

Skepticism and incomprehensibility in Bayle and Hume

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There has been much debate in the secondary literature about the extent and nature of skepticism in the Enlightenment.¹ However, there is general agreement that at least two philosophers identified with the Enlightenment were skeptics—namely Pierre Bayle and David Hume. Both explicitly espoused skepticism and both were regarded as skeptics by their contemporaries and critics. Hence it seems reasonable to begin any investigation concerning the nature of skepticism during the Enlightenment by examining the philosophies of these two writers. While Bayle’s views are sometimes identified as “pre-Enlightenment,” many discussions of skepticism throughout the eighteenth century, including that of Diderot in the *Encyclopédie*, were based on his writings—particularly the *Dictionnaire historique et critique*. Hume is commonly identified as the paradigm of a skeptic during the Enlightenment. The skepticism that he espouses is identified by him as a “mitigated scepticism, or ACADEMICAL philosophy.”² However, scholars dispute which, if any, of the different forms of ancient

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1. See, for example, articles in *Scepticism in the Enlightenment*, ed. Richard H. Popkin, Ezequiel de Olaso, and Giorgio Tonelli (Dordrecht, 1997); *Scepticism in the eighteenth century: Enlightenment, Lumières, Aufklärung*, ed. Sébastien Charles and Plínio Junqueira Smith (Dordrecht, 2013); Anton M. Matytsin, *The Specter of skepticism in the age of Enlightenment* (Baltimore, MD, 2016); *Academic scepticism in the development of early modern philosophy*, ed. Plínio Junqueira Smith and Sébastien Charles (Dordrecht, 2017).
2. David Hume, *An Enquiry concerning human understanding: a critical edition*, ed. T. L. Beauchamp (Oxford, 2000), sec.12, para.1, p.112. Subsequent references to the *Enquiry* give section, paragraph, and page numbers.

Academic skepticism he adopted.³ The form of skepticism adopted by Bayle is perhaps less explicit, although recent scholars agree that he also was an Academic skeptic.⁴

In this chapter, I focus on a skeptical theme that I believe to be central to the writings of both Bayle and Hume, though it has received little attention in the secondary literature, namely the incomprehensibility of reality, or what the ancients called *acatalepsia*.⁵ As we shall see, in a variety of articles of his *Dictionary*, Bayle identifies skepticism, particularly Academic skepticism, as the thesis that reality is incomprehensible. A central focus of his discussions of religion is the claim that the fundamental principles of Christianity are incomprehensible to us.

3. See, in particular, Julia Annas, "Hume and ancient scepticism," *Acta philosophica Fennica* 66 (2000), p.271–85, who argues that "Hume's characterizations of both Pyrrhonian and Academic Scepticism [...] are wrong": Hume was wrong in claiming that Pyrrhonism was incompatible with action and that Academic skepticism is less extreme than Pyrrhonism. She does, however, acknowledge that Hume may have taken his notions of these forms of skepticism from Cicero (p.278–79). Popkin identified both Hume and Bayle as Pyrrhonian skeptics in various articles printed in Richard H. Popkin, *The High road to Pyrrhonism*, ed. Richard A. Watson and James E. Force (San Diego, CA, 1980). I challenged Popkin's reading of Hume in my "Hume's Academic scepticism: a reappraisal of his philosophy of human understanding," *Canadian journal of philosophy* 16 (1986), p.407–36 (410–11, 416).
4. Michael W. Hickson, "Disagreement and Academic scepticism in Bayle," in *Academic scepticism in the development of early modern philosophy*, ed. P. J. Smith and S. Charles, p.293–317; José Raimundo Maia Neto, "Bayle's Academic scepticism," in *Everything connects: in conference with Richard Popkin—essays in his honor*, ed. James E. Force and David S. Katz (Leiden, 1999), p.363–76; Thomas M. Lennon, "What kind of sceptic was Bayle?," *Midwest studies in philosophy* 26 (2002), p.258–79. The stress in these writings is on Bayle's adoption of academic integrity—his determination to consider any argument in the light in which it presently appears to him and to allow that further argument may change his view. Hume adopts a similar skeptical methodology in *A Treatise of human nature*, eds. David F. Norton and Mary J. Norton (Oxford, 2007), book 1, part 4, sec.1, para.15; ed. L. A. Selby-Bigge, revised by P. H. Nidditch (Oxford, 1978), p.274. Subsequent references to the *Treatise* give book, part, section, and paragraph numbers from the Norton edition and the page number from the Selby-Bigge/Nidditch edition.
5. On the Academic skeptic refutation of the Stoic claim to have cataleptic impressions, see Charlotte L. Stough, *Greek skepticism* (Berkeley, CA, 1969), esp. ch.3. For the Renaissance use of the theory of *acatalepsia* see Silvia Manzo, "Reading scepticism historically: scepticism, *acatalepsia*, and the fall of Adam in Francis Bacon," in *Academic scepticism in the development of early modern philosophy*, ed. P. J. Smith and S. Charles, p.81–102.

But the claim that the nature of reality is incomprehensible also figures prominently in his accounts of purely secular paradoxes such as that concerning the nature of extended matter. Hume explicitly holds that the power or force by which any object causes another is incomprehensible to us. Moreover, he employs a number of closely related terms including inconceivability, unintelligibility, absurdity, and impossibility, to characterize other beliefs of both common sense and science.

At the same time as they maintained the incomprehensibility of reality, both authors argued that one cannot live without belief. Hume wrote that “No man ever met with any absurd creature, or conversed with a man, who had no opinion or principle concerning any subject, either of action or speculation.”⁶ He argued that doubt concerning foundational beliefs, such as those in an external world independent of our senses and the efficacy of causes, was impossible except perhaps for a brief period when one reflects on their incomprehensibility. Hume maintained that “Nature, by an absolute and uncontrollable necessity has determin’d us to judge as well as to breathe and feel.”⁷ While there is a continuing dispute among interpreters of Bayle regarding the sincerity of his commitment to fideism—that is, the belief in the fundamental dogmas of religion even in the face of arguments showing their irrationality—there is no reason to think that he recommended pervasive doubt. Like Hume, he held that people would continue to believe in the face of skeptical arguments. He wrote that “the grace of God among the faithful, the force of education in other men, and even, if you will, ignorance and the natural propensity men have to be decisive, are an impenetrable shield against the shafts of the Pyrrhonians.”⁸ While, like the ancient skeptics (Pyrrhonian and Academic), both Hume and Bayle argued for the incomprehensibility of many of our foundational beliefs, at the same time, they denied the possibility of suspending those beliefs, a practice that the ancients called the *epochē*.

Ancient skepticism has been described as involving both a thesis and a recommendation.⁹ The thesis is about knowledge; the

6. Hume, *Enquiry* 12.1, p.112.

7. Hume, *Treatise* 1.4.1.7, p.183.

8. Pierre Bayle, *Dictionnaire historique et critique par Mr. Pierre Bayle*, ed. Pierre Des Maizeaux, 4th ed., 4 vols. (Amsterdam, Brunel, 1730), art. “Pyrrhon,” rem. B, vol.3, p.732a.

9. Giselda Striker, “Sceptical strategies,” in *Doubt and dogmatism: studies in Hellenistic epistemology*, ed. Malcolm Schofield, Myles F. Burnyeat, and Jonathan Barnes (Oxford, 1980), p.54–83.

recommendation about belief. The thesis involves the denial that we can know or comprehend reality; the recommendation is that we should withhold belief on that basis. Enlightenment skepticism, at least as practiced by Bayle and Hume, accepts the thesis of the incomprehensibility of many of our beliefs regarding the nature of reality while denying the possibility of withholding those beliefs.

There is good reason to consider the Academic skepticism adopted by both Bayle and Hume as Ciceronian.¹⁰ In his article on “Cicero: Academic skepticism” in *The Stanford encyclopedia of philosophy*, Harold Thorsrud stresses the difference between the later Academic skepticism of the school of Philo, which Cicero adopted, and the more ancient Academic skepticism espoused by Arcesilaus and Carneades of the second and third Academies.¹¹ While insisting on universal doubt, Carneades had answered the charge of the Stoics that doubt would lead to inaction by arguing that the skeptic could continue to live by following *pithanon*, a Greek term which Cicero translated as *probabilitas*.¹² But in adopting this term, Cicero gave it a more robust meaning than the original of Carneades which he translated. Thorsrud writes that Cicero “frequently uses *probabile* and *veri simile* interchangeably”—indicating “that *probabilitas* is somehow like the truth.” At the same time as he stressed their incomprehensibility, Cicero argued that probable beliefs are likely to be true: The “wise man follows many things probable [*probabilia*], that he has not grasped [*non comprehensa*], nor perceived nor assented to but that possess verisimilitude [*semilia veri*].”¹³ Cicero held that probability for the Academics is not only useful “in the conduct of life” but also “in philosophical [i.e., scientific] investigation and discussion.”¹⁴

10. On the importance of Ciceronian skepticism in the early modern period, see in particular Charles B. Schmitt, *Cicero scepticus: a study of the influence of the “Academica” in the Renaissance* (The Hague, 1972).
11. Harold Thorsrud, “Cicero: Academic skepticism,” in *The Internet encyclopedia of philosophy*, esp. sec.4, <http://www.iep.utm.edu/cicero-a/> (last accessed August 23, 2018).
12. On the history of this dispute in the ancient world see Myles F. Burnyeat, “Can the sceptic live his scepticism?,” in *Doubt and dogmatism*, ed. M. Schofield, M. F. Burnyeat, and J. Barnes, p.20–53, reprinted in *The Skeptical tradition*, ed. Myles F. Burnyeat (Berkeley, CA, 1983), p.117–48.
13. Cicero, *Academica*, translated by Harris Rackham, in *Opera*, 28 vols. (Cambridge, MA, 1933), vol.19, p.594–95. Compare p.620–21: “Suppose that these facts of yours are true (for you see now that I do admit the existence of some truth) nevertheless I deny that they are “grasped” [*comprehendi*] and perceived [*percipi*].”
14. Cicero, *Academica*, p.509.

As Hume was leaving France in August of 1737 after completing a draft of the first two books of his *Treatise of human nature*, he wrote to a friend back in England to recommend four books to help him understand “the metaphysical Parts of [his] reasoning.” These books included Bayle’s *Dictionary*—in particular “some of the more metaphysical Articles ... such as those [... of] Zeno & Spinoza.”¹⁵ While Hume only refers once to Bayle in his *Treatise* (only five times in all his published works), the influence of Bayle throughout his writings on metaphysics and epistemology is well established.¹⁶ However, the nature of that influence has been disputed. Todd Ryan has argued that “Hume was not a sceptic in the Baylean mold... Hume clearly and deliberately rejects the kind of logical conflict among principles of reason upon which Bayle builds his own skepticism.”¹⁷ Ryan stops short of defining the kind of skepticism employed by Hume, noting only that there is a well-recognized tension between his skepticism and his aim to found a new science of human nature. My aim in the present chapter is to argue for the basic similarity of the skepticism adopted by the two philosophers based on their claims concerning the incomprehensibility of many of our beliefs—including that of extension as discussed in Bayle’s article on Zeno, and that of the immateriality of the soul, where Hume adapts an argument from Bayle’s article on Spinoza. Moreover, I argue that even in Hume’s naturalistic explanations there exist logical oppositions of the basic principles of the mind—including those based on reason.

In section i, I document Bayle’s stress on incomprehensibility in his characterization of skepticism in a number of articles of the *Dictionary*. In section ii, I argue that Hume holds, like Bayle, that there are rational arguments on both sides of the issue of the immateriality of the soul, leaving us with the conclusion that both materialism

15. The other books were Nicholas Malebranche’s *De la recherche de la vérité*, Berkeley’s *Principles of human knowledge*, and Descartes’s *Meditations*. This letter was reported in Tadeusz Kozanecki, “Dawida Hume’a Nieznane Listy W Zbiorach Muzeum Czartoryskich (Polska),” *Archiwum historii filozofii społecznej* 9 (1963), p.127–41. I discussed Hume’s use of Malebranche’s *Recherche* in my *Sceptical realism of David Hume* (Manchester, 1983).
16. In fact, this was clearly established before the discovery of this letter. See, in particular, Norman Kemp Smith, *The Philosophy of David Hume* (London, 1940), p.325 and *passim*. See also his edition of David Hume, *Dialogues concerning natural religion* (London, 1947).
17. Todd Ryan, “Hume’s reply to Baylean scepticism,” in *Scepticism in the eighteenth century*, ed. S. Charles and P. J. Smith, p.125–37.

and immaterialism are incomprehensible. I explain Hume's use of Bayle's article on Spinoza in developing the arguments against an immaterial soul. In section iii, I interpret Hume's discussion of space in his *Treatise*, where he ostensibly argues against Bayle's claim that extension is incomprehensible. I argue that in spite of his attempt in his *Treatise* to insist that we have a clear and distinct idea of minimal parts of extension, Hume distances himself from that critique in his later *Enquiry concerning human understanding*. Moreover, Hume follows Bayle's skepticism closely in denying the conceivability of a vacuum or absolute space, and yet acknowledges that both nonphilosophers and Newtonians have this belief. I show how Hume argues that the belief in a vacuum is based on a "fiction" of the imagination that confuses opposing ideas of distance. A similar kind of confusion of ideas is also the basis for Hume's account of the belief in an external world independent of our senses, which I consider in section iv. I contrast the phenomenalism of Berkeley, which denies the possible existence of an external world, with the skepticism of Hume, who, while agreeing that this belief is incoherent when subjected to philosophical analysis, argues that we cannot help but accept it. In section v, I consider Hume's account of causal power: While he claims that it is incomprehensible, he accounts for our belief in it on the basis of the operation of constant experience on the principles of the imagination. I also return to his discussion of the immateriality of the soul and explain his claim that experience of cause and effect favors materialism in spite of its incomprehensibility. Finally, in section vi, I discuss the way comprehensibility and incomprehensibility figure in each philosopher's discussion of the argument from design. In rejecting comprehensibility as the basis for ascribing causal power, Hume refutes Bayle's claim that order can only be explained by a divine mind which comprehends the order and the means by which it is produced.

i. Pierre Bayle on skepticism and incomprehensibility

Pierre Bayle begins his famous article on Pyrrho in the *Dictionary* by noting that *both* Pyrrhonian and Academic skeptics taught "the incomprehensibility of all things."¹⁸ He modifies this claim in remark A, where he draws a distinction between the views of these two schools of ancient skepticism: A Pyrrhonian "does not

18. Bayle, *Dictionnaire*, art. "Pyrrhon," vol.4, p.731–32.

formally adopt incomprehensibility”; he only claims that everything he has yet investigated has been found to be incomprehensible. It was Arcesilaus—the founder of the second Academy—who unequivocally adopted the doctrine that “the nature of things is incomprehensible.” In his article “Arcesilas,” Bayle reaffirmed that “it was he, who taught the *Acatalepsia*, or the incomprehensibility of things, more explicitly than was ever done before.”¹⁹ In this respect, Arcesilaus was more dogmatic than the Pyrrhonians. He was followed in this by Carneades of the third Academy: “Carneades, who was able to support it better than he, was obliged to have recourse to some modification.” In his article “Carneade,” Bayle repeats the claim regarding Carneades’s commitment to incomprehensibility: “with regard to incomprehensibility he carried things as far as the other.”²⁰ Carneades’s modification was only that “he did not deny, with Arcesilaus, that there were no truths.” The ancient philosopher allowed that probability was sufficient to determine one’s actions “provided one makes no absolute pronouncements on anything.”²¹ Nevertheless, citing Cicero’s *Academica*, Bayle notes that the probable truths which Carneades allowed for were incomprehensible. Bayle notes that Carneades was even committed to the paradoxical conclusion that “this very Proposition, that *there is nothing certain, we can comprehend nothing*, is uncertain and incomprehensible.”²²

In spite of the differences described in remark A of his article on Pyrrho, Bayle often treats Pyrrhonians and Academics in the *Dictionnaire* more or less interchangeably. He claims that most modern natural philosophers are “Academics and Pyrrhonists” insofar as they consider nature as “an impenetrable abyss,” the springs of which are hidden to all but their maker.²³ But in a number of articles of the *Dictionnaire*, Bayle goes further in describing beliefs, including not only the “mysteries” of Christianity but also the foundational beliefs of science, as unintelligible or incomprehensible in the sense that they are in direct conflict with reason. To use theological language, they are not just above reason, but contrary to reason. Among the latter are the belief in the so-called mysteries of Christianity, the belief in motion, and the Newtonian belief in absolute space.

19. Bayle, *Dictionnaire*, art. “Arcesilas,” rem. E, vol.1, p.286a.

20. Bayle, *Dictionnaire*, art. “Carneade,” rem. B, vol.2, p.58a–59a (58a).

21. Bayle, *Dictionnaire*, art. “Carneade,” rem. B, vol.2, p.58b.

22. Bayle, *Dictionnaire*, art. “Carneade,” rem. B, vol.2, p.58a.

23. Bayle, *Dictionnaire*, art. “Pyrrhon,” rem. B, vol.3, p.732a.

In his article on the fifth-century-BC philosopher Xenophanes, Bayle speculates that both Academic and Pyrrhonian skepticism had their roots in the claim of Xenophanes and Parmenides that the universe is one and unchanging. He writes that the origin of “the sect of the Acataleptics (that is those who taught the incomprehensibility of things) and that of the Pyrrhonians owed their birth to the principle of the immutable unity of all things supported by Xenophanes.”²⁴ By “the sect of the Acataleptics” here he is apparently referring to Academic philosophers. Bayle offers a reconstruction of Xenophanes’s reasoning beginning with the maxim that something cannot arise from nothing and concluding with the claim that whatever exists has always existed and is both immovable and immutable. Having drawn such a conclusion from reason, Parmenides had concluded that the changes we believe ourselves to experience “are only illusions of our senses, and pure appearances.”²⁵ However, Bayle argues that Xenophanes himself came to acknowledge that the senses give evidence that there is actual change in the universe. Bayle writes that, given this recognition, “I do not see that he could make any other reply than this: our reason is as fallacious as our senses, and everything is incomprehensible to reason.”²⁶ According to Bayle’s reconstruction, these conflicting sources of evidence would have convinced Xenophanes that “the truth is something incomprehensible and impenetrable.” Bayle notes that, while Sextus Empiricus had hesitated in including Xenophanes among the Acataleptics, he “nevertheless ascribes to him the opinion that we never comprehend things to that degree of certainty that constitutes science, and that one only attains judgments of likelihood and probability.” And Bayle asks: “Is this not at bottom to support *Acatalepsia* or the incomprehensibility of things?”²⁷ We find here the same connection between probability and incomprehensibility that Bayle, following Cicero, notes in the article on Carneades.

In his article on “Zenon d’Elée,” Bayle goes further and puts forward arguments for the nonexistence of extension based on the inconceivability of its composition: “Here is what Zeno could have said. Extension cannot be composed either of mathematical points, or atoms, or parts divisible *to infinity*: therefore, its existence is impossible.

24. Bayle, *Dictionnaire*, art. “Xenophanes,” rem. L, vol.4, p.523b. The parenthetical remark is added in the margin.

25. Bayle, *Dictionnaire*, art. “Xenophanes,” rem. A, vol.4, p.516a.

26. Bayle, *Dictionnaire*, art. “Xenophanes,” rem. L, vol.4, p.523b.

27. Bayle, *Dictionnaire*, art. “Xenophanes,” rem. L, vol.4, p.524a.

The consequence seems certain, since one is only able to conceive of these three ways of composition of extension.”²⁸ He goes on to argue for the inconceivability of each of these three alternatives—which he claims are exhaustive. He argues first that it is “impossible, or at least inconceivable” that extended matter could consist of mathematical points because, in having zero extension, they could never be put together to compose anything extended. Similarly, he argues that “it is no less impossible or inconceivable that it is composed of Epicurean atoms, that is of extended and indivisible corpuscles.” They must have a right and left side, a top and bottom and so be divisible, and hence be made up of distinct bodies. Finally, he constructs a number of arguments against the conceivability of extension being infinitely divisible, as Aristotle and the scholastics had claimed. He reasons, for example, that if an extended body were infinitely divisible “the immediate contact of two parts is impossible.”²⁹ Further, the same geometrical arguments that are used to argue against finite parts of extension can also be used to show the impossibility of infinite divisibility.³⁰ He concludes that, just as mathematicians make the claim that mathematical points, lines, and two-dimensional figures can only exist “in our mind” or “ideally,” the same is true of the three-dimensional figures which constitute physical matter.³¹

In remark I of the article on Zeno of Elea, Bayle brings the theory of incomprehensibility into the realm of modern science. He writes that, even though Newtonian science does not support Zeno’s arguments against the possibility of motion, nevertheless it supports the Eleatic “Hypothese de l’*Acatalepsie*, ou de l’incompréhensibilité de toutes choses.”³² He argues that the Newtonian belief in absolute space or a vacuum is directly contrary to the clearest idea of the human mind—that of extension. The modern mathematicians “demonstrate the existence of some-thing which is contrary to the existence of the

28. Bayle, *Dictionnaire*, art. “Zenon de Elée,” rem. G, vol.4, p.540a.

29. Bayle, *Dictionnaire*, art. “Zenon de Elée,” rem. G, vol.4, p.540b.

30. Bayle, *Dictionnaire*, art. “Zenon de Elée,” rem. G, vol.4, p.541b.

31. As Todd Ryan has pointed out, Bayle appears at one point to interpret this claim as referring to our visual perceptions—which is important in considering how Hume takes up and critiques these claims in his *Treatise*; Todd Ryan, “Hume’s reply to Baylean scepticism,” p.128–29. See below, section iii. Ryan also calls our attention to Bayle’s continuation of this discussion in the following article on “Zenon, philosophe épicurien” where he “draws attention not to visual percepts, but to our *concept* of extension.”

32. Bayle, *Dictionnaire*, art. “Zenon d’Elée,” rem. I, vol.4, p.545a.

most evident notions of our understanding; for if there is any nature whose essential properties we evidently know, it is extension. We have a clear and distinct idea of it.”³³ The essential properties of this clear and distinct idea of extension are “divisibility, mobility, and impenetrability.” But the empty space which the Newtonians demonstrate in order to explain the motion of the planets is essentially “immobile, indivisible, and penetrable.” We are therefore forced to admit the existence of a nature of which we have no idea, and which opposes the clearest idea that we have. Nevertheless, this is the notion that accords with common sense: “I know with regard to ordinary people, it is almost as strange a paradox to deny a vacuum, as to deny movement.” Bayle went on to list a number of scientific problems with the notion of a vacuum, as well as the Cartesian idea of a plenum. Since there are paradoxes connected with both theories, modern physicists are forced to choose “between two incomprehensible systems.”³⁴ Whether one adopts the Newtonian theory of absolute space or the Cartesian theory of a plenum, one adopts a belief that has irresolvable difficulties.

Throughout the *Dictionnaire*, Bayle argues that most Christian theologians, whether Roman Catholic or Protestant, are forced to acknowledge that the mysteries of religion are incomprehensible. In his Second Clarification, Bayle writes that a Christian must believe revealed mysteries “however inconceivable they are, and however impossible they appear to our reason.”³⁵ He says that he is willing to limit himself to the opinion of most theologians that “the mysteries of the Gospel” such as the Trinity and the hypostatic union (the claim that Christ is both man and God) are “above reason”; however, his actual treatment of these mysteries indicates that he considers them to be “against reason.”³⁶ Consider the arguments Bayle puts in the words of the philosophical *abbé* in remark B of the article on Pyrrho. The *abbé* claims that there is a direct conflict between reason and the mysteries that a Christian must accept through revelation. For example, “it is evident that things that do not differ from a third are not different from each other: this is the basis of all our reasonings ... and, nevertheless, the revelation of the mystery of the Trinity convinces us that this axiom is false.”³⁷ This fundamental rule of reason is directly

33. Bayle, *Dictionnaire*, art. “Zenon d’Elée,” rem. I, vol.4, p.544a.

34. Bayle, *Dictionnaire*, art. “Zenon d’Elée,” rem. I, vol.4, p.545a.

35. Bayle, *Dictionnaire*, éclaircissement II, vol.4, p.622.

36. Bayle, *Dictionnaire*, éclaircissement II, vol.4, p.620.

37. Bayle, *Dictionnaire*, art. “Pyrrhon,” rem. B, vol.3, p.732b.

contrary to the Christian doctrine that there is a being that is three persons and only one substance. Similarly, the Catholic doctrine of transubstantiation violates the rule of reason that a body cannot be in two distinct places at the same time. Such doctrines are incomprehensible, because they are directly contrary to basic principles of reason. The examples can be multiplied.

The mystery of religion which most preoccupies Bayle throughout the *Dictionary*—and went on to preoccupy his Enlightenment successors—concerns the question of the origin of evil. Bayle holds that the Calvinist doctrine of original sin, which requires “the eternal damnation of an infinite number of people who cannot be saved without an efficacious grace which God only gives to his elect” is of all the mysteries of Christianity that which is the most “inconceivable to our reason, and inexplicable according to its maxims.”³⁸ In support, he directly appeals to scripture, noting that at the same time as this doctrine was espoused by St. Paul, he acknowledged its incomprehensibility: “The writings of St. Paul teach us that this great apostle, having proposed to himself the difficulties of predestination, could get out of it only by asserting God’s absolute right over his creatures, with an exclamation on the incomprehensibility of His ways.”³⁹ Unlike the various mysteries mentioned in the previous paragraph, the incomprehensibility of this doctrine is not based simply on the writings of philosophers; it occurs to ordinary people who understand and act on moral principles of justice throughout their lives. These are principles “which everyone knows, and which constantly regulate the actions of both the learned and the ignorant in determining whether an action is unjust or not.”⁴⁰ Bayle notes that the attempt of theologians to justify predestination by appeal to God’s infinity, and the claim that God

38. Bayle, *Dictionnaire*, éclaircissement II, vol.4, p.625.

39. Bayle, *Dictionnaire*, éclaircissement II, vol.4, p.625. Bayle cites Romans 9.18–20 in remark E of his article on Arminius, stressing again that St. Paul, “who was inspired by God, and immediately directed by the Holy Spirit in everything he wrote, proposed to himself the objection to the doctrine of absolute predestination that is formed by the natural light” (Bayle, *Dictionnaire*, vol.1, p.334b–335a). By “the natural light” he is, of course, referring to *reason*.

40. Bayle, *Dictionnaire*, éclaircissement II, vol.4, p.625. Bayle’s commitment to an objective reason-based morality is also clear from works such as his *Pensées diverses sur la comète* of 1683, his *Commentaire philosophique* of 1686, and his *Continuation des Pensées diverses* of 1704. See Kristen Irwin, “The implication of Bayle’s qualified Academic skepticism for moral knowledge,” in *Academic skepticism in the development of early modern philosophy*, ed. P. J. Smith and S. Charles, p.275–92.

is not subject to human notions of justice, only raises a new set of objections that further reveal the incomprehensibility of evil. Predestination, however incomprehensible, must simply be believed on the basis of the authority of scripture.

At the same time, we need to recognize that Bayle holds that not only morality, but also our belief in the existence of the creator, is based on reason: “The most certain and clear ideas of order teach us that a being which is self-existent, necessary, and eternal must be unique, infinite, all powerful, and endowed with all sorts of perfections [infini, tout-puissant, & doué de toutes sortes de perfections].”⁴¹ He says that the arguments for the existence of such a being are based on reason and include the appeal to the simplest hypothesis to account for the facts of nature and the regularity of the laws of motion. But, while the belief in the existence of a perfect creator is based on *a priori* reason, it conflicts with the rational acknowledgment based on experience that there is natural and moral evil in the creation.

There is, as I mentioned earlier, continuing controversy among Bayle scholars as to whether we must take his affirmations of faith in the mysteries of Christianity as sincere.⁴² But without facing this irresolvable problem, we can certainly affirm that he holds that religious people actually believe what is incomprehensible. Moreover, as Bayle makes clear in articles such as those of “Pyrrho” and “Zeno,” such incomprehensible beliefs are not limited to religion; they are to be found in modern science and even in common sense.

ii. Hume on the immateriality of the soul and his use of Bayle’s article “Spinoza”

Scholars have argued that in Hume’s philosophy, unlike that of Bayle, “reason cannot be in conflict with itself.”⁴³ However, such a conflict is clearly to be found in Hume’s discussion “Of the immateriality of the soul” in his *Treatise of human nature*, where he sets up an antinomy

41. Bayle, *Dictionnaire*, art. “Manichéens,” rem. B, vol.3, p.305a.

42. Elisabeth Labrousse argued forcefully for Bayle’s fideism in her *Pierre Bayle*, vol.2: *Hétérodoxie et rigorisme* (The Hague, 1964), as well as many articles. See also Elisabeth Labrousse, *Bayle*, translated by Denys Potts (Oxford, 1983). Perhaps the strongest opposing view is that put forward by Gianluca Mori, *Bayle philosophe* (Paris, 1999).

43. Kemp Smith, *The Philosophy of David Hume*, p.285; Ryan, “Hume’s reply to Baylean scepticism.”

of reason.⁴⁴ First, he presents an argument that leads to the conclusion that most of our thoughts cannot be located in an extended object like our brains (*Treatise* 1.4.5.7–14). Like Bayle, he employs a version of what Kant later called the “Achilles of all [...] dialectical inferences” to argue against the materiality of the soul.⁴⁵ Hume writes: “Whatever is extended consists of parts; and whatever consists of parts is divisible [...] But ’tis impossible any thing divisible can be *conjoin’d* to a thought or perception, which is a being altogether inseparable and divisible. For supposing such a conjunction, wou’d the indivisible thought exist on the left or the right side of this extended divisible body?”⁴⁶ The conclusion is that the soul or mind cannot be composed of extended divisible matter. Then, Hume turns around and adapts an argument that Bayle had presented against the coherence of Spinozism, in order to show the incomprehensibility of the view that our *extended* thoughts or perceptions can be conjoined with a simple immaterial soul (*Treatise* 1.4.5.15–25). The conclusion of *this* argument is that the soul or mind cannot be immaterial and unextended. Finally, without resolving these opposing rational arguments, Hume argues on the basis of experience that changes in our bodies can, and often do, *cause* changes in our mental state (*Treatise* 1.4.5.29–32), and he concludes that this fact supports materialism.⁴⁷

In Hume’s first argument against materialism, he maintains that most of our perceptions are unextended, and, therefore, cannot be located in a material object such as our brains. These perceptions include not only

44. My overall interpretation of Hume’s strategy in *Treatise* 1.4.5 differs from that of Lorne Falkenstein in “Hume’s reply to the Achilles argument,” in *The Achilles of rationalist psychology*, ed. Thomas M. Lennon and Robert J. Stainton (Dordrecht, 2008), p.193–214. Falkenstein regards the whole argument as a refutation of immaterialism, including an “immaterialism that takes the soul to be extended but incomposite” (p.204). I find no evidence for this latter claim in Hume’s text. On my interpretation, Hume shows the incomprehensibility of both materialism and immaterialism, and then provides a naturalistic explanation which favors materialism. For Hume’s naturalist solution, see section v below.

45. See Pierre Bayle, *Réponses aux questions d’un provincial*, in *Œuvres diverses*, 4 vols. (The Hague, Compagnie des libraires, 1737), vol.3, p.904b. For Kant’s argument, see Immanuel Kant, *The Critique of pure reason*, translated by Paul Guyer and Allen W. Wood (Cambridge, 1998), A351, p.417. For a history of this argument, see Ben Mijuskovic, *The Achilles of rationalist arguments: the simplicity, unity, and identity of thought and soul from the Cambridge Platonists to Kant* (The Hague, 1974), and Lennon and Stainton, *The Achilles of rationalist psychology*.

46. Hume, *Treatise* 1.4.5.7, p.234.

47. See the end of section v below for this final part of the argument.

our passions and affections, but also objects of our senses, such as smells and tastes. Such perceptions and their objects cannot exist in any place. Hume argues that we only believe that the smell and taste of any fruit, say an orange, are located in the orange because of an association of ideas that arises as a result of experiencing them together. It is only our imagination or “our fancy by which we are determin’d to incorporate the taste with the extended object.”⁴⁸ However, “our *reason* [...] shows us the impossibility of such an union.” Indeed, there is, he writes, “in this union something altogether unintelligible and contradictory.” If it is claimed that the taste or smell exists in every part of the extended object, this is “absurd and *incomprehensible*” because we then must hold that the taste or smell has a shape and extension.⁴⁹ Similarly, it is incomprehensible that an unextended thought such as a passion can be located in a material object such as the brain:

If it exist within its dimensions, it must either exist in one particular part, and then that particular part is indivisible, and the perception is joined only with it, not the extension; or if the thought exists in every part, it must be extended, and separable, and divisible, as well as the body; which is utterly absurd and contradictory. For can any one conceive of a passion of a yard in length, a foot in breadth, and an inch in thickness?⁵⁰

The conclusion of the argument is that our thoughts—at least, those which like our passions are unextended—cannot be located in our extended bodies.

Hume goes on to balance this argument against one showing the incomprehensibility of the *immaterialist* conception of the soul: “Tho’ in this view of things we cannot refuse to condemn the materialists who conjoin all thought with extension; yet a little reflection will show us equal reason for blaming their antagonists, who conjoin all thought with a simple and immaterial substance.”⁵¹ He argues that our perceptions of sight and touch (unlike smells, tastes, and passions)

48. Hume, *Treatise* 1.4.5.13, p.238.

49. Emphasis added.

50. Hume, *Treatise* 1.4.5.7, p.234–35.

51. Hume, *Treatise* 1.4.5.15, p.239. It is striking that while at the beginning of the section (*Treatise* 1.4.5.2–6) Hume argued that the question of whether our perceptions inhere in a material or immaterial *substance* is unintelligible because we have no idea of a substance distinct from individual perceptions, he now allows that we do have such an idea when he argues against the immateriality of the soul. He makes this explicit at *Treatise* 1.4.5.17, p.240.

are themselves extended, and that it is impossible that they can exist in an unextended and simple soul. How is it possible to “incorporate a simple and indivisible subject with an extended perception? [...] Is the indivisible subject, or immaterial substance [...] on the left or on the right hand of the perception? Is it in this particular part, or in that other? Is it in every part without being extended?”⁵²

Hume then adapts Bayle’s argument against Spinoza’s claim that all objects are modifications of one simple and unified substance to critique the claim of “the theologians” that all perceptions are modifications of one simple immaterial soul.⁵³ Just as Bayle had pointed out the unintelligibility of Spinoza’s claim that the extended material world inheres in a simple unchanging substance that he called God or Nature, so Hume argues for the unintelligibility of the view that our extended perceptions inhere in a simple, unchanging substance called the soul. For example, Bayle had argued that Spinoza’s view implied that one and the same substance can have two contradictory predicates at one and the same time. On Bayle’s reading of Spinoza’s doctrine, what we think of as ordinary material objects, such as tables and chairs, are not really substances but mere modifications of the one single substance which constitutes the universe. Hence, that single substance would be at one and the same time both the square table in the corner and the round table beside it.⁵⁴ But this is absurd, since one and the same substance cannot be round and square at

52. Hume, *Treatise* 1.4.5.16, p.240.

53. Hume, *Treatise* 1.4.5.17–25, p.240–44. See Bayle, *Dictionnaire*, art. “Spinoza,” rem. N, vol.4, p.259–62. It should be noted that Hume now returns to the question that he condemned as unintelligible at the beginning of the section on the grounds that we have no idea of a substance independent of a perception!

54. See Bayle, *Dictionnaire*, art. “Spinoza,” rem. N, vol.4, p.260a. Compare Hume, *Treatise* 1.4.5.25, p.244. For a comparison of each of Hume’s arguments with those of Bayle, see my “Hume, Descartes, and the materiality of the soul,” in *The Philosophical canon in the 17th and 18th centuries*, ed. G. A. J. Rogers and Sylvana Tomaselli (Rochester, NY, 1996), p.175–90 (180–83). Hume’s argument presupposes that “whatever conclusions [...] we form concerning objects, will be applicable to impressions” (*Treatise* 1.4.5.20, p.241). In his *Thinking matter: materialism in eighteenth-century Britain* (Minneapolis, MN, 1983), John W. Yolton argued that Hume was satirizing this view, but on my reading this is the assumption that Hume needs to draw parallel arguments from Bayle’s critique of Spinoza’s conception of the external world to his own critique of “the theologians” who believe that all our perceptions are modifications of a single unextended immaterial soul. See also Falkenstein, “Hume’s reply to the Achilles argument,” who also takes issue with Yolton’s reading of the passage.

the same time. Similarly, Hume asks how the simultaneous *perceptions* which one has of a round and square table in the corner of a room can coexist in a simple soul substance which apprehends them. If our extended perceptions of such objects were modifications of a simple uncompounded soul, it would follow that this soul would have contradictory predicates at the same time.

Finally, at the end of the *Treatise* section “Of the immateriality of the soul” Hume argues that, in spite of the unintelligibility of both materialism and immaterialism, *experience* shows us that changes in our bodies actually *cause* changes in our thoughts. He concludes that experience favors materialism. In order to understand this claim, we will first have to consider Hume’s account of the incomprehensibility of causal relations, a task I shall take up in section v below.⁵⁵

iii. Hume’s response to Bayle’s article on Zeno of Elea

The claim that Hume rejects Bayle’s form of skepticism is largely based on his discussion of space and time in sections 1–3 of part 2 of book 1 of his *Treatise of human nature*. In these passages, Hume takes issue with Bayle’s argument for the incomprehensibility of extension in his article on Zeno of Elea.⁵⁶ As we have seen in section i, Bayle had argued that none of the three alternatives for the composition of extension—mathematical points, physical points (i.e., atoms), or infinitely divisible parts—is possible.⁵⁷ Hume argues in opposition to Bayle that we *do* have a clear and distinct idea of indivisible minimal parts of extension—that is, physical points or atoms. He bases this claim, first, on his empiricist principle that all our ideas are derived from impressions; second, on his argument from experience that our visual impressions reach a threshold below which they instantaneously disappear; and third, on what he calls “an established maxim of metaphysics, *that whatever the mind clearly conceives includes the idea of possible existence.*”⁵⁸ Hume concludes that these minimal ideas of the parts of extension give us “adequate representations of objects”—a

55. See below, p.154–56.

56. See Kemp Smith, *The Philosophy of David Hume*, p.285–88, and Ryan, “Hume’s reply to Baylean scepticism,” p.128–29 and 133–34. On Hume’s use of Bayle’s article on Zeno, see also Gianni Paganini, “Hume and Bayle on localization and perception: a new source for Hume’s *Treatise* 1.4.5,” in *Scepticism in the eighteenth century*, ed. S. Charles and P. J. Smith, p.109–24.

57. Bayle, *Dictionnaire*, art. “Zenon d’Elée,” rem. G, vol.4, p.540–42.

58. Hume, *Treatise* 1.2.2.8, p.32.

conclusion directly opposed to that of Bayle.⁵⁹ While recognizing that there are geometrical demonstrations to prove that matter is infinitely rather than finitely divisible, Hume argues in his *Treatise* that they do not apply to absolute minima and are “built on ideas which are not exact, and maxims which are not precisely true.”⁶⁰

Nevertheless, in his *Enquiry concerning human understanding* Hume distances himself from his earlier critique of Bayle’s skepticism concerning the composition of extension.⁶¹ Here, Hume acknowledges the strength of the demonstrations of infinite divisibility provided by philosophers and geometers:

Nothing can be more convincing and satisfactory than all the conclusions concerning the properties of circles and triangles; and yet, when these are once received, how can we deny, that the angle of contact between a circle and its tangent is infinitely less than any rectilinear angle, that as you increase the diameter of the circle *in infinitum*, this angle of contact becomes still less, even *in infinitum*.⁶²

He argues that this and other demonstrations of infinite divisibility are “as unexceptional” as any others in geometry, and all such demonstrations are “big with contradiction and absurdity.” It is true that in two footnotes he continues to suggest his solution of indivisible “physical points” as a way “to avoid these absurdities and contradictions” but only as a “hint [...], without pursuing it any further.”⁶³ Like Bayle, he recognizes that even the clear and distinct ideas of geometry prove contradictory when subjected to the caustic acid of our skeptical reason. And Hume no longer maintains that knowledge of geometry requires that its basic ideas be adequate representations of external objects.⁶⁴

Moreover, when Hume turns to the notion of a vacuum or absolute space in sections 4–5 of part 2 of book 1 of his *Treatise*, he clearly follows Bayle’s strategy of arguing for its incomprehensibility. This strategy sets the stage for the skepticism he develops on later topics in book 1 of the *Treatise*. Like Bayle, Hume maintains that a vacuum

59. Hume, *Treatise* 1.2.2.1, p.29. For Bayle’s claim that extension only exists in the mind or ideally, see section i above, p.137.

60. Hume, *Treatise* 1.2.4.17, p.44–45.

61. This is acknowledged by Ryan, “Hume’s reply to Baylean scepticism,” p.134.

62. Hume, *Enquiry* 12.18, p.117.

63. Hume, *Enquiry* 12.18, n.33, p.117, and 12.20, n.34, p.118.

64. Hume, *Enquiry* 4.1, p.24.

or absolute space is inconceivable: “’Tis impossible to conceive [...] a vacuum and extension without matter.”⁶⁵ Hume initially bases this argument on his earlier claim that our idea of space is composed of finite indivisible points. However, like Bayle, he acknowledges that the contrary belief in empty space or a vacuum accords with common sense, and he explains how through a confusion of ideas we come to believe in the existence of this “invisible and intangible distance.”⁶⁶

Hume’s explanation of the common-sense belief in a vacuum or absolute space is based on a “fiction” of the imagination caused by resemblance. In what he calls “our natural and most familiar way of thinking” we tend to confuse “two kinds of distance” and, taking the one for the other, come to believe that there is space without matter.⁶⁷ The one kind of distance he calls a “fictitious distance” and illustrates it through a situation where we look at two objects (for example, two stars in the night sky) separated by utter darkness—i.e., by “the negation of light, or more properly of speaking, of colour’d and visible objects.”⁶⁸ The perception of distance in this case is absolutely “simple and indivisible” and hence “can never give us the idea of [a genuine] extension,” which requires multiple parts between the two distant objects.⁶⁹ But the movement of our eyes as we look from one distant object to the other is the same as it would be if they were separated by a genuine extension filled with visible bodies. It is this and other resemblances between these “two kinds of distance” which make us confuse the first with the second, leading us to think that we have an idea of space without matter.

Hume attributes this confusion to a principle of the imagination which becomes key in his later discussions of our judgments of external existence, material substance, and personal identity.⁷⁰ He writes that “we may establish it as a general maxim of human nature, that whenever there is a close relation betwixt two ideas, the mind is very apt to mistake them, and in all its discourses and reasonings to use

65. Hume, *Treatise* 1.2.4.2, p.40. Compare *Treatise* 1.2.5.1, p.54, where he writes that “we can form no idea of a vacuum, or space where there is nothing visible or tangible.”

66. Hume, *Treatise* 1.2.5.12, app. p.639.

67. Hume, *Treatise* 1.2.5.11, p.57, and 1.2.5.17, p.59.

68. Hume, *Treatise* 1.2.5.23, p.62.

69. Hume, *Treatise* 1.2.5.12, p.58.

70. This principle is the foundation of what I have called the “identity substitution principle” in *Hume’s “A Treatise of human nature”: an introduction* (Cambridge, 2009), ch.4.

the one for the other.”⁷¹ It is association of ideas by way of *resemblance* which is the main cause of the confusion.⁷² This substitution of the one idea for the other takes place unconsciously, and Hume ascribes it to the physiology of the brain.⁷³

According to Hume then, the systematic and unconscious replacement of the idea of a genuine extension composed of parts with the idea of the “fictitious distance” is the source of our belief in the existence of absolute space. The result is an opposition between the belief based on our clear and distinct impression-derived idea of space, on the one hand, and the natural common-sense belief in space generated by the substitution of ideas, on the other. Important to note in this context is the fact that Hume, like Bayle, does not deny that people have a genuine belief in space without body, even though he explains that belief by ascribing it to a confusion of ideas. While admitting that any attempt to answer the question about the real nature of things “will be full of scepticism and uncertainty,” he asserts in the appendix that he added to book 3 of the *Treatise* that he himself is inclined to believe that there really is space without matter “as being more suitable to vulgar and popular notions.”⁷⁴ But this concession is immediately retracted, and Hume ends up adopting “a fair confession of ignorance in subjects, that exceed all human capacity.”

In the first part of this section, I argued that, in spite of Hume’s attempt in his early *Treatise* to refute Bayle’s argument that extension cannot exist objectively because the parts that compose it are inconceivable, in his later *Enquiry concerning human understanding* he clearly acknowledges the contradictions which result from perfectly valid demonstrations of geometry—and, like Bayle, holds that its basic principles may only apply to mental objects. Moreover, both philosophers acknowledge that the belief in absolute space, while it accords with both common sense and Newtonian philosophy, cannot be conceived through a clear and distinct idea. Hume explicitly argues that the belief in absolute space or a vacuum is based on a confusion of two distinct ideas of distance caused by association. The fundamental incomprehensibility of the belief is manifest when we examine exactly how it is generated. The same is true of Hume’s account of our belief in an external world, which I shall examine in the next section.

71. Hume, *Treatise* 1.2.5.19, p.60; compare 1.4.2.32, p.202.

72. Hume, *Treatise* 1.2.5.21, p.61.

73. Hume, *Treatise* 1.2.5.20, p.60–61.

74. Hume, *Treatise* 1.2.5.26, n.12, p.639.

iv. Incomprehensibility of belief in an external world:
transition from Berkeley's phenomenalism to Hume's skepticism

In his *Enquiry*, Hume claims that the writings of George Berkeley "form the best lessons of skepticism, which are to be found either among ancient or modern writers, BAYLE not excepted."⁷⁵ Hume's comment tells us far more about his own conception of skepticism than it does about Berkeley's. For Berkeley set out to *defeat* skepticism by showing that there is no external world apart from appearances.⁷⁶ He wrote that "skepticism follows [...] from our supposing a difference between *things* and *ideas*, and [supposing] that the former have a subsistence without the mind or unperceived."⁷⁷ By denying such a double existence of appearances and objects *and* by arguing that objects consist of no more than appearances, Berkeley claimed to have conquered skepticism. However, Hume regards Berkeley as a skeptic *malgré lui*. He holds that, while Berkeley's arguments are irrefutable, they leave the belief in an external independent world intact. They "*admit [...] of no answer, and produce [...] no conviction.*"⁷⁸ For Hume, what skepticism teaches us is that we cannot help but believe in an external world independent of perceptions even though, like Berkeley, he holds that this belief is incomprehensible.

Berkeley had argued that, since it was impossible to conceive of objects independent of our perceptions, they could not exist. He wrote that the opinion that objects exist "distinct from their being perceived by the understanding" involves "a manifest contradiction."⁷⁹ Hume agreed with this latter claim: He wrote that it is "impossible for us to form an idea of any thing specifically different from ideas and impressions"—that is, from our perceptions.⁸⁰ However, this was not the end of the story for Hume.

75. Hume, *Enquiry* 12.15, n.32, p.112.

76. This is not to deny that Berkeley was seen as a skeptic during the Enlightenment. See Sébastien Charles, *Berkeley au siècle des Lumières: immatérialisme et scepticisme au XVIII^e siècle* (Paris, 2003). See also Sébastien Charles's contribution in this volume (p.89–108).

77. George Berkeley, *A Treatise concerning the principles of human knowledge*, in *The Works of George Berkeley bishop of Cloyne*, ed. A. A. Luce and T. E. Jessop, 9 vols. (Edinburgh and London, 1948–1957), vol.2, part 1, sec.87, p.79. Subsequent references to the *Principles* give part, section, and page numbers.

78. Hume, *Enquiry* 12.15, n.32, p.112.

79. Berkeley, *Principles* 1.4, p.42.

80. Hume, *Treatise* 1.2.6.8, p.68.

Hume's aim in a long section of his *Treatise of human nature* entitled "Of scepticism with regard to the senses" was to explain the source of our natural belief in the existence of external objects. He began that section by announcing that the skeptic "must assent to the belief in body, tho' he cannot pretend by any arguments of philosophy to maintain its veracity."⁸¹ "Nature," he wrote, "has not left this to his choice and has esteem'd it an affair of too great importance to be trusted to our uncertain reasonings and explanations." By a "body" Hume meant an object which is "DISTINCT from the mind and perception"—that is, independent "of their existence and operation."⁸² For Hume, unlike for Berkeley, we cannot help but believe in the existence of bodies—except for a brief period, when we reflect on the irrationality of the formation of the belief.⁸³

In Hume's philosophy, clear and distinct ideas are all derived from impressions.⁸⁴ But there is, according to Hume, no impression of bodies—that is, of objects that are external and independent.⁸⁵ Philosophers discover through a few simple experiments that our sensory impressions are mind-dependent and cannot exist unperceived.⁸⁶ It follows that we can have no legitimate *idea* of externality and independence. Hume's argument for this conclusion, unlike that of Berkeley, is based on "experience and observation."⁸⁷ But the result, that we have no clear and distinct idea of body or external existence, is the same.

Hume's skepticism manifests itself in the incomprehensibility of the belief in an external and independent object—in its basis in an obscure and confused idea.⁸⁸ According to Hume's main explanation, the belief in body is based in a natural confusion of qualitative identity with quantitative or numerical identity, a belief that results from the postulation of a "fiction" of the imagination.⁸⁹ When I experience

81. Hume, *Treatise* 1.4.2.1, p.187.

82. Hume, *Treatise* 1.4.2.2, p.188.

83. Hume, *Treatise* 1.4.2.57, p.218.

84. Hume, *Treatise* 1.1.1.1, p.1–7; *Enquiry* 2.

85. Hume, *Treatise* 1.4.2.7, p.190.

86. Hume, *Treatise* 1.4.2.45, p.210–11; compare *Enquiry* 12.9.

87. Hume, *Treatise* 1.4.2.10, p.191.

88. See my "Hume's sceptical realism," in *The Oxford handbook of David Hume*, ed. Paul Russell (Oxford, 2016), p.60–81, esp. 66–67.

89. Hume, *Treatise* 1.4.2.32–41, p.202–209. On these pages Hume presents his chief explanation of belief in an external world, based on what he calls the "constancy" of our perceptions.

perceptions which are qualitatively similar but discontinuous (for example, when I look away for a few moments when observing an object such as “my bed and table, my books and papers”),⁹⁰ my imagination fills in the gap and confuses the gappy observation with the observation of a continuous and unchanging perception.⁹¹ This commits me to the belief in an “*object* or *perception*” that exists while unperceived.⁹² Moreover, the memory of past experiences of the continuously observed object enlivens the “fiction” of the unperceived perception and makes me *believe* in its existence.⁹³ For all of its being a “fiction” in Hume’s technical sense—that is, an idea taken to refer to another impression than the one from which it is derived—it still generates a genuine belief.⁹⁴

Hume argues that even philosophers, who correct the mistaken judgment of common sense which attributes an external and independent existence to our sensory impressions themselves, still remain psychologically dependent on that judgment.⁹⁵ Reason teaches philosophers that our actual sensory impressions are mind-dependent, and these impressions cannot exist independently from their being perceived. Thus far, the philosophers correct the judgment of common sense. However, they are so affected by that natural or common-sense judgment, that they postulate an unperceived continuously existing object which is *represented* by our sensory impressions. Hume argues that this philosophical theory of a “double existence” of the objects of sense only arises because we first form the common-sense judgment that our very sensory impressions exist while unperceived. The result is that even this representative realist theory of philosophers is infected with the initial confused and incomprehensible judgment, which it corrects.⁹⁶ Nevertheless, Hume concludes that, even after

90. Hume, *Treatise* 1.4.2.18, p.195.

91. Hume, *Treatise* 1.4.2.32–41, p.202–209.

92. Hume, *Treatise* 1.4.2.31, p.202.

93. Hume, *Treatise* 1.4.2.42, p.209: “As this propensity arises from some lively impressions of the memory, it bestows a vivacity on that fiction.” Hume’s theory of *belief* in what is unobserved as involving the enlivening of an idea through its relation to an impression of sense or memory was originally set out in *Treatise* 1.3.7–10, p.94–106.

94. See Hume, *Treatise* 1.2.3.11, p.37.

95. Hume, *Treatise* 1.4.2.46–55, p.211–17. On the logic of Hume’s argument see my *Sceptical realism of David Hume*, esp. p.55–59.

96. Moreover, philosophers have no independent way of proving through reason that our impressions are caused by and represent independent and distinct external objects because they have no access to the latter with which to compare

contemplating all these difficulties in our belief in a world independent of our mind and senses, the philosopher will still be convinced that “there is both an external and an internal world” after he leaves his study.⁹⁷

In reinterpreting Berkeley as a skeptic in his *Enquiry*, Hume focuses on Berkeley’s argument against the intelligibility or comprehensibility of the philosophical notion of matter. According to that notion, matter consists solely of primary qualities such as extension, shape, solidity, and motion, while secondary qualities such as color and hardness are purely subjective.⁹⁸ Berkeley had argued that, since one cannot conceive of the primary qualities of bodies apart from the secondary ones, the primary qualities also must be purely mind-dependent.⁹⁹ Hume rehearses Berkeley’s argument in his *Enquiry* and, like him, claims that the philosophical notion of matter is rooted in the “unintelligible, and even absurd” theory of *abstraction*. Nevertheless, at least in his earlier *Treatise*, Hume still held that this unintelligible supposition of a purely quantitative world apart from sensible qualities is “the fundamental principle” of modern science,¹⁰⁰ and that it involves “a considerable advancement of the speculative sciences.”¹⁰¹

We saw in section i that Bayle argued in his article on Zeno of Elea for the incomprehensibility of extension (and matter) based the paradoxes of its composition. In addition, in remark G of that article he argued that primary qualities are no less relative to the perceiver than secondary ones—and hence, if their relativity proved that the latter were not objective or real, then the same conclusion must apply to the former.¹⁰² Admittedly, Bayle did not go so far as to argue for the incomprehensibility of a world of primary without secondary qualities, as did Berkeley and Hume. Nevertheless, his arguments

them. See Hume, *Enquiry* 12.12, p.114–15; compare Hume, *Treatise* 1.4.2.14, p.193.

97. Hume, *Treatise* 1.4.2.57, p.218.

98. Hume, *Enquiry* 12.15, p.115–16; compare *Treatise* 1.5, p.225–31.

99. Berkeley, *Principles* 1.10, p.45.

100. Hume, *Treatise* 1.4.4.3, p.226.

101. Hume, *Treatise* 3.1.26, p.469. In his later *Enquiry*, Hume seems less certain of this basic principle of the mechanical philosophy that goes back to Galileo. In his later *Enquiry*, he writes that Berkeley’s argument shows that the principle is “contrary to reason; at least, if it be a principle of reason that all sensible qualities are in the mind, not in the object” (*Enquiry* 12.16, p.116).

102. Bayle, *Dictionnaire*, art. “Zenon d’Elée,” rem. G, vol.4, p.541a; compare the objection of the philosophical *abbé* at art. “Pyrrhon,” rem. B, vol.4, p.732a–b.

against the three alternative accounts of the composition of extension went as far as their arguments in showing the incomprehensibility of the real and objective existence of matter. So, there is good reason to question Hume's judgment that Berkeley's arguments form better lessons of skepticism than those of Bayle. Both philosophers show the incomprehensibility of extension or matter when subjected to rational arguments and yet, as Hume himself acknowledges, these arguments "have little or no influence on practice."¹⁰³

v. Hume on the incomprehensibility of causal relations

Hume's most important philosophical innovation is to be found in his account of the belief in causal relations. This has both a negative and a positive side. On the negative side, he argues that "the force or energy" or power by which one object causes another "is *entirely incomprehensible*" to us.¹⁰⁴ He identifies this force, energy, and power of the cause with the necessary connection between the cause and effect, and argues negatively that this connection is never perceived.¹⁰⁵ However, he also argues positively that we believe in such a connection on the basis of a *supposition* we make when we experience one kind of event always followed by another: "When one particular species of event has always, in all instances been conjoined with another [...] we then call the one object, *Cause*; the other *Effect*. We suppose, that there is some power in the one, by which it infallibly produces the other, and operates with the greatest certainty and strongest necessity."¹⁰⁶ The constant experience of effects following their causes produces a belief in their necessary connection, and a supposition that there is power in the cause which produces the effect.

Hume stresses that, even after constant experience, the connection of causes and their effects is incomprehensible to us. This applies to causes in the mind itself, as well as in the physical world. He writes in his *Treatise* that "the uniting principle, among our internal perceptions is as unintelligible as that among external objects."¹⁰⁷ Experience

103. Hume, *Treatise* 3.1.1.26, p.469.

104. Hume, *Enquiry* 7.25, p.57 (emphasis added).

105. On the equivalency of these terms, see Hume, *Enquiry* 7.5, p.50, and *Treatise* 1.3.14.4, p.4.

106. Hume, *Enquiry* 7.27, p.59. In his *Treatise* Hume allowed that we can *suppose* what we are unable to *conceive* (Hume, *Treatise* 1.4.5.20, p.241; compare 1.4.6.9, p.68). See my Hume's "A *Treatise of human nature*": an introduction, p.59–60.

107. Hume, *Treatise* 1.3.14.29, p.169.

never gives us “any insight into the internal structure or operating principle of objects.” It “only teaches us, how one event constantly follows another; without instructing us in the secret connexion, which binds them together, and renders them inseparable.”¹⁰⁸ Our natural supposition that there is a power in the cause that produces the effect is due to the principle of human nature, which he calls custom or habit: The “customary transition of the imagination from one object to its usual attendant, is the sentiment or impression, from which we form the idea of power or necessary connexion.”¹⁰⁹ In his *Treatise*, Hume further accounts for this belief in objective power by arguing that we project the subjective feeling of necessity generated by repeated instances on to the objects themselves.¹¹⁰

The incomprehensibility of causal relations is ascertained by philosophers when they analyze the ideas of cause and effect. Hume’s central argument is that our perceptions of cause and effect are always found to be distinct and can be conceived independently. When philosophers examine the ideas we have of causes and their effects, they discover that they can always conceive of the existence of the one without the other—something that would be impossible if they could comprehend the power by which one produces the other. In his *Treatise*, Hume writes that since “the ideas of cause and effect are evidently distinct, it will be easy for us to conceive any object to be non-existent this moment and existent the next, without conjoining to it the distinct idea of a cause or productive principle.”¹¹¹ From the distinction of our impressions and ideas of cause and effect he concludes that the power of the cause, or its necessary connection with its effect, is incomprehensible.

Nevertheless, in common life, under the influence of custom and habit, both ordinary people and philosophers suppose the existence of causal power in the objects of the senses, and so draw inferences from constantly observed causes to their accompanying effects. Hume writes that, “notwithstanding this ignorance of natural powers and principles, *we always presume*, when we see like sensible qualities, *that they have like secret powers*, and expect, that effects, similar to those which we have experienced, will follow from them.”¹¹² Hume holds that we do not merely draw an inference from cause to effect on the

108. Hume, *Enquiry* 7.13, p.53.

109. Hume, *Enquiry* 7.28, p.59; compare *Enquiry* 5.5, p.37.

110. Hume, *Treatise* 1.3.14.25, p.167.

111. Hume, *Treatise* 1.3.3.3, p.79–80; compare Hume, *Enquiry* 4.11–12, p.27.

112. Hume, *Enquiry* 4.16, p.29 (emphasis added).

basis of constant experience, but we do so under the assumption of an underlying causal power.

How then does Hume account for the fact that we never comprehend the causal power between causes and their effects? His answer is that we have imperfect, inadequate, or deficient ideas of cause and effect in both matter and mind. For example, in his *Enquiry* he writes that “So imperfect are the ideas” of the relation of cause and effect that we can only define it from “something extraneous and foreign to it.”¹¹³

The difference between philosophers and unreflective persons is that the former attribute the power to the unknown cause *represented* by our perceptions, not to the perceptions themselves. When philosophers discover irregularities in our experience, they are so fully convinced of the existence of the underlying unintelligible causal power, that they “form a maxim, that the connexion of all causes and effects is equally necessary, [and] that its seeming uncertainty in some instances proceeds from the secret operation of contrary causes.”¹¹⁴

It is striking that in his discussions of causation Hume provides us with a clear and distinct criterion for what would count as knowledge and comprehension of causal power, while at the same time denying that we ever attain such comprehension. He writes that *if* we could comprehend the relation between cause and effect, our inferences from one to the other “would amount to knowledge, and would imply the absolute contradiction and impossibility of conceiving any thing different.”¹¹⁵ We would be able to “penetrate into their essences” and “discover the dependence of the one upon the other.” The fact that this is never the case shows that our belief in causation is incomprehensible—particularly after he has shown in a positive way the generation of that belief through “an illusion of the imagination.”¹¹⁶

Hume also applies his account of causation to the problem of the relation of the mind and body. He employs it to critique the philosophical claim that, since it is incomprehensible how physical changes in the body can cause changes in the thoughts of the mind, such causation can never take place. At the end of the *Treatise* section

113. Hume, *Enquiry* 7.29, p.60. For an explanation of how the definitions that Hume goes on to provide are “extraneous and foreign” to what is defined, see my *Hume’s “A Treatise of human nature”: an introduction*, p.118–20. At *Treatise* 1.3.14.10, p.160, he claims that we have “no adequate idea of power in any object,” and at 1.4.7.6, p.267, he writes of the “deficiency” of our ideas of cause and effect.

114. Hume, *Treatise* 1.3.12.5, p.132; *Enquiry* 8.13, p.66.

115. Hume, *Treatise* 1.3.6.1, p.86.

116. Hume, *Treatise* 1.4.7.6, p.267.

“Of the immateriality of the soul,” that we discussed in section ii, he considers the argument that, since changes in our physical bodies have no resemblance to our mental perceptions, they cannot cause them: “Matter and motion [...] however vary’d [...] produce only a difference in the position and situation of objects [...] ’Tis absurd to imagine [...] that the shocking of two globular particles shou’d become a sensation of pain, and that the meeting of two triangular particles shou’d afford a pleasure.”¹¹⁷ The conclusion of this argument is that it is “impossible, that thought can ever be caus’d by matter.” Hume replies to this argument by pointing out that in *no* case do we comprehend how causes produce their effects—neither in the physical nor in the mental world. Resemblance between cause and effect does not make causation any more comprehensible.¹¹⁸ Before observing constant regularity in experience, “any thing may produce any thing, and we shall never discover the reason why any object may or may not be the cause of any other, however great, or however little the resemblance may be.”¹¹⁹

Then Hume poses a dilemma: either to deny that anything can really cause anything else except when we can perceive the connection, or “to maintain, that all objects, which we find constantly conjoin’d, are upon that account to be regarded as causes and effects.”¹²⁰ He *rejects* the first horn of the dilemma, on the ground that since we never comprehend the connection between any cause and its effect we would then have to draw the absurd conclusion that there is no power or production anywhere in or outside the universe, even in God or the first being.¹²¹ In arguing *for* the second horn, he concludes on the basis of their constant conjunction that “matter and motion may often be regarded as the causes of thought, as far as we have any notion of that relation.”¹²² The regular conjunction of physical changes in our bodies with changes in our mental state gives evidence that the former cause the latter. Indeed, Hume goes so far as to claim that our experience

117. Hume, *Treatise* 1.4.5.29, p.246.

118. Hume, *Treatise* 1.3.9.10, p.111–12.

119. Hume, *Treatise* 1.4.5.30, p.247.

120. Hume, *Treatise* 1.4.5.31, p.248.

121. Hume, *Treatise* 1.4.5.31, p.248–49. Compare Hume’s argument against the occasionalist claim that there is no power anywhere in the universe at *Treatise* 1.3.14.8–10, p.159–60. In both cases he refers to the writings of Malebranche. For an analysis of Hume’s argument against Malebranche’s theory of causation, see my *Sceptical realism of David Hume*, p.136–45.

122. Hume, *Treatise* 1.4.5.32–34, p.250.

of the constant conjunction “evidently gives the advantage to the materialists above their antagonists.”

This is the final solution to the antinomy of reason which Hume sets up earlier in his discussion “Of the immateriality of the soul” (discussed in section ii above). In spite of the incomprehensibility of both materialism and immaterialism, we have evidence through experience and our natural belief-forming mechanisms that changes in our physical state cause changes in our mental state.

vi. Incomprehensibility in Hume and Bayle on the design argument

The incomprehensibility of the supreme being is a central topic in Hume’s posthumously published *Dialogues concerning natural religion* (1779). It is stressed not only by his theist Demea, who defends Samuel Clarke’s version of the cosmological argument, but also by his skeptic Philo. According to Demea, when we apply the terms “thought” or “reason” “to the supreme being” we must acknowledge that “their meaning [...] is totally incomprehensible.”¹²³ Thought and reasoning in finite creatures, being essentially successive and compounded, are incomprehensible when applied to the divine being, who is eternal, unchanging, and an absolute unity. Cleanthes, by contrast, the character who defends the eighteenth-century argument from design, questions how Demea’s view of “the absolute incomprehensibility of the deity” differs from that of “sceptics or atheists, who assert, that the first cause of all is unknown and unintelligible.”¹²⁴ Cleanthes’s own argument bases the belief in an intelligent creator on the order and apparent purposefulness of nature.¹²⁵ He argues on the basis of experience that such a creator must reason and plan with a mind not unlike that of human beings. The other two interlocutors accuse him of anthropomorphism, while he in turn accuses them of mysticism—that is the complete incomprehensibility of the divine nature. In the final dialogue, after Demea has left the scene, Philo argues that the dispute between the atheist and philosophical theist is “merely verbal” or “incurably ambiguous.”¹²⁶

123. David Hume, *Dialogues concerning natural religion*, ed. Dorothy Coleman (Cambridge, 2007), part 3, para.13, p.34. Subsequent references to the *Dialogues* are to this edition, and give part, paragraph, and page numbers.

124. Hume, *Dialogues* 4.1, p.35.

125. See especially *Dialogues* 2.5, 2.14, 2.16, p.19–20, 22–23.

126. Hume, *Dialogues* 12.7, p.92–94. This long paragraph was added in 1776, a few

The theist must allow “that there is a great and immeasurable, because *incomprehensible* difference between the human and the divine mind.”¹²⁷ The atheist, in turn, must allow that “the principle which first arranged, and still maintains the universe bears [...] some remote inconceivable analogy, to [...] human mind and thought.” However, having made this concession, Philo goes on to argue in effect that there is no likeness between the moral values of human beings and those of their creator.¹²⁸ The universe appears entirely destitute of anything like human moral values. The *incomprehensibility* of human moral qualities as applied to the Deity—foreshadowed in Bayle’s discussions of Manicheanism in the *Dictionary*—means that a consistent rational religion (i.e., deism) has no implications for human behavior.¹²⁹

In Hume’s *Dialogues*, *Philo* takes issue with Bayle’s argument against the claim that the first principle of the universe can be material, an argument based on its incomprehensibility. Among some manuscript notes from Hume’s reading which have survived, we find the following:

Strato’s Atheism the most dangerous of the Ancient, holding the Origin of the World from Nature, or a Matter endu’d with Activity. Baile [*sic*] thinks there are none but the Cartesians can refute this Atheism.

A Stratonician cou’d retort the Arguments of all the Sects of Philosophy... The same question, Why the Parts or Ideas of God had that particular Arrangement? is as difficult as why the World had.¹³⁰

Hume’s remarks relate particularly to sections 106 and 111 of Bayle’s *Continuation des Pensées diverses*; the latter was entitled “That it is

months before Hume’s death and, according to M. A. Stewart, “takes on a special significance as his dying testament to posterity.” See M. A. Stewart, “The dating of Hume’s manuscripts,” in *The Scottish Enlightenment: essays in reinterpretation*, ed. Paul Wood (Rochester, NY, 2000), p.267–314 (303).

127. Emphasis added.

128. Hume, *Dialogues* 11.14, p.86.

129. Hume, *Dialogues* 12.33, p.101–102.

130. See Ernest C. Mossner, “Hume’s early memoranda, 1729–1740,” *Journal of the history of ideas* 9 (1948), p.492–518 (501). In spite of Mossner’s title, the best evidence shows that these notes, which are in different inks, were written at different periods throughout the 1740s after Hume published his *Treatise* (1739–1740); see Stewart, “The dating of Hume’s manuscripts,” p.276–88. For a more complete discussion of Hume’s use of the note on Stratonician atheism, its relevance to his thoughts on active matter and occasionalism, and its incorporation into the *Dialogues*, see my *Sceptical realism of David Hume*, p.167–74.

important to teach that matter is destitute of activity.”¹³¹ Bayle had argued in section 106 that atheists, who followed the ancient Aristotelian philosopher Strato, could provide a strong response to the argument from design: “they could retort with greater force against their antagonists” than other forms of atheism.¹³² For Strato had held that the order which is to be found in matter always existed, and that the universe is eternal. Thus, a Stratonician could dispense with the need for a divine mind to explain the origin of the order found in nature. Indeed, Bayle argued that even those modern philosophers who maintain that physical causes, such as impulse, are “second causes,” and that God is only required for their conservation, could not answer the Stratonicians.¹³³ Once these modern philosophers admit that there are natural causes which act without knowledge, they dispense with the need for a divine mind. Bayle wrote: “If this order once exists without knowledge, it lasts eternally: the most difficult thing is already done.”¹³⁴

Bayle went on to argue that Stratonician atheism can only be countered by a Cartesian occasionalism which maintains that it is *incomprehensible* that any cause can act without an understanding of the effect and of the means by which it is produced.¹³⁵ Thus, even the order that according to Strato existed in nature eternally, would have to be produced by a divine mind that understands the order that it creates.

In the *Dialogues*, Hume takes up the claim in his manuscript cited above that, in answering Bayle, the Stratonician could reply by asking “the same question” of the divine mind: What is the cause of the order found in *it*? Philo states that “it is not easy, to see, what is gained by [... the] supposition” that the order in the world is derived from such a mind.¹³⁶ For the order found in “a mental world, or universe of ideas,

131. Pierre Bayle, *Continuation des Pensées diverses*, in *Œuvres diverses*, 4 vols. (The Hague, Compagnie des libraires, 1737), vol.3, p.340a.

132. Bayle, *Continuation des Pensées diverses*, sec.106, p.333a.

133. Bayle, *Continuation des Pensées diverses*, p.340b–341a.

134. Bayle, *Continuation des Pensées diverses*, p.336a.

135. Bayle wrote that “the *incomprehensibility* that one can object to Strato forms an insoluble argument and an insurmountable difficulty” (*Continuation des Pensées diverses*, sec.111, p.341b, emphasis added). This rationalist argument against the Stratonicians, which can be traced to the writings of Malebranche, is explained at length in Todd Ryan, *Pierre Bayle’s Cartesian metaphysics* (New York, 2009), esp. p.71–73 and 150–51, 156–57 and *passim*.

136. Hume, *Dialogues* 4.6, p.37.

requires a cause as much, as does a material world [...]; and, if similar in its arrangement, must require a similar cause.”¹³⁷ Bayle’s claim that any order requires an ordered intelligent mind would lead to the absurd conclusion that there are an infinite number of intelligent divine minds, each one causing the order of the next. By contrast, if we look to *experience* we find that the order of ideas in *our* minds, the only intelligent minds with which we are directly acquainted, depends on material causes: “A difference of age, of the disposition of his body, of weather, of food, of company, of books, of passions; any of these particulars and others more minute, are sufficient to alter the curious machinery of thought, and communicate to it very different movements and operations.”¹³⁸ In this way, Hume employs his own naturalistic account of causation to counter Bayle’s occasionalist argument that it is incomprehensible that anything besides a knowing mind can produce the order we discover in the physical world. The connection between *any* cause and its effect is absolutely incomprehensible, and we can only determine what causes what through regular experience.

vii. Conclusion

I have argued that skepticism in the philosophies of both Bayle and Hume is characterized by the claim that in many cases we must believe what is incomprehensible. However, it may be objected that “incomprehensibility” and related terms such as “inconceivable,” “unintelligible,” “absurd,” “contradictory,” which these philosophers ascribe to our beliefs, do not have precise enough meanings to characterize eighteenth-century skepticism. I am honestly not sure how to deal with this objection *in a general way*. I do hope nevertheless to have shown in a variety of cases that skepticism as conceived by these philosophers involves an assertion concerning the incomprehensibility of our beliefs—without leading to their rejection. Hume wrote that “the sceptical doubt [...] always increases, the further we carry on our reflections [...] Carelessness and in-attention alone can afford us a remedy.”¹³⁹ The same may be said of our attempts to precisely define skepticism itself. Perhaps all we can then do is to go through the individual cases in which Bayle and Hume argue that beliefs are incomprehensible and follow each path they take to that conclusion,

137. Hume, *Dialogues* 4.7, p.37.

138. Hume, *Dialogues* 4.8, p.38.

139. Hume, *Treatise* 1.4.2.57, p.218.

whether it be laying out an antinomy of reason, the inconceivability of contrary accounts of the nature of reality, the opposing views of reason and the senses, the contradictions involved in the generation of natural beliefs themselves, or, finally, the opposition between the distinct impressions that we experience as cause and effect, and the necessary causal powers that we naturally ascribe to their objects on the basis of that experience.