11, 44. Citations from the *Principles* will designate by the part, section, and page number.

16 Hobbes, *Concerning Body* II.8.4, 105.

unlike abstraction, which has a grounding in the extension of real bodies). Third, as “an effect of our imagination”, Hobbes really intends to link the idea of imaginary space to a unique form of perception, and which involves memory; hence the operation of the imagination as regards space might actually be closer to the primary/secondary property distinction, with imaginary space playing the role of a distinct type of primary or secondary property, or even possibly as an anticipation of Hume’s distinction between an impression and idea. Many of Hobbes’ statements would seem compatible with several, or all, of these interpretations: e.g., body is “subjected to imaginary space”; extension is an accident of body, and an accident is “the manner of our conception of body”; “magnitude does not depend upon cogitation, as imaginary space doth”; bodies, after their annihilation, “left images of themselves in our minds”; etc. The guilty party in this, as it were, underdeterminism of the content of imaginary space is, undoubtedly, Hobbes’ nominalist-based approach to the mental realm—an approach wherein perception, memory, imagination, abstraction, and probably other cognitive categories, are all lumped together under the banner of “imaginary space”.¹⁷

2 Interpretations of Hobbes’ Imaginary Space

The interpretations offered by commentators as regards Hobbes’ notion of imaginary space runs the gamut in almost the exact proportion to the different appraisals of his unique cognitive-nominalist theory furnished at the end of section I. The following overview is not an exhaustive survey of these evaluations, but is merely intended to mark the different orientations alongside their various strengths and deficiencies.

2.1 *Abstraction*

First, there is the “abstraction” reading, as nicely explicated in Gaukroger’s recent monograph:

17 See, also, Y. C. Zarka, “First Philosophy and the Foundations of Knowledge” in T. Sorell (ed.), *The Cambridge Companion to Hobbes* (Cambridge: Cambridge University Press, 1996), 62–85; and, C. Leijenhorst, “Sense and Nonsense about Sense: Hobbes and the Aristotelians on Sense Perception and Imagination” in P. Springborg (ed.), *The Cambridge Companion to Hobbes’s ‘Leviathan’* (Cambridge: Cambridge University Press, 2007), 82–108. Also relevant is Hobbes’ early tract from 1642–1643, entitled, *Anti-White*. See, T. Hobbes, *Thomas White’s De Mundo Examined*, trans. H. W. Jones (London: Bradford University Press, 1976). Many parts of *Anti-White* were reworked for inclusion in *De corpore*.

Space [for Hobbes] is not only not absolute, it is not even something that acts as a container for bodies,.... Space is just a subjective frame of reference, not real in its own right. It is our awareness of body 'simply', that is, of body having no other attribute except that it is located somewhere. But, although body certainly exists outside of our minds, the space which body occupies is a purely mental construction. Space is a 'phantasm', a mental abstraction, an imaginary extension: it is the system of coordinates or external locations which the mind constructs out of experience and real extended things.... Space is, in short, 'privation of body'. The meaning of privation depends in the first place on our knowledge of body, and refers only to the possibility of body coming into being. Considered by itself, privation of body is a 'figment' or 'empty imagination'.¹⁸

Gaukroger's overview focuses upon the role of imaginary space as a "mental abstraction", or a "purely mental construction", which "the mind constructs out of experience". The function that space assumes in the annihilation thought experiments does seem to uphold the notion that it is a purely mental construction, at least in some respects, since the very act of pretending to discount the existence of body is a creative mental process, and hence it must rely on those more elaborate mental processes associated with abstraction. On the other hand, as we have disclosed, Hobbes' annihilation experiments rely on the claim that bodies, after their annihilation, "left images of themselves in our minds", and it is on this basis that he draws his various conclusions on the nature of space subsequent to their annihilation. Accordingly, the cognitive processes associated with phantasms, and hence memory, would seem to better fit the distinctive conclusions concerning space that Hobbes' extracts from his annihilation experiment. Abstraction, which must involve reason to a considerable degree, thus cannot be the main element in Hobbes' theory of imaginary space, even granting the fact that abstraction must form an element of his overall philosophy of space and natural philosophy.

Nevertheless, imaginary space does have a central feature that correlates with abstraction, at least to some degree, and this arises in connection with Hobbes' nominalist theory of language, briefly discussed in section I. Hobbes reckons that science is concerned with the application of general names in an elaborate process of syllogistic reasoning in order to determine the world's causal order and truths (with much of Part I of *De corpore* developing

18 S. Gaukroger, *The Emergence of a Scientific Culture: Science and the Shaping of Modernity* (Oxford: Oxford University Press, 2006), 285.

this theme).¹⁹ In his analysis of the immobility space, a critique of Descartes' notion of internal place²⁰ brings this aspect of Hobbes theory to the forefront:

For whilst one affirms that place is therefore said to be immovable, because space in general is considered there; if he had remembered that nothing is general or universal besides names or signs, he would easily have seen that that space, which he says is considered in general, is nothing but a phantasm, in the mind or the memory, of a body of such magnitude and such figure. And whilst another says: real space is made immovable by the understanding; as when, under the superficies of running water, we imagine other and other water to come by continual succession, that superficies fixed there by the understanding, is the immovable place of the river: what else does he make it to be but a phantasm, though he do it obscurely and in perplexed words?²¹

While the perceptual-based component of imaginary space is implied in the passage concerning phantasms “in the mind or memory”, the boundary (superficies) between the river and the shore is fixed, or made immovable, “by the understanding”, with both memory and understanding explicitly associated with phantasms in this quotation (via his theory of names or signs). So, abstraction factors into Hobbes' conception of imaginary space, and thus could be seen as the analogue of Hume's use of “idea”, which is derived from perception in the same manner as Hobbes' original phantasms of the sense organs. Indeed, Hobbes adds that space “considered in general” is nothing but a phantasm, since only names or signs can be considered generally. Consequently, Gaukroger's assertion, that Hobbesian space is “the system of co-ordinates or external locations which the mind constructs out of experience”, is correct to the extent that imaginary space relies on mental abstractions, but for reasons specifically allied to Hobbes' language-based method of scientific investigation and his theory of sensation. In other words, to claim that frames of reference are constructed from our experience of the material world not only leaves out the actual details of Hobbes' theory, but there is also little evidence to justify singling out the modern conception of a system of reference frames as the intended goal of his spatial theorizing.

19 See, e.g., D. Jesseph, “Hobbes and the Method of Natural Science” in T. Sorell (ed.), *The Cambridge Companion to Hobbes* (Cambridge: Cambridge University Press, 1996).

20 Descartes, *Principles* II.10, 43.

21 Hobbes, *Concerning Body* II.8.5, 106.

Our analysis of the abstractive element in Hobbes' scheme has the added benefit of bringing to the forefront one of the principle roles that imaginary space assumes within his overall system; namely, its function as the source of the immobility of place. In another passage, he states: "Besides, *place is immobile*; for, seeing that which is moved, is understood to be carried from place to place, if place were moved it would also be carried from place to place, so that one place must have another place, and that another place, and so infinitely, which is ridiculous".²² The problem of the immobility of place, which had long constituted an obstacle for the Aristotelian/Scholastic conception of place as the two-dimensional surface of the contained/containing body (since those bodies can themselves be in motion), is therefore neatly avoided, or so Hobbes thinks, by his unique concept of imaginary space. Unlike Descartes' similar solution,²³ which utilizes an arbitrarily chosen set of reference bodies to determine the same place over time (and is thus much closer to Gaukroger's estimate), Hobbes merely invokes his nominalist classificatory scheme to resolve the immobility problem. Whether this epistemological maneuver truly lays to rest the ontological worries about the immobility of place is doubtful, needless to say—and, besides conflating the ontological and epistemological issues of space, it also raises a number of solipsistic or relativist concerns.

Before proceeding to other interpretations, it is worth following up this last point and briefly discussing whether or not Hobbes' language-based approach to natural philosophy leads to a debilitating form of conventionalism, such that a different set of definitions or terms would bring about a different set of scientific truths. T. Sorell provides a persuasive case that conventionalism need not follow from Hobbes' system: "the truth of conclusions in geometry and mechanics cannot be owed just to people's agreeing in how they use words", since "[i]n the case of universal things definitions must actually put over conceptions of the nature of body, conceptions that have a basis of reality".²⁴ Interestingly, in contrast to Newton's geometric system of definitions involving space in the *Principia*, which several contemporary philosophers allege is the proper basis for understanding Newton's dynamics (e.g., Stein, DiSalle), Hobbes' nominalist, linguistic approach to space could be seen as adopting a similar definitional methodology, although it only forms a part of his larger

22 Hobbes, *Concerning Body* II.8.5, 105–106.

23 Descartes, *Principles* II.10, 43.

24 T. Sorell, *Hobbes* (London: Routledge, 1986), 49. Similar conclusions are reached by Jesseph, "Hobbes and the Method of Natural Science", 100.

sylogistic scheme for science (as opposed to the more formally geometric system utilized by Newton specifically for his dynamics).²⁵

2.2 *The other Imaginary Space*

While there is little evidence that anyone seriously entertained our second interpretation of Hobbesian space (outlined at the end of section I), namely, as comparable to an imaginary construction of the mind (such as unicorns), the notion that space is akin to a form of being for Hobbes has been occasionally embraced. His contemporary, the Cambridge neo-Platonist, Henry More, presented this interpretation in *The Immortality of the Soul*, linking Hobbes' imaginary space to the concept of an imaginary space advanced by many medieval and renaissance philosophers.²⁶ After laying out Hobbes' argument that "Whatsoever is real, must have some place; But spirits can have no Place", More replies, "[f]or if nothing else be understood by Place, but *Imaginary Space*, Spirits and Bodies may be in the same Imaginary Space, and so the Assumption is false": and, a bit further, "But if we will with Mr. *Hobbs*...confine the notion of Place to *Imaginary Space*, ... we may, without any more adoe, assert, That *Spirits* are as truly in place as *Bodies*".²⁷ A similar reading of Hobbes, which connects with the earlier imaginary space tradition, is defended by Grant: "Hobbes's description of imaginary space is much the same as that of the Coimbra Jesuits..., Bartholomeus Amicus..., and Gassendi".²⁸ He adds that "the phantasm of former bodily magnitudes [for Hobbes] is imaginary space, which lacks real extension", and which is presumably in keeping with the overwhelming majority of pre-seventeenth century natural philosophers who regarded imaginary space as non-dimensional.²⁹

Nevertheless, as we have seen, Hobbes does indeed assign dimension, or quantity, extension, to imaginary space: for instance, imaginary space "is coincident with the magnitude of any body", or "place is feigned extension".³⁰ A more appropriate category for Hobbes is the "internal space" conception, which equates space with material extension, and among whose ranks Grant

25 On the definitional approach to Newtonian space, see, e.g., R. DiSalle, *Understanding Space-Time* (Cambridge: Cambridge University Press, 2008).

26 Koyré discusses this in connection with Henry More. See, A. Koyré, *From the Closed World to the Infinite Universe* (Baltimore: Johns Hopkins Press, 1957), 145.

27 H. More, *The Immortality of the Soul*, I.X.8, in *Philosophical Writings of Henry More*, ed. F. MacKinnon (New York: Oxford University Press, 1925), 95–96.

28 E. Grant, *Much Ado About Nothing* (Cambridge: Cambridge University Press, 1981), 401.

29 Grant, *Much Ado About Nothing*, 226; and chapter 6.

30 Hobbes, *Concerning Body* II.8.5.

includes Buridan, Toletus, Suarez, and Descartes: that is, like Descartes, Hobbes postulates a conception of space, i.e., real space, that is the same as bodily magnitude (which Hobbes then goes on to describe as the cause of the phantasm, imaginary space, in the perceiving subject).³¹ Accordingly, unless Grant means something more ontological by “real extension” in the quote above, he errs in linking the earlier imaginary space conception too firmly to Hobbes, since Hobbes clearly conceives imaginary space as possessing extension, despite its purely mental status. Of course, it is difficult to conceive how a purely mental item, such as a phantasm, can be extended, but Hobbes shares this difficulty with the majority of his Empiricist descendants, who similarly ascribed spatial characteristics to perceptions or ideas.

Indeed, the empirical or subjective nature of Hobbes’ use of imaginary space seems to be conceded by Grant: “For Hobbes, imaginary space has no reality outside the mind; for the others [as above] it has some sense of external reality...”, but “[w]hat links them is a common derivation of space from the presence and then imagined absence of bodies”.³² Even so, this last inference should likewise be regarded with suspicion, since it conceals some substantial differences. While Hobbes undoubtedly rejects the possibility of a vacuum in his later work,³³ the earlier theorists normally associated imaginary space with God’s immensity, and often regarded various regions of imaginary space as actually empty of body (e.g., the extracosmic void space beyond the finite world), but not empty of God, of course. In contrast, there is no role for an incorporeal, space-sustaining God in Hobbes’ theory, nor is empty space a real possibility (whereas the committed plenists of the earlier tradition often confessed that God could bring about a vacuum, if so desired). The annihilation thought-experiment, surveyed in section I, is not intended to support space’s *ontological* status as a sort of container that can account for the immobility of place as well as receive body (whereas that is the intention of the earlier imaginary space theorists); rather, the annihilation thought-experiments assist in revealing space’s *epistemic* status as a phantasm of the mind.³⁴ Consequently,

31 Grant, *Much Ado About Nothing*, 14–16.

32 Grant, *Much Ado About Nothing*, 401.

33 Hobbes, *Concerning Body* IV.26.2–4.

34 This inference is supported in an analogous discussion in *Anti-White*, where Hobbes puts forward his own imagination-based conception of imaginary space using the same rationale that the earlier imaginary space theorists had employed—i.e., as supporting the *possible* existence of body—but, importantly, it is absent the earlier tradition’s reliance on God’s immensity to ground these possible existents: “So we must say that there no space at all [outside a finite world], and yet there is absence of body. This, however, is enough to

Hobbes' version of imaginary space differs significantly from the earlier tradition, including More's usage, for it points towards a conception of space that is more perceptual and subjective, as opposed to ontological. These same objections can be raised concerning some of the natural philosophers that Leijenhorst cites as precedents for Hobbes' imaginary space notion, in particular, Suarez.³⁵ While Suarez clearly held an internal, bodily idea of space (as noted above), his imaginary space concept is bound to God's immensity, as is typical of that tradition, and hence radically different from Hobbes' understanding. In short, Hobbes' language-based conceptual system takes over the function that God had directly provided for many of these earlier imaginary space theorists—and this is true even if one takes seriously his late ruminations with Bramhall that, presumably, view God as a material, fluid-like spirit that mixes with ordinary bodies.³⁶ A material spirit within the world is quite different from an immaterial space-supporting entity that is also outside the world, nor is Hobbes' fluid spirit comparable to Spinoza's pantheism. Finally, while Descartes' internal space conception can be viewed as similar to Hobbes' approach in many ways, the former still retains an important role for his non-extended God; namely, upholding the world at each instant,³⁷ thus Descartes' God serves a function that parallels that of many of the earlier imaginary space theorists, unlike Hobbes.

2.3 *Subjectivity*

If there is a common element, to varying degrees, among all the interpretations of Hobbes' theory of space, it is the perceptual or subjective aspect, as even Grant admits: unlike real space, Hobbes "denied objective reality to [imaginary] space, which he described as a phantasm" (this is also evident in Gaukroger's "subjective frame of reference", above).³⁸ Yet, the precise nature of

make the existence of several bodies possible; ..." (Hobbes, *Thomas White's De Mundo Examined*, 41). This reasoning parallels a passage in *De corpore* on contiguity, where Hobbes argues that "if there intercede any imagined space which may receive another body, then those bodies are not contiguous" (*Concerning Body* II.8.9, 108). For further analysis, see, E. Sylla, "Space and Spirit in the Transition from Aristotelian to Newtonian Science", in *The Dynamics of Aristotelian Natural Philosophy from Antiquity to the Seventeenth Century*, eds. C. Leijenhorst, C. Lüthy, J. Thijssen (Leiden: Brill, 2002), 248–287. The complications that this reasoning may raise for Hobbes' concept of real space are noted by Leijenhorst (*The Mechanisation of Aristotelianism*, 123–124).

35 Leijenhorst, *The Mechanisation of Aristotelianism*, 111–119.

36 Hobbes, EW 4, 310.

37 Descartes, *Principles* I.21, 11.

38 Grant, *Much Ado About Nothing*, 226.

the “subjective” element in Hobbes’ theory is, needless to say, open to question. Leslie Stephen may have ushered in that characterization, with its modernist overtones: “It is rather startling to find this rigid materialist [Hobbes] declaring that time and space are, as we now say, ‘subjective’”, although the function that real space (bodily magnitude) assumes in Hobbes’ theory prompts the later concession that “[i]t must, so it seems, be both purely objective and purely subjective”.³⁹

Some commentators have even taken this subjectivity to constitute an early instance of phenomenalism. After associating phantasms with the subjective, G. Herbert goes on to argue that, since “body is entirely phenomenal” for Hobbes, his “account of space follows from a phenomenological reduction of his own phenomenal notion of body”.⁴⁰ With respect to the objective, external world, Herbert later concludes:

There is no valid sense in which we can take Hobbes to have included as an integral part of his natural philosophy the actual existence of radical externality. This is not to say that externality is eliminated in Hobbes’s account. Rather, it is there as in Kant’s philosophy, that is, in a way that prevents the division of the world into the inner accessible part and the outer, inaccessible part.⁴¹

But this reading of Hobbesian subjectivity seems implausible, for there are many Aristotelian/Scholastic elements in Hobbes’ account of space and body that uphold “radical externality”, such as the division between the accidents actually inherent in body (as an instance of the traditional substance/accident dichotomy) and the mental images (phantasms) caused by those bodily accidents, namely, magnitude. As disclosed in section I, Hobbes contends that “magnitude does not depend upon cogitation, as imaginary space doth; for this is an effect of our imagination, but magnitude is the cause of it”.⁴² It is possible

39 L. Stephen, *Hobbes* (New York: Macmillan, 1904), 98–100.

40 G. Herbert, “Hobbes’s Phenomenology of Space”, *Journal of the History of Ideas*, 48 (1987), 709–717, here 711–712.

41 Herbert, “Hobbes Phenomenology of Space”, 716.

42 Hobbes, *Concerning Body*, II.8.4. It is possible that Herbert has a different understanding of “radical externality”, here, although that term is not defined in his essay. Other assertions by Herbert strain credibility, as well: “Hobbes anticipates Kant’s treatment of space as the outer form of sensuous intuition but without any notion of its existing *a priori* or in-itself” (Herbert, “Hobbes’s Phenomenology of Space”, 713). However, to declare that Hobbesian space is “Kantian space without the *a priori*” is about as equally informative a

that such radically subjective interpretations compelled the following thoroughly reasonable assessment by Zarka:

As time and space depend on our faculty of thinking [for Hobbes], one can legitimately speak of the ideality of space and time; on the other hand, this ideality clearly has nothing transcendental about it, space and time have as correlates objectively existing objects, and are caused by the extension and motion of bodies.⁴³

These “objectively existing objects” in Hobbes’ theory present unique obstacles to those schooled in the primary/secondary quality distinction, nevertheless. For, whereas magnitude functions straightforwardly like a primary quality, the same cannot be said for the other qualities normally assigned a primary ranking:

[T]here are certain accidents which can never perish except the body perish also; for no body can be conceived to be without extension, or without figure. All other accidents, which are not common to all bodies, but peculiar to some only, as *to be at rest, to be moved, colour, hardness*, and the like, do perish continually, and are succeeded by others; yet so, as that the body never perisheth.⁴⁴

As Sorell notes: “He includes among them [secondary qualities] such accidents as motion or rest and hardness, which are commonly reckoned primary”, and adds that “I am aware of no other place where he comes any closer to acknowledge the primary/secondary quality distinction, and I know of no passage at all where he says that phantasms of shape and hardness have a basis in external bodies that phantasms of colour, odour, savour, and sound lack”.⁴⁵ These peculiarities may have helped to encourage the phenomenalist reading of Herbert, but what this severe restriction on the primary qualities really demonstrates is that Hobbes takes seriously the search for a truly invariant feature of all corporeal existents, and this preoccupation is ontological in nature, not

comparison as, say, describing modern psychology as “Cartesianism without substance dualism”. Finally, Herbert’s characterizations that rely on both “absolute” and “relative” space are untenable given the lack of any discussion of the relevant contrasts, concepts and issues in *De corpore* (Herbert, “Hobbes’s Phenomenology of Space”, 713–715).

43 Zarka, “First Philosophy and the Foundations of Knowledge”, 67.

44 Hobbes, *Concerning Body* II.8.3, 104.

45 Sorell, *Hobbes*, 79.

phenomenalist. Finally, it is much more likely that Hobbes regards motion and rest as a sort of disjunctive primary property, i.e., one of the two is always possessed by a body, since he normally includes rest and motion alongside magnitude in characterizing the basic properties of bodies: e.g., in the same paragraph quoted above, he states that “as magnitude, or rest, or motion, is in that which is great, or which resteth, or which is moved, ... so it is to be understood that every other accident is in its subject”.⁴⁶

3 Conclusion

While it may not count as a revelation, if one were to locate a single philosophical position that gathers together both the strong subjectivist, or empiricist, features of Hobbes' theory of space, alongside the role apparently accorded to abstraction, then the obvious answer would seem to reside in the anti-universals thesis, nominalism. Leibniz commented on this facet of Hobbes' thought, dubbing him a “super nominalist”, and added: “for not content like the nominalists, to reduce universals to names, he says that the truth of things itself consists in names and what is more, that it depends on the human will, because truth allegedly depends on the definitions of terms, and definitions depend on the human will”.⁴⁷ Overall, the nominalist component in Hobbes' thought seems under appreciated in many of the recent treatments of his theory of space, but it was carefully noted by Burt in the early twentieth century:

Inasmuch as images are always of particular objects, we find Hobbes quite in line with the strong nominalistic tendency of the later Middle Ages, vigorous especially in England, which regarded individual things as the only real existences. This nominalistic aspect of his philosophy led him to see no reality in universal essences or natures. They are just *names*, nothing more”.⁴⁸

⁴⁶ Hobbes, *Concerning Body* II.8.3, 104.

⁴⁷ G. Leibniz, “Preface to an Edition of Nizolius”, in *Philosophical Papers and Letters*, second edition, ed. L. Loemker (Dordrecht: Kluwer, 1969), 128. Although beyond the topic this essay, there are many interesting similarities between Hobbes and Leibniz' approaches to geometry; see, e.g., V. De Risi, *Geometry and Monadology: Leibniz's Analysis Situs and Philosophy of Space* (Basel: Birkhäuser, 2007).

⁴⁸ E. A. Burt, *The Metaphysical Foundations of Modern Science*, revised ed. (Atlantic Highlands: Humanities Press, 1952), 128.

What is important about a nominalist interpretation of Hobbes' theory of space is that it straightforwardly incorporates all of the separate functions of his cognitive theory, e.g., sense, memory, abstraction, within his theory of language, as names or marks for these perception, memories, and abstractions (and which stand for universals). Of course, this is exactly what Hobbes intended, but recent interpretations have either stressed aspects of his theory other than its core nominalist structure (such as Leijenhorst's insightful emphasis on late Scholasticism), or as an anticipation of later developments in philosophy (such as Herbert's allusions to Kant and phenomenology). As noted at the outset, and as a final verdict and summary, the problem with Hobbes' imaginary space conception lies in the conjunction of his cognitive theory and his nominalist theory of language. By merely grouping together all of the different cognitive functions that involve space under a single name or sign, a multitude of widely divergent interpretations of his theory of space has been the unfortunate consequence. In short, given Hobbes' shadowy concept of imaginary space, modern commentators are undoubtedly haunted by the specter that their quest to grasp his phantasm of space is like, well, chasing a ghost.