

1. Our Problem Posed

What does Hume think the laws of nature are?¹ He defines ‘cause’ twice in the *Treatise of Human Nature* and repeats those definitions with minor modifications in the *Enquiry Concerning Human Understanding*. Sometimes philosophers of science seem to think what Hume says about causes can be smoothly transferred to what he thinks about laws. Tim Maudlin writes,

Hume begins by investigating the notion of cause and effect, and finds within it a notion of necessary connection between events The ‘necessity’ must reduce to either to mere pattern or to a purely subjective sensation, and in neither case pertains solely to the two events thought to be necessarily conjoined. Although Hume does not focus so intently on the motion (*sic*) of a law of nature, the natural implication is that laws can be nothing but patterns of events either (20).

A little reflection shows that that we should be wary of assimilating the concept of cause to the concept of law. Bertrand Russell argues that we should eliminate talk of causation from philosophy, partly because scientific laws don’t appeal to that concept or its relatives (153). If the concept of cause were the concept of law, Russell’s argument wouldn’t make any sense. But it does make sense, so these are different concepts. Distinguishing between laws and causes is at least as important for interpreters of Hume to as it is for modern philosophers of science. For one thing, when we see that he’s an anti-skeptical realist about laws, there’s no obstacle to taking him literally as a regularity theorist about causation.

In the *Treatise*, most of the references to ‘laws of nature’ are in the Ciceronian sense of the discoverable principles of morality (*DL* 1.18-23). Hume uses the expression to refer to the foundations of moral phenomena, for example, property (*T* 3.2.4.1, 3.2.5.8), promises (*T* 3.2.8.5), and governmental authority (*T* 3.2.12.9). He does refer to the laws governing the motion of animal

¹ <acknowledgement omitted>

spirits (*T* 1.4.1.10) and claims that saplings sometimes kill their parent trees by “the laws of matter and motion” (*T* 3.1.1.24). Even so, in his systematic discussion of ‘laws of nature,’ the expression applies to “the rules of justice” (*T* 3.2.1.19). For Hume in the *Treatise*, the “three fundamental laws of nature” are “that of the stability of possession, of its transference by consent, and of the performance of promises” (*T* 3.2.6.1).

In the first *Enquiry*, the expression ‘law of nature’ is front and center, in something like the modern sense. In §1, Newton’s determination of “laws and forces” governing the planets is a model for philosophy of mind (*EHU* 1.15). In Part I of §4, Hume argues that the laws of nature are only discoverable through experience (*EHU* 4.9, 4.13). In §8, Hume argues that irregular biological events shouldn’t be taken as evidence that the laws of nature aren’t exceptionlessly obeyed within living things (*EHU* 8.14) and argues that voluntary motions are “subjected to the same laws of necessity with the operations of matter” (*EHU* 8.32). In §10, he argues that our confidence in the laws of nature should be so high that we would never have good reason to trust religiously motivated testimony that there have been exceptions to them.²

Hume’s allusions to particular laws of nature can be divided into three groups. First, he offers psychological laws as analogous to the laws of physics. For example, he proposes that vivacity is transferred across associated perceptions, and says that if generally confirmed, this hypothesis “may be established as a general law, which takes place in all the operations of the mind” (*EHU* 5.14). If this were a general psychological law, it would justify his attempt to carry out “enquiries concerning the mental powers and œconomy” similar to what Newton succeeded with in astronomy (*EHU* 1.15). In the *Treatise*, he calls his principles of association “a kind of ATTRACTION, which in the mental world will be found to have as extraordinary effects as in the natural, and to show itself in

² It’s for this reason that I call him an anti-skeptic about laws.

as many and as various forms” (*T* 1.1.4.6), which suggests that he thinks that his laws of association have the same nomic status as Newton’s law of gravitational attraction.

The second sort comprise biological and chemical generalities that underlie an argumentative question in Hume’s essay on miracles. “Why,” he asks

is it more than probable, that all men must die; that lead cannot, of itself, remain suspended in the air; that fire consumes wood, and is extinguished by water; unless it be, that these events are found agreeable to the laws of nature, and there is required a violation of these laws, or in other words, a miracle to prevent them? (*EHU* 10.12)

Notice that the generalities that all men die and that water quenches fire aren’t said to be the laws, but rather that they are agreeable with laws and that their negations are not. The laws must be wider generalities that contain these more narrow generalities, and these laws must be well enough known to us for Hume’s argument to make sense. All living things die permanently might be the generality that includes all men die and which would be violated in the hypothetical case of Queen Elizabeth’s resurrection (*EHU* 10.37).

The third group comprise the laws of Newtonian mechanics, at least as Hume understands them. When Hume says that a philosopher “determined the laws and forces, by which the revolutions of the planets are governed and directed” (*EHU* 1.15), he has in mind Newton’s three laws and the law of universal gravitation. In §8 he tells us, “The degree and direction of every motion is, by the laws of nature, prescribed with such exactness, that a living creature may as soon arise from the shock of two bodies, as motion, in any other degree or direction than what is actually produced by it” (*EHU* 8.4). I think that Hume takes this to be an implication of Newton’s Second Law. The motion of a body is determined by its mass, motion, and the forces impressed upon it. We should also understand Hume’s footnote on imperceptible miracles in §10 in this light. According to Hume, “The raising of a house or ship into the air is a visible miracle. The raising of a feather, when the wind wants ever so little of a force requisite for that purpose, is as real a miracle, though not so sensible with regard to us” (*EHU* 10n23). Take the sum of forces on a feather in light of Newton’s

Second Law and the parallelogram rule for adding forces and then calculate where the feather should be. If the feather goes higher, then the laws of nature have been broken. God's intervention doesn't count as an additional force in this case.

I don't think that Hume thinks of these laws as mere regularities. Such an analysis is incompatible with the assertion in §1 that the motions of the planets are "governed and directed" by Newtonian laws and forces (*EHU* 1.15), though of course we might reasonably treat this as a mere turn of phrase. More importantly, as I shall show, it's also incompatible with the form of Hume's argument in his essay on miracles.

I'll argue that Hume thinks of laws of nature as general principles governing the world imposed by God or by something analogous to God. I realize that this interpretation may scandalize both those who think of Hume as an atheist and also those who think of Humean laws of nature as nothing more than exceptionless regularities. I'll try to give a close and responsible reading of enough texts to make my interpretation seem plausible, interesting, and important. In the course of offering this reading, I will make more concessions to those who read Hume as an atheist than to those who read him as a regularity theorist about laws.

2. Hume's Definition of Miracles and his Conception of Laws

As a motivating puzzle, let's examine Hume's definitions of miracles and try to come up with an account of laws on which it makes sense. He defines a miracle as "a violation of the laws of nature" (*EHU* 10.12), and then says it "may be accurately defined" as "a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent" (*EHU* 10.12n23). Whether something is a miracle isn't supposed to depend on whether it's noticed by human beings. The raising of a feather with insufficient force is a miracle, even "though not so sensible with regard

to us” (ibid.). The example of the excessively lifted feather rising suggests that he has an objective, perception-independent account of laws of nature in mind.

But what can that be? Many philosophers of science and commentators on Hume assume with John Earman that “whatever else a law of nature is, it is an exceptionless regularity” (8). If they are exceptionless regularities, then there aren’t exceptions to them, and Hume didn’t need “a complicated essay on the credibility of miracle stories” to show that (Earman 8, cf. Garrett 1997: 139-40).

There are two issues here, one philosophical and one interpretive. The philosophical puzzle is making clear to ourselves what we might mean by a violation of the laws of nature. Alastair McKinnon argues that miracles are incompatible with “the current scientific use of *natural law*” (1967: 309) as entirely accurate descriptions of what happens in the world. If laws of nature describe “the actual course of events,” then “someone who insisted upon describing an event as a miracle would be in the rather odd position of claiming that its occurrence was contrary to the actual course of events” (ibid., see also Flew 149-51, Everitt 1987, and Curd 1996).

The interpretive puzzle is how to make Hume’s argumentative practice compatible with his definition of miracles. Norman Swartz accuses Hume of contradicting himself:

If physical laws are ‘constant conjunctions’ (Hume’s own words in “On Miracles”), then it is logically impossible that a physical law should be ‘violated.’ Nothing can be both ‘constant’ and ‘violated’, that is, without exception and with exception. If Hume is going to allow that it is possible that a physical law should be violated, then he cannot, with consistency, define physical laws to be constant conjunctions (108).

Swartz has found a hypothetical contradiction here, and it’s true that Hume defines causes as constant conjunctions, but it isn’t true that he defines laws in that way. As I said, Hume doesn’t offer an explicit definition of laws of nature in the *Enquiry*.

The standard solution to this puzzle is to say that Hume has a subjective account of laws of nature. Thus, Don Garrett argues that by a “law of nature,” Hume means something relative to “an

individual's cognitive organization . . . for which the individual has, within his or her experience, *a proof*" (1997: 153; compare Beauchamp and Rosenberg 137-45 and Earman 12-13). But, as Garrett concedes (1997: 252-3), such an account is in tension with Hume's discussion of the miraculously raised feather which calls for an objective account of laws. One could, as Garrett does (1997: 252-3), say that Hume adopts a subjective account in the body of the text and an objective one in the footnote with the feather or come up with a way to make the letter of the subjective account of laws compatible with the footnote, but that ignores the spirit of the text. Hume wouldn't go out of his way to emphasize the objectivity and possible imperceptibility of miracles if he had a subjective account of laws of nature in mind. In the footnote, Hume warns us off a certain misunderstanding, and, Garrett chooses not to heed that warning.

McKinnon emphasizes that his argument against miracles rests on a "modern" conception of laws of nature. Our interpretive puzzle will be more tractable if we start looking at conceptions of laws that were more common in Hume's time and place. What else might he mean? A clue may be found in his more accurate description of a miracle as "a transgression of a law of nature by a particular volition of the Deity" (*EHU* 10.12n23).

The formula, "a particular volition of the Deity," is a piece of jargon that alludes to Malebranche's theory of God's agency.³ For Malebranche, general volitions are laws of nature, while particular volitions are miracles and other unlawful acts. In speaking of God's activity, Malebranche tells Arnauld that "acting by general *volitions* and acting according to general *laws*" amount to "the same thing" (*OC* 8.651; Radner 30-2, Black 32, 38-40, Walsh and Stencil 227). In contrast, "God acts by particular volitions when the efficacy of his will is not at all determined by some general law to produce some effect" (*TNG* 1st Clarification §2=*OC* 5.147-8; Radner 32, Nadler 62-63, Walsh and

³ Brandon Watson (2011) has drawn this connection in a blogpost.

Stencil 232-3). For Malebranche, after the first days of creation, particular volitions would be miracles (OC 8.696; Radner 32-33, Walsh and Stencil 233-4, 236-7).

Hume refers to particular volitions six times in his corpus, always in connection with God's acting outside of what Hume takes to be his normal activity through the laws of nature. In the *Natural History*, Hume sympathetically describes the religion of zealous and refined theists according to whom God fixes general laws and doesn't disturb those laws through particular volitions (NHR 6.2). In "Of Suicide," Hume depreciates particular volitions of God. He identifies them with miracles, contrasts them with the laws of nature, and doubts that they ever occur: "Nature still continues her progress and operation; and if general laws be ever broke by particular volitions of the deity, 'tis after a manner which entirely escapes human observation" ("Suicide" 581). In part 11 of the *Dialogues Concerning Natural Religion*, Hume considers the possibility that God might govern the world by general laws at the level where these are discoverable and useful to us, but intervene with particular volitions where "causes are unknown and variable" from our point of view (DNR 11.8).

In the *Enquiry Concerning the Principles of Morals*, Hume considers regimes that follow the principle that virtue should be proportionately rewarded with possessions. Such a principle would be disastrous if carried out by humans, but "in a perfect theocracy, where a being, infinitely intelligent, governs by particular volitions, this rule would certainly have place, and might serve to the wisest purposes" (EPM 3.23). Hume is imagining a God who doesn't work through amoral general laws but instead distributes property in proportion to virtue on a case by case basis.

A passage from the first *Enquiry* shows that Hume has taken the jargon of particular volitions and made it his own. The point of Malebranche's distinction between general volitions and particular volitions is to contrast God's ordinary activity through laws and his extraordinary activity in cases such as miracles. For Hume, a particular volition of God is any deviation from the ordinary order of laws, and Hume thinks it would be extraordinary if God's activity deprived ordinary objects

of causal power. Because occasionalists reject ordinary causal relations, Hume says that that their God only acts through particular volitions:

They pretend, that those objects, which are commonly denominated *causes*, are in reality nothing but *occasions*; and that the true and direct principle of every effect is not any power or force in nature, but a volition of the Supreme Being, who wills, that such particular objects should, for ever, be conjoined with each other. Instead of saying, that one billiard-ball moves another, by a force, which it has derived from the author of nature; it is the Deity himself, they say, who, by a particular volition, moves the second ball, being determined to this operation by the impulse of the first ball; in consequence of those general laws, which he has laid down to himself in the government of the universe (*EHU* 7.21).

For Malebranche the divine volitions that constitute the laws of nature aren't particular volitions.

Hume seems to be thinking that if events in Malebranche's system aren't caused by ordinary events, then they must be caused by divine interventions through particular volitions. Hume seems to be accepting an inference that Leibniz made: if we treat God as the only cause, "without there being any other explanation that can be drawn from the order of secondary causes, this is literally resorting to a miracle" (L 457=G 4.483; see Ott 102n2).

If we include his definition of miracles, Hume discusses particular volitions in a half dozen passages, and in all of them they are references to ways that God might act other than through the establishment of general non-moral laws that undergird ordinary causal claims. "Particular volition" is, in Malebranche's hands at least, one of a pair of complementary terms. It brings with it an implicit framework and the accompanying concept of general volitions. As a first approximation, let me suggest that Hume accepts the other half of Malebranche's conceptual pair, and that he thinks of laws of nature as general volitions of God.

Malebranche's view that laws of nature are immediate expressions of God's will is common in the British Isles in the era between the *Principia* and the *Treatise*. In Richard Bentley's inaugural Boyle lectures, he argues

that this Gravity, the great Basis of all Mechanism, is not it self Mechanical; but the immediate Fiat and Finger of God, and the Execution of the Divine Law; and that

Bodies have not the power of tending towards a Centre, either from other Bodies or from themselves: which at once; if it be proved, will undermine and ruine all the Towers and Batteries that the Atheists have raised against Heaven (4th Sermon 6).

Bentley goes on to argue that universal gravitation can't be explained mechanically, and so must proceed "from a higher principle, a Divine energy and impression (7th Sermon 32; Metzger 82-91, McCracken 93, Harrison 2008: 26). Samuel Clarke defines "the course of nature" as "the will of God producing certain effects in a continued, regular, constant, and uniform manner," and then, similarly to Hume, defines as miracle as "an effect produced contrary to the usual course or order of nature by the unusual interposition of some intelligent being superior to men" (EV 149-50; Metzger 122, Harrison 2008: 13).⁴ Berkeley fits into this tradition as well. For him, "the set rules or established methods, wherein the mind we depend on excites in us the ideas of sense, are called the *Laws of Nature*: and these we learn by experience" (*Principles* Part I §30; Hurlbutt 60-2). The doctrine that the laws of nature are the free volitions of God and the doctrine that they are discovered by experience are the background against which Hume's arguments are set.

It might seem perverse to claim that Hume's definition of a miracle commits him to the existence of God. It would be more perverse to insist that Hume's views of the laws of nature are independent of the spirit of the time. For his purposes in his essay on miracles, it is enough to show that we've got no good reason to believe testimony that God has suspended the laws through which he governs the universe. Someone who is too atheistic to take such an account of laws of nature seriously isn't likely to need persuading that we shouldn't believe in Biblical miracle stories.

3. God and Laws in Rational Religion

⁴ Peter Harrison (1995: 538) says that Clarke rejects this definition, but if we look closely at the text, we see that Clarke only rejects the definition if you mistakenly define the course of nature as "the power of nature or the natural powers of created agents" (EV 149)

In *The Natural History of Religion* and in “Of Suicide,” Hume implies that on the best religious views, the laws of nature should be identified with the will of God. In the *Natural History*, the point is to distinguish rational philosophical religion from the actual religion that we find in the world. In “Of Suicide” the point is to deny that suicide is against the will of God.

In the opening lines of the *Natural History*, Hume distinguishes between religion’s “foundation in reason” and “its origin in human nature”—in effect, between the rational grounds for theism and the anthropological grounds for the existence of religion as it is actually practiced and believed. The *Natural History* is about the second, anthropological question, and on the way to addressing it, Hume says that the question of rational grounds allows for an entirely clear solution: “The whole frame of nature bespeaks an intelligent author; and no rational enquirer can, after serious reflection, suspend his belief a moment with regard to the primary principles of genuine Theism and Religion” (*NHR* Introduction; Yoder 83, Hardy 254).

Hume’s quick solution to the problem of rational religion serves two rhetorical purposes. First, it allows him to clarify the historical and sociological project of his book by way of contrast with the problem that he has just set aside. Second, by declaring that the argument from design is obviously persuasive and justifies the first principles of theism, Hume can dodge some accusations of impiety that would inevitably accompany his non-rational account of the origins of actual religion. If all that Hume had to say on the subject of religion were that it originates out of superstition and error, he would have been wise to sugarcoat that message with praise for the argument from design.

It’s worth noting, however, that the attractiveness of the design argument is a load-bearing element of Hume’s larger argument in the *Natural History*. He wants to show that monotheism arises out of polytheism by a slow progression. As a rival hypothesis, he considers the possibility that early people discovered design in the world as a whole, inferred a creator god, and that this belief was

later corrupted into the polytheism that we find in early recorded history. Against this, Hume argues as follows:

If men were at first led into the belief of one Supreme Being, by reasoning from the frame of nature, they could never possibly leave that belief, in order to embrace polytheism; but the same principles of reason, which at first produced and diffused over mankind, so magnificent an opinion, must be able, with greater facility, to preserve it (*NHR* 1.7).

For Hume, discovering and accepting the argument from design in the universe as a whole is more difficult than retaining that argument once it's been discovered, so monotheism probably wasn't discovered through a rational argument and then corrupted. That would be a deeply misleading argument, if he thought that the argument from the frame of nature for monotheism were a mere fallacy (Yoder 85).

Hume argues that religion originally arises from our tendency to anthropomorphism and monotheism arises out of an inclination to flatter a particularly important local god (*NHR* 3.2-5, 6.5-6; Gaskin 1988: 184-9, Yandell 10-16, Yoder 88, 91-2). He defends his account against the rival story that most people are monotheists for rational reasons. As part of this defense, he gives further details about the kind of theism that would be justified by the argument from design. On this account, God fixes the laws of nature and doesn't intervene with miracles:

Many theists, even the most zealous and refined, have denied a *particular* providence, and have asserted, that the Sovereign mind or first principle of all things, having fixed general laws, by which nature is governed, gives free and uninterrupted course to these laws, and disturbs not, at every turn, the settled order of events by particular volitions. From the beautiful connexion, say they, and rigid observance of established rules, we draw the chief argument for theism; and from the same principles are enabled to answer the principal objections against it (*NHR* 6.2).

According to these zealous and refined theists, God chooses general laws and doesn't rely on particular volitions.

Hume associates this philosophical religion with Bacon's dictum, "a little philosophy makes men atheists: A great deal reconciles them to religion" (*NHR* 6.2).⁵ Hume explains,

For men, being taught, by superstitious prejudices, to lay the stress on a wrong place; when that fails them, and they discover, by a little reflection, that the course of nature is regular and uniform, their whole faith totters, and falls to ruin. But being taught, by more reflection that this very regularity and uniformity is the strongest proof of design and of a supreme intelligence, they return to that belief, which they had deserted; and they are now able to establish it on a firmer and more durable basis (*ibid.*)

It's worth noting that this was Bacon's original point, and that Hume is presenting in a straightforward manner what Bacon had written in his circuitous Renaissance style:

I had rather believe all the fables in the Legend, and the Talmud, and the Alcoran, than that this universal frame is without a mind. And therefore God never wrought miracle to convince atheism, because his ordinary works convince it. It is true, that a little philosophy inclineth man's mind to atheism; but depth in philosophy bringeth men's minds about to religion. For while the mind of man looketh upon second causes scattered, it may sometimes rest in them, and go no further; but when it beholdeth the chain of them, confederate and linked together, it must needs fly to Providence and Deity (*Atheism* 371)

"The Legend" is a medieval collection of miracle stories. "Convince" here has its original sense of *overcome*. For Bacon, a little philosophy teaches us not to believe in miracles. More philosophy convinces us that the exceptionless order of the world is a good argument for theism.

The new science and its laws could be a poisoned pawn for those seeking to shore up faith in Christianity. If you believe in God only because of grand regularities that you find in nature, you'll be less inclined to think that those laws have exceptions. To reject miracles is to reject the reliability of the Bible and to reject the occurrence of the Resurrection.

The absence of miracles in this zealous and refined religion has an argumentative role. If religion based on reason doesn't have miracles in it, then religion as it stands in eighteenth century Europe isn't rational, since it gives a central place to miracles in the Old and New Testaments.

⁵ Cleanthes cites Bacon's dictum in the *Dialogues* and Philo calls it "very judicious" (*DNR* 1.18 41)

According to Hume, ordinary people don't see the merits of philosophical religion and accuse its followers "of the grossest infidelity" (*NHR* 6.2). Instead of appealing to the design argument, they point to human suffering as an explanation of why they believe in God (*NHR* 6.1). For good reasoners, these are the "chief difficulties" against believing in a supreme intelligence (*ibid.*).

Hume is returning here to the rational religion that he endorses (or apparently endorses) in the opening paragraph of the *Natural History*, and he's filling in details. The explicit absence of miracles in the view undermines the hypothesis that he has only advanced it as a smokescreen to avoid persecution. Denying that Jesus performed genuine miracles is a heresy, after all. In Note G of the *Natural History*, Hume advances the principle that "no political devotee" is ever a heretic for their times. On the basis of this principle, he argues that Xenophon believed in pagan superstition and Locke, Newton and Clarke were Arians and not atheists (*NHR* 12.23n78). If we apply the principle to Hume himself, it suggests that he's a sincere advocate of the philosophical religion that he sympathetically describes.

Hume endorses the zealous and refined theism as the best conception of God in a somewhat jarring way in "Of Suicide." His argument that suicide is permissible has three parts: first, that it isn't a transgression of duty to God, second, that it isn't a transgression of duty to society, and, third, that it isn't a transgression of duty to self. In the first and longest part, he argues that if suicide is contrary to a duty towards God, then it's contrary to his will, as expressed in Providence. But nothing that happens is contrary to Providence, since God carries out his plan through exceptionless laws. On this view of God's will, everything that happens accords with it: "Providence guided all these causes, and nothing happens in the universe without its consent and co-operation. If so, then neither does my death, however voluntary, happen without its consent" ("Suicide" 585). Hume argues that God "governs every thing by those general and immutable laws" and therefore "all events, in one sense, may be pronounced the action of the almighty" ("Suicide" 581; Yoder 133-4). Since everything is the

action of God in this sense, “When I fall upon my own sword, therefore, I receive my death equally from the hands of the deity, as if it had proceeded from a lion, a precipice, or a fever” (“Suicide” 584). Anything that’s God’s action can’t be contrary to our duty to God, and so suicide isn’t contrary to our duty to God.

At one point in “Of Suicide,” Hume’s argument seems to go off the rails. He argues, “It would be no crime in me to divert the *Nile* or *Danube* from its course, were I able to effect such purposes. Where then is the crime of turning a few ounces of blood from their natural channels!” (“Suicide” 583). Of course, most stabbings are crimes, and if Hume’s premises imply that there’s nothing wrong with stabbing then at least one of the premises is false. In context, Hume’s point is that diversions of blood aren’t crimes against God. If they were, they would be contrary to Providence, which is enacted by the laws of nature and which no human action can violate, not even large public works that alter the face of nature.

That clarification notwithstanding, it may seem that Hume is still confused. When most people say that something is contrary to God’s will, they don’t mean that it violates the laws of nature. They suppose that God has certain preferences about how we should act, and the prohibited act is contrary to those preferences.

But Hume is speaking in his own voice and not for the sake of common religion. On his view, something is contrary to our duty to God if it’s contrary to the will of God, and the will of God (if there is a God) is expressed by the laws of nature. For Hume, “it is a kind of blasphemy to imagine, that any created being can disturb the order of the world, or invade the business of providence” (“Suicide” 586). Hume’s God isn’t interested in your praise, he isn’t testing you, and he won’t exchange rewards for penance, poverty, or pointless suffering. Insofar as he cares about what you do, you’ll do what he wants, because your actions have been determined by divine laws of nature.

4. God and the Success of Simple Methods

In Part 12 of the *Dialogues*, Philo declares his “unfeigned sentiments on this subject” of natural religion (DNR 12.9 121), which are that “a purpose, an intention, a design strikes everywhere the most careless, stupid thinker” (DNR 12.2 116). According to him, the principle that nature works by the simplest methods needs an explanation, as does the complexity of biological organisms. The explanation of these features of universe is both like and unlike a mind, in such a way that it’s arbitrary whether we should call this cause God. These doctrines constitute a kind of deism, if you arbitrarily decide that the cause of these phenomena are enough like a mind.

If these are Philo’s unfeigned sentiments, then they are very much like the views that he expresses in Part 6. If he were “obliged to defend any particular system,” he sees none better than “that which ascribes an eternal, inherent principle of order to the world, though attended with great and continual revolutions and alterations” (DNR 6.12 76). “How could things have been as they are,” he asks, “were there not an original, inherent principle of order somewhere, in thought or in matter? And it is very indifferent to which of these we give the preference” (ibid.). There has to be an inherent principle of order somewhere, but it doesn’t matter whether this principle is in thought or matter.⁶ After Hume describes this view, he implies that it entails the rejection of chance and a commitment to determinism by laws. No matter what the fundamental principle inheres in, it fixes everything in nature through laws.

⁶ In the “Letter from a Gentleman” (121) Hume reports a related dialectic concerning the force by which nature acts: “The Followers of *Epicurus* and *Strato* asserted, That this Force was original and inherent in Matter, and, operating blindly, produced all the various Effects which we behold. The *Platonick* and *Peripatetick* Schools, perceiving the Absurdity of this Proposition, ascribed the Origin of all Force to one primary efficient Cause, who first bestowed it on Matter, and successively guided it in all its Operations.” Here Hume insults the view that the original source of lawlike order is in matter as perceptibly absurd. He expresses more sympathy toward Strato’s position in earlier manuscript notes (Kemp Smith 35-6), which makes me think that Hume’s dismissal of Epicurean materialism in the Letter is one of the insincerities that sometimes accompany trying to get a job.

Philo's hypothetically compelled sentiments in Part 6 are, I think, pretty similar to his unfeigned sentiments in Part 12. In Part 12, he seems more committed at first to the cause being mental than in Part 6, but the eventual emphasis on the looseness of the similarity between the divine mind and human minds undermines that commitment.

At the end of Part 10, Philo offers another important exposition of what he really thinks. When it comes to the evidential argument from evil, "Here, Cleanthes, I find myself at ease in my argument. Here I triumph" (DNR 10.36 104). In contrast,

when we argued concerning the natural attributes of intelligence and design, I needed all my skeptical and metaphysical subtilty to elude your grasp. In many views of the universe, and of its parts, particularly the latter, the beauty and fitness of final causes strikes us with such irresistible force, that all objections appear (what I believe they really are) mere cavils and sophisms; nor can we then imagine how it was ever possible for us to repose any weight on them (ibid; Yoder 108-9).

Notice that Hume distinguishes between the argument for design as it applies to the whole universe and as it applies to its parts (Gaskin 1988: 12-17). According to Philo the version of the argument from design that appeals to the parts of the universe (that is to say, from apparent design in biological structures) is stronger than the version of the argument that applies to the whole world (that is to say, from the simplicity of the laws of nature). For illuminating Hume's conception of laws, however, the second argument is the important one.

In the *Treatise*, Hume treats the Copernicus's victory in astronomy as a victory for simplicity in science:

Here, therefore, moral philosophy is in the same condition as natural, with regard to astronomy before the time of *Copernicus*. The antients, tho' sensible of that maxim, *that nature does nothing in vain*, contriv'd such intricate systems of the heavens, as seem'd inconsistent with true philosophy, and gave place at last to something more simple and natural. To invent without scruple a new principle to every new phænomenon, instead of adapting it to the old; to overload our hypotheses with a variety of this kind; are certain proofs, that none of these principles is the just one, and that we only desire, by a number of falshoods, to cover our ignorance of the truth (T 2.1.3.7)

Nature is governed by few principles, Hume argues, so the simplicity of a theory that's adequate to a phenomenon is evidence of its truth, both in astronomy and in moral psychology (Demeter 60-2).

In Part 12 of the *Dialogues*, after arguing that the practice of anatomists illustrates the principle that nature does nothing in vain, Philo argues from this methodological premise to the existence of God:

One great foundation of the Copernican system is the maxim, *that nature acts by the simplest methods, and chooses the most proper means to any end*; and astronomers often, without thinking of it, lay this strong foundation of piety and religion . . . Thus all the sciences almost lead us insensibly to acknowledge a first intelligent Author (DNR 12.2 116-7).

I take the argument to run as follows:

1. If Copernicanism is true, then nature acts by the simplest methods
2. If nature acts by the simplest methods, then there's an intelligent designer
3. Copernicanism is true

So, 4. There's an intelligent designer

This is an interesting argument, and it's worth looking at in detail. I say this not because it shows that God exists with all his bells and whistles, but because it shows something deep about Hume's metaphysics.

Suppose that there were no source of order in the world, neither a source of order internal to the things nor a source of order outside of the things. That is, suppose that there's just an array of things with qualities at times and places and no explanatory connection between things at one time and place and things at another time and place, either when this connection is understood to arise from the things themselves or to be imposed on them from outside. On such a hypothesis, we'd expect the objects and their qualities to be arranged higglety piggledy, with no discernible patterns. Hume's appeal to simplicity in astronomy is an argument that we don't live in a higgledy-piggledy

world. If we did, then simplicity wouldn't be a guide to truth. But it is a guide to truth, since there are patterns in the world.⁷

As a matter of fact, it isn't obviously true that Copernicus's system is simpler than Ptolemy's. In order to explain the celestial longitudes of the heavenly bodies, Copernicus required 18 circles and Ptolemy only needed 15 (Gingerich 86-88). If we take the long view of the Copernican Revolution up to *Principia* in 1687, eventually Newton explains the phenomena from a handful of simple laws in a way that Ptolemy had not. In the *Enquiry*, Hume describes this development as follows:

Astronomers had long contented themselves with proving, from the phaenomena, the true motions, order, and magnitude of the heavenly bodies: Till a philosopher, at last, arose, who seems, from the happiest reasoning, to have also determined the laws and forces, by which the revolutions of the planets are governed and directed (*EHU* 1.15).

In that spirit, Hume says in the opening of the *Treatise* that recent British discoveries in natural philosophy depend on the method of rendering "all our principles as universal as possible, by tracing up our experiments to the utmost, and explaining all effects from the simplest and fewest causes" (*T* Intro 8) and that imitating this method might lead to progress in the study of human nature. In the *Dialogues*, Philo seems to identify this method with philosophy itself (*DNR* 1.9 36).

It's not *a priori* obvious that such a method will lead to success. There have to be simple principles out there to discover. The fact that the method does work tells us something about the universe.

⁷ Eric Schliesser (2010: 231) argues that this passage isn't good evidence that Hume takes simplicity to be a guide to truth, since it occurs "in context of an error theory" that there is an intelligent designer of the universe. This may be a case of reading a text in the grip of an interpretation. Schliesser's assumption that Hume rejects the argument from design in all its forms leads him to argue that Hume doesn't think of Newton as a good model of how to do philosophy, in spite of texts to the contrary (see Schliesser 2009: 170, 177, 183-5)

Thinking about the issue schematically, such patterns could arise in two ways. They could arise from the things, or they could be imposed upon the things. But Hume has strenuous doubts about the existence of intelligible, explanatory relations among the things themselves. In both the *Treatise* and the *Enquiry*, Hume defines causal relations in terms of the patterns that give rise to our ideas of causation. That makes it seem as if he thinks that causal relations are explained by the patterns in which they are embedded, and not the other way around. In the *Treatise*, he argues that if we ascribe “any real intelligible connexion” between objects, then we ascribe them to something that “is incompatible with those objects” (*T* 1.3.14.27; Stanford 2002: 346-7).

If the patterns we see in the world need explanation, and they don’t arise from the objects in the patterns, then they are imposed from the outside. From the astronomical patterns that we observe, Philo infers that those simple patterns have been imposed from the outside.

There’s a good chance that when Hume was a student at Edinburgh, he was assigned John Keill’s *Introductio ad Veram Physicam* (Barfoot 152). Newton’s first hypothesis in the first edition of *Principia* is “no more causes of natural things should be admitted than are both true and sufficient to explain their phenomena” (*Principia* 402=CW 794). Keill took that hypothesis, turned it into an axiom, and gave it a theological underpinning: “The causes of natural things are those that are simplest and suffice to explain the phenomena: for nature always proceeds in the simplest and most expeditious method, because in this way of working the Divine Wisdom reveals itself better” (*Introductio* 79=*Introduction* 89; Wilson 50). Insofar as Philo is Hume’s mouthpiece, Hume is sympathetic to the thought that Newtonian simplicity needs a theological underpinning.

5. The Obscure Nature of Hume’s God

How can we square the picture of God as the source of laws sketched in the *Natural History* and “Of Suicide” with all the skeptical arguments that Philo offers in the first eleven parts of the *Dialogues*

Concerning Natural Religion? The tidiest way to make Philo's earlier and later remarks consistent is to say that in parts 2 through 8, he is arguing against a version of the argument from design that has the conclusion that the cause of the universe is very much like a human mind. In Part 12, Philo takes this negative result as established and answers that the theist must grant that the cause of order is unlike human reason. He supplements this conclusion with a new argument that the atheist must grant that there's at least some remote similarity between human minds and the source of order (Yoder 127-8, Lorkowski 42-4). For Hume, genuine theism requires a thinking first principle who governs the world and designs its fabric (*NHR* 4.2). If so, then the question of theism depends on how much similarity to a human mind is required for us to say that something thinks. Philo argues that since that dispute is merely verbal then so is the dispute between the atheist and the theist (*DNR* 6.7 120-1; Garrett 2012: 216-7).

I think that Philo speaks for Hume on this point. Thus, those who think Hume is an atheist aren't making a mistake, nor are those who think he's a theist. At a salon held by Baron d'Holbach in 1764, Hume declares that he has never seen an atheist and doesn't believe that they existed (Kemp Smith 37-8, Mossner 483, Yoder 54-55). On the other hand, right before he dies in 1776, Hume tells James Boswell that he "never entertained any beleif in Religion since he began to read Locke and Clarke" (Mossner 597, Harris 50-1). Philo's claim that the distinction between theism and atheism is a verbal dispute gives us a way to make these two stories compatible. Hume believes in God in that he believes that there's a quasi-rational being who is the source of teleology and the laws of nature. He rejects religion in that he denies that this source has moral attributes or a close resemblance to a human mind (Gaskin 1988: 221-2). Just as Hume thinks it's a verbal dispute whether God exists, I think it's a verbal dispute whether Hume is an atheist.⁸

⁸ I grant that one can stipulate a perfectly reasonable conception of theism according to which Hume is an atheist. See, e.g., Cordry 2011: 62.

Many alternatives need to be closed off before Hume's irenic solution to the problem of theism is in the least bit plausible. After all, as Keith Yandell (41) observes, it isn't true of actual religions that they are all the same or that they are equivalent to atheism. Hume's way of thinking about religion only makes sense if you think of the argument from design as the only reason to believe in God (Yandell 42). And, indeed, Hume doesn't have much patience for other arguments for God's existence. The Epicurean in the first *Enquiry* says to his imagined audience of philosophical Athenians that they "have acknowledged, that the chief or sole argument for a divine existence (which I have never questioned) is derived from the order of nature" (*EHU* 11.10). Likewise, Hume's treatments of the cosmological argument in the *Dialogues*, of miracles in the *Enquiry*, and of enthusiasm in "Of Superstition and Enthusiasm" show that he has no sympathy for alternative arguments for theism. Hume assumes that the argument from analogy is the only one worth taking seriously, that it doesn't give us many details about the character of God, and that no religious traditions are backed up by genuine miracles.

Hume is at least lightly committed to two claims about the source of order in the universe. First, that it is singular, and second that it is, by human lights, neither morally good nor bad. In the *Natural History*, he seems to be emphatic about the singularity of the source of order in the world:

were men led into the apprehension of invisible, intelligent power by a contemplation of the works of nature, they could never possibly entertain any conception but of one single being, who bestowed existence and order on this vast machine, and adjusted all its parts, according to one regular plan or connected system (*NHR* 2.2).

It's true that Philo raises the possibility of multiple gods (*DNR* 5.8-9 69-70), but that's a character in an aporetic dialogue, while in the *Natural History* Hume is speaking in his own voice and laying out an argument for a historical thesis. And the contrast is less deep than it seems. In the *Dialogues*, Philo is mostly just raising a possibility, a possibility that Hume acknowledges in the *Natural History* with the example of the multiple sculptors who produced *Laocoön and his Sons* (*NHR* 2.2).

The second commitment is to the moral neutrality of the source of order in the universe.

Philo argues in Part 11:

There may *four* hypotheses be framed concerning the first causes of the universe: *that* they are endowed with perfect goodness, *that* they have perfect malice, *that* they are opposite and have both goodness and malice, *that* they have neither goodness nor malice. Mixed phenomena can never prove the two former unmixed principles. And the uniformity and steadiness of general laws seem to oppose the third. The fourth, therefore, seems by far the most probable (*DNR* 11.15 114; Gaskin 1988: 56-8)

This claim that God (or the gods) are morally neutral is consistent with Hume's identification of the laws of nature with God's will in "Of Suicide." There, as here, the character of the laws of nature is the best guide to divine intentions. It's also consistent with a letter to Frances Hutcheson in which Hume expresses doubts about the application of morals to divinities, "since Morality, according to your Opinion as well as mine, is determin'd merely by Sentiment, it regards only human Nature & human Life" (*Letters* 1.40).⁹

Philo argues that if we lower our standards of resemblance enough everyone will grant that there's some sort of analogy between the works of nature and the productions of art. Consequently, an atheist will have to concede "that the principle which first arranged, and still maintains, order in this universe" bears "some remote inconceivable analogy" to "the rotting of a turnip, the generation of an animal, and the structure of human thought" (*DNR* 12.7 120). Thus, probably, the cause of order in this world bears some remote analogy the workings of a human mind.

Philo's implication that God isn't necessarily more like a human mind than he is like a rotting turnip makes it seem as if Hume's concession to theism doesn't amount to much (Priest 350-1, Millican 2002: 38, P. Russell 282). It should be emphasized, however, that Hume isn't comparing

⁹ Thomas Holden (2010) argues ably and at length that Hume denies that there's a God with moral attributes, mostly for reasons connected to the ones raised in Hume's letter to Hutcheson (on this see also Lorkowski 38-9). But he denies (Ch. 6 §4) that Philo is speaking for Hume in the argument I quoted above, partially because he thinks the argument violates Hume's skeptical strictures and partially because Holden doesn't think that the argument is any good.

God to any old rotting turnip. The supposition at this point of the argument is that there's a source of order in the world, and that this source might be remotely similar to a human mind and remotely similar to a rotting turnip. It's not uncommon for theists to suppose that theism has been established once the dependency of the created world has been established. In the *Summa Theologicae*, after arguing that there's a prime mover, Aquinas adds the phrase "and this everyone understands to be God" (*ST* 1.2.3). After arguing that there's a first efficient cause, he adds, "which everyone calls God" (*ibid*). You might think that Aquinas is making a mistake here and that such arguments aren't sufficient for establishing the existence of God,¹⁰ but you aren't the Common Doctor of the Catholic Church. Early in the *Dialogues* (*DNR* 2.3 44), Philo endorses the stipulation that "the original cause of this universe (whatever it be) we call God."

More than once, Hume describes a continuum between mysticism on one end and anthropomorphism on the other (e.g. *DNR* 4.1-3 60-1, 6.6 73-4). The mystic refuses to make any assertions at all about God in ordinary human language. The anthropomorphist makes God implausibly like a human being. Hume assumes that no one really wants to be an anthropomorphite about religion. The character Cleanthes is named after a Hellenistic Stoic who probably offered an argument from design for the existence of God (*DND* 2.15, LS 54C). Of the historical Cleanthes' views on God, a character in Cicero's *De Natura Deorum* complains that "at one point he says that the world itself is God, at another he bestows this name to the mind and soul of all nature, and at another he declares that the most certain god is the ultimate, farthest, most extreme fire, which is called aether, and which surrounds everything from all sides, embracing and grasping" (*DND* 1.37).¹¹ Demea cites Malebranche (*DNR* 2.2 43) and Plotinus (*DNR* 3.12 58) to defend the view that God doesn't have a mind like us.

¹⁰ This seems to be Benjamin Cordry's position (64).

¹¹ For discussions see Dragona-Monachou (71-4, 88-92) and Meijer (37-8, 46-7, 69-70, 212-20)

For Demea and for Hume, the human soul is a composition of faculties, passions, sentiments, and ideas. In reasoning, certain ideas arrange themselves in new orders. New opinions and feelings are continually generated. None of this is compatible with the traditional conception of God as immutable and simple (*DNR* 4.2 60-1). After hearing Cleanthes say that those who believe in divine simplicity and immutability are atheists, Philo replies, “You are honouring with the appellation of atheist all the sound, orthodox, divines almost, who have treated of this subject; and you will, at last, be, yourself, found, according to your reckoning, as the only sound theist in the world” (*DNR* 4.4 61-2). Indeed, the Fourth Lateran Council canons of 1215 command Christians to believe that God is “eternal, immeasurable, omnipotent, unchangeable, incomprehensible, and ineffable,” and “one entirely simple essence, substance, or nature” (Denzinger and Schönmetzer #800).¹² Aquinas (*ST* 1.3.7, 1.9.1), Malebranche (*OC* 1.439=*ST* 231, *OC* 3.149=*ST* 625), Locke (*Essay* 2.23.35, 2.27.2), and Clarke (*EV* 34-5) all assert that God is simple and unchanging. Some thinkers remain silent on the topic, but, so far as I know, no philosopher or theologian in the medieval or early modern monotheistic traditions positively asserts that God changes or has parts.¹³

I don’t mean to say that Hume himself believes in the simplicity and immutability of the source of order in the world. In the *Natural History* he describes religious attributions of unity, infinity, simplicity, and spirituality to God as the consequences of anxious, non-rational praise (*NHR* 8.2).¹⁴ Nevertheless, Hume does believe that the source of order in the world is drastically unlike a

¹² <acknowledgement omitted>

¹³ Berkeley says that God is simple and impassive (*Alciphron* 4.21), but he thinks there’s a puzzle about attributing immutability to him (*Dialogues* 254). <acknowledgement omitted>

¹⁴ Hume believes in the impassivity of God to the extent that he denies the God can be influenced by our prayers. In a letter to William Mure, he calls petitionary prayer “very dangerous” since it “leads directly & even unavoidably to Impiety & Blasphemy,” by encouraging the “natural Infirmary of Men to imagine, that their Prayers have a direct Influence” (*L* 1.51-2; Kemp Smith 22-23).

human mind,¹⁵ and he assumes that his theologically sophisticated readers, who are independently committed to the simplicity and immutability of God, will have to agree with him.

Still, one might reasonably ask, if God is more like a rotting turnip than like a human mind, how are we supposed to think of the laws of nature as general volitions of God? Imagine what you imagine when you normally think of God willing something, but with a turnip instead. No one in the history of philosophy emphasized the conceptual distinction between cause and effect more than Hume (*T* 1.3.6.1, *EHU* 7.6-8), a separability that Hume is willing to extend to volitions (*EHU* 7.20).¹⁶ He thinks that he can conceive of any effect without its cause, including, I submit, a general volition. If you can do it as well, you can imagine laws as general volitions arising from anything.

When I say that that Hume thinks of laws of nature as something like general volitions of a deity, I'm not saying that he came to that conception out of first principles. It's a standard view at the time, and one held by philosophers he is deeply engaged with. He breaks off part of that view and modifies that fragment to make it fit into his metaphysics, his theology, and his epistemology rather than coming up with a new story from scratch. Hume is a realist and an anti-skeptic about these laws of nature, but only a skeptical quasi-theist about their source.

6. The Poverty of Divine Explanation

In works that aren't centered on theological topics, Hume doesn't say that laws of nature are expressions of the will of God. Instead, he says that they are inexplicable. In the *Treatise*, he says that

¹⁵ Demea offers the following argument for thinking that God is unlike a human mind which we may reasonably attribute to Hume: "All the *sentiments* of the human mind, gratitude, resentment, love, friendship, approbation, blame, pity, emulation, envy, have a plain reference to the state and situation of man, and are calculated for preserving the existence, and promoting the activity of such a being in such circumstances. It seems therefore unreasonable to transfer such sentiments to a supreme existence, or to suppose him actuated by them; and the phenomena, besides, of the universe will not support us in such a theory" (*DNR* 3.13 58).

¹⁶ To be clear, the argument there concerns volitions as causes of ideas

the “impossibility of explaining ultimate principles” is a feature of “all the sciences, and all the arts, in which we can employ ourselves” (*T* Introduction 10). In the first *Enquiry*, Hume writes, “no philosopher, who is rational and modest, has ever pretended to assign the ultimate cause of any natural operation, or to show distinctly the action of that power, which produces any single effect in the universe” (*EHU* 4.12). He continues,

elasticity, gravity, cohesion of parts, communication of motion by impulse; these are probably the ultimate causes and principles which we shall ever discover in nature; and we may esteem ourselves sufficiently happy, if, by accurate enquiry and reasoning, we can trace up to, or near to, these general principles. The most perfect philosophy of the natural kind only staves off our ignorance a little longer (*ibid*)

Our explanations have to come to an end somewhere.

I think that the rational and modest philosopher that Hume has foremost in mind is Locke, whom Hume calls “a just and modest Reasoner” in a footnote in the 1748 and 1750 editions of the *Enquiry* (*EHU* p. 231). Locke is rational and skeptical in his way, and he doubts our ability to give natural explanations for a similar list of phenomena. In the *Essay Concerning Human Understanding*, he writes,

The coherence and continuity of the parts of Matter; the production of Sensation in us of Colours and Sounds, *etc.* by impulse and motion; nay, the original Rules and Communication of Motion being such, wherein we can discover no natural connexion with any *Ideas* we have, we cannot but ascribe them to the arbitrary Will and good Pleasure of the Wise Architect (*Essay* 4.3.29).

The two lists of fundamental yet inexplicable phenomena share two items: cohesion and the communication of motion. Hume includes gravity and elasticity as ultimate causes and they don’t appear on Locke’s similar list; Locke attributes gravity to the will of God (*2nd Reply* 4.467-8; Hill 89-92, <author work 1>) but he suggests that there could be a mechanical explanation for the elasticity of springs (“Elasticus” 221n2, *Essay* 2.23.12; <author work 1>). Locke lists the production of ideas of secondary qualities, the continuity of matter, and the rules of motion as phenomena that can’t be naturally explained; in the *Treatise*, Hume solves the first problem by arguing that anything can cause

anything (*T* 1.4.5.30); in the *Dialogues*, Philo says that the “composition of parts, which renders [a stone] extended” is “inexplicable” and has “repugnant and contradictory” aspects (*DNR* 1.3); insofar as Hume discusses the laws of motion, it’s in his treatments of collisions and Newtonian mechanics in the first *Enquiry*.

But where Hume says that fundamental phenomena are ultimately inexplicable, Locke says we have to explain them by appealing to God’s arbitrary will. If Hume believes that the laws of nature arise from an intelligent designer or something like an intelligent designer, why isn’t he willing to say so in his writings that aren’t focused on religious subjects? We can distinguish three reasons for this stance.

The first arises from considerations that we’ve already discussed. Hume believes that there’s a source of the laws of nature and of biological teleology, and that this source is like a human intellect in some respects and unlike a human intellect in others. Given Hume’s emphasis about our ignorance of God’s nature, it’s not surprising that he isn’t impressed by the explanatory power of appeals to God. It isn’t very helpful to be told that the source of the laws of nature and biological teleology explains the laws of nature, if nothing more is said about the nature of that source.

A second reason Hume is reluctant to count the design argument as providing an explanation for the laws of nature concerns the form of the argument. Hume begins a letter to Gilbert Eliot by writing, “You wou’d perceive by the Sample I have given you, that I make Cleanthes the Hero of the Dialogue” (*Letters* 1.153). He continues, “I cou’d wish that Cleanthes’ Argument cou’d be so analys’d as to be render’d quite formal & regular” (*Letters* 1.155). It’s worth getting clear on the request for formal regularity here, since it allows us to place Cleanthes’ argument within the framework of Hume’s epistemology.

Plainly, when Hume writes that he’s looking for a more formal argument, he isn’t looking for an *a priori* argument. In the *Enquiry*, Hume argues that there can’t be an *a priori* argument for the

existence of a thing (*EHU* 12.28-29), and in Part 9 of the *Dialogues*, Cleanthes applies that argument to the special case of the existence of God (*DNR* 9.5 91). Earlier in the work, Demea is scandalized that the Cleanthes's design argument is *a posteriori* (*DNR* 2.6 45), and Philo replies that all inferences to causes have to be *a posteriori*, since *a priori*, anything can cause anything (*DNR* 2.11-17 47-49).

It seems to me that Hume allows for two kinds of formally regular *a posteriori* arguments. The first sort is the unification and simplification that aims “to reduce the principles, productive of natural phaenomena, to a greater simplicity, and to resolve the many particular effects into a few general causes” (*EHU* 4.12). The general causes he has in mind are “elasticity, gravity, cohesion of parts, communication of motion by impulse” and says that they “are probably the ultimate causes and principles which we shall ever discover in nature.” A bit of subtlety is required to figure out what general causes are in this context, but general principles are laws of nature, and Hume is schematically describing a method of discovering them. As we've seen, he attributes this method to Newton and Hume himself takes this as his model. The existence of God isn't a higher level principle in the relevant sense for Hume. It isn't an empirical generalization from which others can be derived. According to Philo, once we recognize the sources of philosophy, we'll recognize that it can only deal with matters in our experience. In religion, however, we are contemplating “objects, which, we must be sensible, are too large for our grasp” (*DNR* 1.10 37).

The second form of empirical reasoning that Hume endorses in the first *Enquiry* is the method of probabilistic judgment he describes in the section “*Of Probability*”. In cases of imperfect generalizations, we should presume that future instances of that generalization should be expected to occur “in the same proportion as they have appeared in the past” (*EHU* 6.4). We can think of this as a modified version of the straight rule, ‘modified’ since Hume doesn't believe that uniform past experience is absolutely certain to continue in the same way (Fogelin 48-9). Where the first regular

method tells us how to infer laws from particular phenomena, the second describes how to infer particular effects from particular causes and with what probability.

Hume's worry about the form of Cleanthes' argument is a worry that we only have experience of a single world and we don't have experience of the requisite conjunctions (Gaskin 1988: 24-7). Philo argues,

When two *species* of objects have always been observed to be conjoined together, I can *infer*, by custom, the existence of one wherever I *see* the existence of the other: and this I call an argument from experience. But how this argument can have place, where the objects, as in the present case, are single, individual, without parallel, or specific resemblance, may be difficult to explain (*DNR* 2.24 51).

Cleanthes replies that this objection would apply to Copernicus as well, since there's only a single earth (*DNR* 2.25 52). Philo replies that the planets and moons are other earths and that the discoveries of the Copernicans depend on assimilating these bodies to one another and generalizing about the causes of their motions (*DNR* 2.26 52-3). Hume offers a very similar argument in the *Enquiry*:

I much doubt whether it be possible for a cause to be known only by its effect (as you have all along supposed) or to be of so singular and particular a nature as to have no parallel and no similarity with any other cause or object, that has ever fallen under our observation. It is only when two *species* of objects are found to be constantly conjoined that we can infer the one from the other; and were an effect presented, which was entirely singular, and could not be comprehended under any known *species*, I do not see, that we could form any conjecture or inference at all concerning its cause (*EHU* 11.30; Logan 105, Millican 2002: 62).

As a mark of the seriousness of this difficulty within Hume's system, consider his first definition of causation in the *Enquiry*: "an object, followed by another, and where all the objects, similar to the first, are followed by objects similar to the second" (*EHU* 7.29, cf. *T* 1.3.14.31). On this definition, God won't stand in a causal relation to the patterns in the world, if there aren't any objects similar to him (Temple 24-25). We could push God into one of these regularities by saying that he's like a human designer (or like a rotting vegetable) but nothing useful would be learned by the exercise

(Temple 23). If there aren't any objects similar to God, then he can't be a cause of anything, according to that definition.

Cleanthes tries to offer arguments from analogy that are so good, that they'll lead us to abandon Humean restrictions of empirical inferences (Gaskin 1988: 51). First, suppose that a voice were to boom out of the sky everywhere at the same time, and that the words conveyed instruction worthy of a superior, benevolent being. Cleanthes says that the following would obviously be a good inference:

1. Many earthly voices convey sensible instruction and are produced by rational minds.
2. This voice conveys sensible instruction.
3. So, this voice is produced by a rational mind (*DNR* 3.2 54)

The objections Philo places against the argument from design could be placed against this argument. But this argument is obviously good, so the objections must be bad (*DNR* 3.3 54-5). Next, suppose that there were self-replicating books "containing the most refined reason and the most exquisite beauty" (*DNR* 3.5 55). We would infer that they had an ultimate, rational cause. The anatomy of animals shows stronger marks of design than a reasonable book, so we should infer that it has a rational cause (*DNR* 3.6-7 56).

After Cleanthes offers these arguments Philo is "a little embarrassed and confounded" (*DNR* 3.10 57), which seems like a suggestive piece of stage direction (Tweyman 48-50, Yoder 104). For Cleanthes, the persuasiveness of his arguments means that they don't need to obey the strictures of Humean epistemology:

if the argument for theism be, as you pretend, contradictory to the principles of logic; its universal, its irresistible influence proves clearly, that there may be arguments of a like irregular nature. Whatever cavils may be urged; an orderly world, as well as a coherent, articulate speech, will still be received as an incontestable proof of design and intention (*DNR* 3.8 57).

Hume at least considers the possibility that the convincing character of the argument from design shows its merit and shows that there are good arguments that don't meet the demands that he has placed on empirical inferences (Logan 110).

If we look again at Hume's letter to Eliot, we see that he classifies the argument from design with three other irregular arguments. Those arguments vary with respect to their persuasive power and their consequences for human life. Referring to Cleanthes' argument, Hume continues, "The Propensity of the Mind towards it, unless that Propensity were as strong & universal as that to believe in our Senses & Experience, will still, I am afraid, be esteem'd a suspicious Foundation" (*Letters* 1.155). I take the reference to belief in our senses to be a reference to the "faith in their senses" that leads human beings to believe in a mind-independent external world (*EHU* 12.7). I take his reference to belief in our experience to be a reference to the instinct "that objects, which have, in our experience, been frequently conjoined, will likewise, in other instances, be conjoined in the same manner" (*ibid.*). Those inferences are universal and irresistible. Until Cleanthes' argument is as persuasive as that, we'll still have reason to doubt it (Gaskin 1974: 289).

Hume contrasts our belief in the external world and induction with our tendency to anthropomorphize nature. To Eliot, Hume says that in order to strengthen Cleanthes' argument, we'll have to show that our inclination to trust it "is somewhat different from our Inclination to find our own Figures in the Clouds, our Face in the Moon, our Passions & Sentiments even in inanimate matter. Such an Inclination may, & ought to be controul'd, & can never be a legitimate Ground of Assent" (*Letters* 1.155). I mentioned earlier that Hume believes that the tendency to see human features in nature is the origin of polytheism. In the *Treatise*, he describes this inclination as "suppress'd by a little reflection," and says that it "only takes place in children, poets, and the antient philosophers" (*T* 1.4.3.11).

In the *Enquiry*, Hume's reasons for trusting in our faith in induction and the external world go beyond the irresistibility of the inferences. In addition, rejecting the inferences wouldn't "be beneficial to society" (*EHU* 12.23). As a matter of fact, if the Pyrrhonist's principles were adopted, "all discourse, all action would immediately cease; and men remain in a total lethargy, till the necessities of nature, unsatisfied, put an end to their miserable existence" (*ibid.*). Here is a deeper contrast that may be drawn between Hume's evaluations of induction and faith in the external world, on the one hand, and his evaluation of Cleanthes' argument on the other. For Hume trust in induction is beneficial to human life, and indeed a prerequisite for human life. In contrast, he thinks that religion as actually practiced has pernicious effects on politics, society, virtue, and sanity (Kemp Smith 11-24, Gaskin 1976: §2).

According to Philo, religious spirit leads to "factions, civil wars, persecutions, subversions of government, oppression, slavery" (*DNR* 12.11 122; Gaskin 1988: 194). Hume argues that a sacrificial spirit and contemplation of the infinite superiority of God leads to the exaltation of "monkish virtues" that distract us from true virtue and true happiness (*NHR* 10.2, cf. *NHR* 14.6-8, *DNR* 12.15-18 123-4, *EPM* 9.3; Kemp Smith 18-19; Gaskin 1988: 196-200). He also believes humans are governed by psychological law according to which "fits of excessive, enthusiastic joy, by exhausting the spirits, always prepare the way for equal fits of superstitious terror and dejection" (*DNR* 12.30 128), so "the most flattering hopes make way for the severest disappointments" (*NHR* 15.3). The best thing we can do when we're tempted by detailed positive religious doctrines is to consider all the various inconsistent religions and then make a retreat into philosophy: "enlarge our view, and opposing one species of superstition to another, set them a quarrelling; while we ourselves, during their fury and contention, happily make our escape into the calm, though obscure, regions of philosophy" (*NHR* 15.13).

So here is a third reason for Hume to avoid saying that the will of God explains the laws of nature in his writings that aren't explicitly centered on religion. He thinks that religious belief tends to be bad and that the more people have it, the less happy they'll be.¹⁷

7. Springs and Principles

Hume very often pairs the terms 'springs' and 'principles' (e.g. *T* 2.2.12.1, *EHU* 1.15, "Platonist" 158) and he twice uses the evocative expression "springs and principles of the universe" (*DNR* 2.18, 11.12). Hume uses the term 'principle' in various ways,¹⁸ but at least sometimes to refer to the laws of nature (e.g. *EHU* 8.14, *NHR* 6.2, "Contract" 470). Hume often uses the expression 'spring' for an explanatory state. In some contexts, the metaphor of a coiled mainspring isn't entirely dead (e.g. in "Idea of a Perfect Commonwealth" 529, Hume says, "rust may grow to the springs of the most accurate political machine, and disorder its motions.") Most of the time, however, he uses the term somewhat generically to refer to a state of a thing (or of the universe as a whole) that explains later motions or activities (e.g. *T* 2.3.2.2, *EHU* 8.7, *NHR* 3.1).

¹⁷ One trend in Hume scholarship has been to consider whether Hume thinks of theism as a 'natural belief' where a natural belief is a permissible one that arises out of non-rational principles (Tweyman 1986, Logan 1993, Black and Gressis 2017). Since Hume believes that all probable arguments rest on the generation of belief by non-rational associative principles, questions about the evaluation of probable arguments in his system can be paraphrased as into questions about such natural belief (compare Wadia 333-7). If we want to paraphrase my discussion above into the idiom of natural belief, we can say that in this letter to Eliot, Hume worries that a belief in God generated by an analogical argument isn't a natural belief since it isn't as universal and forceful as our beliefs in the uniformity of nature or the existence of external bodies (Wadia 340). Moreover (though he doesn't say it in the letter to Eliot), Hume thinks that other paradigmatically natural beliefs are prerequisites for living and he thinks that ordinary theistic belief generally has pernicious consequences. Tim Black and Robert Gressis argue that Cleanthes' argument part 2 must have a different form than the argument in part 3, since criticizing the first doesn't seem to undermine Cleanthes' confidence in the second. I worry that their reading twists the give and take of a lively dialogue into incompatible estimates of validity.

¹⁸ Sometimes, it seems to be an alternative expression for 'spring'. In the *Treatise* we're told that the perception of pain and pleasure is the "chief spring and moving principle" of the mind's actions (*T* 1.3.10.2).

Hume's discussion of the springs and principles of the universe in part 11 of the *Dialogues* illuminates his views on the relation between laws and causes as much as passage in the corpus. That discussion suggests that we think of the principles of the universe as the laws of nature and the springs as the physical states that are the inputs and outputs of those laws.

By part 11, Philo has backed off the claim that it's impossible for the world that we see to be the product of a perfectly benevolent God. He retreats to the claim that experience doesn't suggest that the world is the product of such a God. By way of arguing for this conclusion, Hume describes "four circumstances, on which depend all, or the greatest part of the ills, that molest sensible creatures" (DNR 11.5 107) and to argues that these circumstances seem to ones that a perfectly benevolent God would have omitted.

The second circumstance is "the conducting of the world by general laws; and this seems nowise necessary to a very perfect being (DNR 11.7 108). The world is regulated by exceptionless laws, and this causes various miseries. In describing the contingency of this fact, Philo gives a hypothetically morally perfect God two alternatives to the present situation, a heavy intervention where God acts through particular volitions rather than through general laws and a light intervention in which God uses particular volitions to change the imperceptible states of the world.

Philo asks us to consider the heavy intervention immediately after saying that it's not necessary the world to be governed by general laws. If God governed the world entirely through particular volitions, the laws of nature wouldn't exist and we could avoid the unfortunate floods, plagues, and fires that follow from them. Philo concedes that undoing the general laws of nature would upend the regularities that they entail: "if every thing were conducted by particular volitions, the course of nature would be perpetually broken, and no man could employ his reason in the conduct of life" (DNR 11.7 108). He worries that a world governed by particular volitions instead of laws wouldn't have enough salient regularities to underwrite causal inferences. This would be a

radical inconvenience, especially since Hume believes that all of our inferences about unobserved matters of fact rest on such inferences. After making the concession, Philo asks, “But might not other particular volitions remedy this inconvenience? In short, might not the Deity exterminate all ill, wherever it were to be found; and produce all good, without any preparation or long progress of causes and effects?” (*DNR* 11.7 108). Which is to say, God could immediately tell us what we would have only inferred under an system of laws and, more generally, immediately give us every other benefit that we might derive from the laws.

The hypothesis that the world might sustain so few regularities that we couldn’t make any causal inferences is hard to wrap one’s mind around. Philo follows up with a less radical hypothesis, when the order of nature is at least superficially maintained, and God only intervenes at the microphysical level. This description of a lighter intervention into the course of nature is useful for us because it shows us how Hume thinks things ordinarily run.

This second alternative is that God usually governs the world through laws, but also occasionally throws in some particular volitions that lead to happy consequences. These well-chosen miracles break the general laws by modifying some state of the world in an inconspicuous way that doesn’t interfere with our reasoning. Once a new state is in place, the general laws apply to it and carry on with the course of nature, but with more pleasant results than we would have had otherwise.

For Hume, “the irregular events, which outwardly discover themselves, can be no proof, that the laws of nature are not observed with the greatest regularity in [the human body’s] internal operations and government” (*EHU* 8.14). He supposes instead that the laws exceptionlessly govern the microphysical states of everything, but that since, “almost in every part of nature,” there are

secret “springs and principles” (*EHU* 8.13), the visible world seems to work in an irregular manner to ordinary people.¹⁹

Hume supposes that God could imperceptibly break the laws of nature by fiddling with these hidden contrary causes, in something like the way that he could raise a feather higher than the forces upon it would entail. Accordingly, he has Philo argue, “a Being, therefore, who knows the secret springs of the universe, might easily, by particular volitions, turn all these accidents to the good of mankind, and render the whole world happy, without discovering himself in any operation” (*DNR* 11.7 108). For example, “some small touches, given to CALIGULA’S brain in his infancy, might have converted him into a TRAJAN” (*DNR* 11.7 109). Philo tells us, “a few such events as these, regularly and wisely conducted, would change the face of the world; and yet would no more seem to disturb the course of nature or confound human conduct, than the present œconomy of things, where the causes are secret, and variable, and compounded” (*DNR* 11.7 108-9). After God changes a secret spring, nature runs in its usual course, and the new accident is followed by its lawful consequences. No one would be able to tell that a miracle had occurred, and we would confidently continue to rely on the uniformity of nature in our inferences.

Hume is assuming that microphysical states of the world don’t deductively entail later states of the world. If they did then God couldn’t change one of these states through a particular volition without changing a chain of preceding states. Instead Hume assumes that the world is governed by laws of nature that apply to microphysical states in a way that generates a regular course of nature and allows us to make causal inferences. In virtue of these regularities, we can call the relevant microphysical states springs, powers, and causes.

¹⁹ This picture of exceptionless laws working at the microphysical level generating irregular discoverable phenomena doesn’t square well with subjective interpretations of Humean laws of nature that make them relative to an individual’s cognitive state.

This framework of springs and principles explains a puzzling passage in §4 of the first *Enquiry*, where Hume seems to run together what he calls ‘general principles’ and ‘general causes.’²⁰ We can’t find the “causes of these general causes,” the best we can do is reduce the “ultimate causes and principles” to a short list—“elasticity, gravity, cohesion of parts, communication of motion by impulse”—and then “trace up the particular phaenomena to, or near to, these general principles” (*EHU* 4.12). In the next paragraph Hume seems to treat talk of “ultimate causes” as somehow convertible with talk of “certain laws . . . established by nature in her operations” (*EHU* 4.13) so showing that the second can only be empirically discovered shows that the first can only be thus discovered. In arguing that we don’t make inferences from hidden explanatory structures, Hume says that nature “conceals from us those powers and principles, on which the influence of these objects entirely depends” and refers to our “ignorance of natural powers and principles” (*EHU* 4.16).

Hume’s list of ultimate general causes is a list of fundamental physical forces. He doesn’t think of basic forces as ultimate constituents of the universe. Instead, he thinks of them arising out of states and laws. The relevant principles in §4 of the *Enquiry* are laws of nature and the relevant causes, springs, and powers are the states of the world that are the inputs and outputs of those laws. This explains all the conjunctive expressions (‘springs and principles,’ ‘causes and principles,’ ‘powers and principles’) that we find in his discussion.

One might think that the third general cause, cohesion of parts, isn’t a force, but it is to Newton and his followers. Newton argued that we should understand cohesion as the product of a force, since the alternatives are unattractive:

And for explaining how this may be, some have invented hooked Atoms, which is begging the Question; and others tell us that Bodies are glued together by rest, that is, by an occult Quality, or rather by nothing; and others, that they stick together by conspiring Motions, that is, by relative rest amongst themselves. I had rather infer

²⁰ <Acknowledgement omitted>

from their Cohesion, that their Particles attract one another by some Force, which in immediate Contact is exceeding strong, at small distances performs the chymical Operations above-mention'd, and reaches not far from the Particles with any sensible Effect (*Opticks* 388-9).

If we think of cohesion as a kind of force, we can think of it as governed by laws discoverable by analogy and experience.

The idea that elasticity as a property of materials is relevant to collisions was given an experimental foundation by Edmé Mariotte, who dropped ivory balls on a steel anvil covered in talc, and measured the different degrees of deformation upon impact when the balls were dropped from different heights (*Percussion* 91-2; Alexander 150-1). Leibniz argues for the universal elasticity of bodies from continuity principles and argues from the conservation of *vis viva* to universal elasticity (L 446-7=GM 6.248-9; Scott 14-16). Keill and Colin Maclaurin, on the other hand, allow for collisions between both hard and elastic bodies. Keill treats collisions between hard bodies in chapter 13 of his *Introductio* and collisions between elastic bodies in chapter 14. Maclaurin says that sometimes *vis viva* is conserved, but those who hold that it is universally conserved, “confine this theory too much to one sort of bodies [*scil.* the elastic ones], which for any thing appears from nature have no prerogative above others” (*Fluxions* 2.438n; Scott 41, Harman 222). Hume must be following the Scottish Newtonians in thinking that not every collision is explained through elasticity. If he didn’t, he wouldn’t have listed elasticity and the communication of motion through impulse as two distinct general causes.

One piece of evidence that it’s right to think of Hume’s list of general causes as a list of forces is a similar list he gives in the *Dialogues*. After Demea advances the principle that matter can’t move without a voluntary agent to initiate it, Philo replies, “Motion, in many instances, from gravity, from elasticity, from electricity, begins in matter, without any known voluntary agent” (*DNR* 8.4). Here we have a list of three forces that initiate motion. Two of them overlap with Hume’s list of

general causes. We shouldn't be surprised at the absence of cohesion from the second list, since it doesn't normally explain the production of motion.²¹

Though Hume's list of general causes is a list of forces, it's a mistake to think of Humean forces as something in addition to the underlying laws and states. This is the lesson we should draw from Hume's analysis of inertial force. For Newton inertial or implanted force is "a power of resistance, by which each body, to the degree that it is in itself, perseveres in its state, either of rest or of moving uniformly in a straight line" (*Principia* 2=CW 404). Hume protests that once you have the law there's no need to posit a force as a distinct entity:

I need not examine at length the *vis inertiae* which is so much talked of in the new philosophy, and which is ascribed to matter. We find by experience, that a body at rest or in motion continues for ever in its present state, till put from it by some new cause; and that a body impelled takes as much motion from the impelling body as it acquires itself. These are facts. When we call this a *vis inertiae*, we only mark these facts, without pretending to have any idea of the inert power; in the same manner as, when we talk of gravity, we mean certain effects, without comprehending that active power (*EHU* 7.25n16)

Experience teaches us the truth of Newton's first law and some version of the conservation of momentum. To say that bodies have an inertial force is just to say that these laws obtain, and not to posit or discover a distinct entity (Millican 2007: 232-3). Similarly, Hume tells us, with gravity. The term '*vis*' doesn't signify an intrinsic explanatory entity but rather the law of universal gravity, that bodies with given masses and at a given distance apart will generate forces that can be plugged into Newton's second law. And we may generalize to all of Hume's general causes: they aren't explanatory entities distinct from the laws of nature that correspond to them and the relevant

²¹ To explain the presence of electricity on the second list and its absence from the list of general causes, we may observe that the first *Enquiry* is written in the mid 1740s and the *Dialogues* were mostly written in the early 1750s. Leyden jars are invented in 1745. They allow for the artificial storage of electricity, and generate a wave of research. In particular, the first edition of Benjamin Franklin's *Experiments and Observations on Electricity* is published in London in 1751. Hume probably meets Franklin in 1759 and Franklin stays with Hume when he visits Edinburgh in 1771 (Labaree 426). In a letter written in 1762, Hume calls Franklin "the first philosopher, and indeed the first great man of letters" to come from America (*L* 1.357; Labaree 426).

physical states that fall under those laws. Bodies with certain features and with certain motions are followed by other patterns of motion in accordance with the laws of nature. That's all that there is to forces, considered as general causes of phenomena (Slavov 2013: 288-90).

This picture of forces as relative and arising out of circumstances and laws is confirmed by a footnote in the 1750 edition of the first *Enquiry*:

According to these explications and definitions, the idea of *power* is relative as much as that of *cause*; and both have a reference to an effect, or some other event constantly conjoined with the former. When we consider the *unknown* circumstance of an object, by which the degree or quantity of its effect is fixed and determined, we call that its power: And accordingly, it is allowed by all philosophers, that the effect is the measure of the power. But if they had any idea of power, as it is in itself, why could not they measure it in itself? The dispute whether the force of a body in motion be as its velocity, or the square of its velocity; this dispute, I say, needed not be decided by comparing its effects in equal or unequal times; but by a direct mensuration and comparison.

Note that Hume treats the ideas of force and power as interchangeable in this footnote; the analysis of the idea of cause in the text to which the footnote is attached is supposed to be analogous but distinct. Peter Millican has persuasively argued,

In saying that “the effect is the measure of the power”, Hume clearly has in mind a notion of power not as some mysterious intelligible connexion, but rather as a quantifiable *force* of the sort that plays a role in Newtonian mechanics. We cannot observe these forces, nor can we even guess in advance what their measure or functional role might be (2007: 242).

We can't figure out the force by considering the object as it is in itself. Instead, we need to look at the surrounding objects and empirically discover the relevant laws that govern the motions of those objects.

The idea of force is relative in the same sense as the idea of cause. For Hume, whether something is a cause depends on whether an object resembles a class of objects and whether all the members of this resembling class (including the initial object) are followed by objects which resemble each other. The force present in a body depends on its later degrees of motion and the degrees of motion of the bodies it collides with. These motions can either be measured by time (as

when we see how far a body moves in a given time) or by distance (as when we see how far a body moves when it is being slowed down by a contrary force). These resemblances and degrees of motion are determined by the laws of nature and ultimately by God or something like him. There's nothing in the things, considered as they are in themselves, that make them causes or gives them force.

8. Laws and Particular Causes

In the first *Enquiry*, as in the *Treatise*, Hume goes about analyzing causation by tracing the origin of our ideas of “*power, force, energy, or necessary connexion*” (EHU 7.3, cf. T 1.3.2.12-13), where the relevant necessity is not the deductive sort involved in relations of ideas, but rather that which makes us feel that causes must be followed by their effects. In pursuing this project, Hume explicitly appeals to patterns of objects in our world and doesn't call the laws of nature into question. Even if he had explicitly appealed to laws of nature in giving his analysis of causation, he would still be pursuing a worthwhile project, since, as Russell observes, causal relations aren't explicitly mentioned in the basic laws of nature.

Hume argues that we don't form the impression of causal necessity through any particular observations, since if we did, we would be able to infer the occurrence of the effect from the presence of the cause, and we can never do that (T 1.3.14.15, EHU 7.7). Having concluded that we don't get the impression of causal necessity from any particular observation, Hume recalls his account of inductive inference and asserts that the establishment of an associative connection is the only relevant difference between a single observation and the pattern required to establish an impression of necessity; so, he infers, this is the source of our impression of causal necessity (T 1.3.14.22-23, EHU 7.27-8). In light of this account of the origin our impression of causal necessity,

Hume defines particular causes in terms of the circumstances that give rise to such impressions (*T* 1.3.14.31, *EHU* 7.29).

These are honest and honorable attempts to define causal relations. Hume, unlike his Aristotelian and corpuscularian predecessors, denies that effects can be deduced from causes. On that assumption, there's a natural puzzle about what we mean when we call something a cause. Hume looks to the wider scene, in effect asking about the conditions under which we call something a cause.

Such a project is on firmer foundations if we can take the laws of nature for granted. If someone asks how a pattern comes to be instantiated or how vivacity comes to be transferred from the impression of the cause to a lively idea of the effect, Hume can point to the laws of physics and the laws of association. If someone asks what grounds these laws, he can say that explanations have to end somewhere. If someone insists on an answer, he can point piously or impiously to God or something like him.

In "Realism and Causation," Galen Strawson offers regularity theorists the following challenge. On their supposition,

there are all those mind-independent physical objects knocking about out there completely independently of us, persisting and interacting, and nothing—*nothing*—governs or orders the ways in which they do this. And yet they persist and interact in a highly regular fashion. How can this be so? It is really rather extraordinary. For, *ex hypothesi*, nothing constrains them to behave and interact in a way that exhibits any order or regularity at all (1987: 265).

A pure regularity theory of causation absurdly implies that there is no explanation here, and so a pure regularity theory of causation must be false.

It's a useful exercise for interpreters of Hume's metaphysics to consider how he might reply to Strawson's objection. I say that he would say that one of the tasks of natural philosophy is to reduce the productive principles of nature as far as possible. After a certain point, the project of reducing principles breaks down, and we can go no farther. Hume suspects that the ultimate

discoverable principles are the laws governing elasticity, gravity, cohesion, impulse, and electricity. There's no hope of explaining these general principles in turn.

We might not be satisfied with this. We might want to push and prod to find out what Hume thinks lies behind these laws. Here are clues we can find: indirect references to general volitions of God, an argument for the existence of God from the simplicity of astronomical motions, the form of Hume's argument that ordinary religion isn't based on the argument from design, and the way that Hume argues for the permissibility of suicide. The ultimate source of order is something like a human designer, but also something like a rotting turnip.

In his later book, *The Secret Connexion*, Strawson takes it upon himself to argue that Hume shouldn't be thought of as a Regularity Realist about causation, where such a realist holds both 1) "there is an external world (of physical objects) which is highly regular in its behavior" and 2) "that there is, quite definitely, *absolutely nothing at all* about the nature of the world given which it is regular in its behavior: there is *just* the regularity; that is all that causation in the world amounts to" (1989: 20-1). Thus defined, I agree that Hume is not a Regularity Theorist about causation, since he skeptically acknowledges an ultimate source of order in the world.

Elsewhere in *The Secret Connexion*, Strawson defends the thesis that Hume is a believer in Causation with a capital C, where that amounts to believing "(A) that there is something about the fundamental nature of the world in virtue of which the world is regular in its behavior; and (B) that that something is what causation is, or rather is at least an essential part of what causation is or involves" (1989: 84-5). I think we should attribute A to Hume but not B. In thinking about Hume's system, it's important to distinguish causes, laws, and the inscrutable source of the laws.²²

²² Matias Slavov argues that since Hume believes that all of our reasoning about unobserved matters of fact depend on causal reasoning, and laws of physics tell us about unobserved matters of fact, Hume must think of laws as "generalized causal principles" (2016: 9). But, as Slavov observes (2016: 31n18), not all of our thinking about matters of fact rests on causal inferences. For example, if I know that every set of Monopoly contains a pair of six-sided dice, I know that two sets contain four

If Hume thinks that God or something like him is the source of regularity in the universe, then Strawson's suggestion amounts to saying that Hume believes only God is a capital C cause and that ordinary objects and events are only called causes by analogy or by courtesy. If that reading were right then Hume would be a Malebranchian occasionalist.

There is a skeletal resemblance between Malebranche's system and Hume's, at least as Hume's theory stands in the *Enquiry*.²³ For both, God is at the hub, radiating order out to the spokes, and there aren't deductive entailments between the ordinary objects at the tips of the spokes. By the time of the *Enquiry* however, Hume takes Malebranche's denial that ordinary objects stand in causal relations to one another to be absurd. Hume's analysis of causation is intended, in part, to be a way of saving ordinary thought and talk about causes and effects. We can thus look at Hume's critique of Malebranche in the *Enquiry* as an indirect critique of Strawson's reading of Hume.

Hume takes the occasionalists to "acknowledge mind and intelligence to be, not only the ultimate and original cause of all things" (which is ordinary early modern theism) "but the immediate and sole cause of every event, which appears in nature" (*EHU* 7.21). Occasionalists deny "that one billiard-ball moves another, by a force, which it has derived from the author of nature" (*ibid.*). Hume offers three arguments against the view. The first is theological: a God who can give causal power to ordinary objects is greater than one who can't (*EHU* 7.22).²⁴ The second two he calls "more philosophical": first, that occasionalism is "so extraordinary, and so remote from common life" that

dice and that each die has twelve edges. (Slavov gives 'Cats and dogs exist' and 'All humans are mortal' as examples.) We'll distort Hume's system if we try to force the inferences that lead to these conclusions into causal frames. It's enough to say that for Hume both our confidence in the uniformity of nature and our confidence in particular causal inferences rest on principles of association.

²³ On the development of Hume's views on Malebranche between the *Treatise* and the first *Enquiry*, see <author work 2>

²⁴ There's a similar argument in Locke (*Books* 10.255; McCracken 146-7), though Hume probably doesn't know about it, since he writes that Locke "took no notice" of occasionalism (*EHU* 7.25n16).

someone who is aware of the weakness of human understanding wouldn't be convinced of it (*EHU* 7.24; McCracken 268-9), and, second, that we don't have an idea of this sort of efficacy, since the only idea of God we have is gotten by extrapolation from our own faculties, and we don't find an idea of efficacy there any more than we find it by observing bodies (*EHU* 7.25). A version of this psychological argument is the *Treatise*, where Hume acknowledges that it rests on rejecting the Cartesian belief in innate ideas (*T* 1.3.14.10).

The point of the philosophical arguments is that Hume thinks we need an account of causation that conforms with ordinary thought and ordinary experience. If we end up saying that only God is a cause with a capital C, then we'll fail to meet those desiderata.

Hume attempts to clarify our idea of necessary connection by finding the impression from which it was copied. Such impressions "are not only placed in a full light themselves, but may throw light on their correspondent ideas, which lie in obscurity" (*EHU* 7.4, cf. *T* 1.3.14.6). He wants to analyze our idea of causation by figuring out the ordinary circumstances in which we feel that one object necessitates another. Given this method, God can't count as the paradigm of causation for Hume, since he isn't an object of experience (*T* 1.3.14.10, *EHU* 7.25). He constructs his definitions of cause to deal with the ordinary causes we come across in daily life. God is no ordinary cause, and (as we've seen) he doesn't fit Hume's regularity definition of causation.

Following Garrett (1997: 107-17), I think that in the *Enquiry* Hume has an idealized observer in mind in his second definition of causation, and that this idealized observer is constructed in a way so that Hume's two definitions of causes are equivalent.²⁵ But you can interpret Hume's definitions of cause however you like. If God or something like God is the source of the lawlike order of the world and the relevant 'source of' relation is *sui generis* and can't be analyzed in the way that ordinary causes are analyzed, then the stakes are dramatically lowered on the project of giving an analysis of

²⁵ Unlike Garrett, I don't think this is true of the *Treatise*. See <author work 2>

our ordinary idea of causation. We can just explain what we ordinarily mean by causation without worrying about secret inconceivable causes or that all the patterns of the world are mere coincidences.

Hume is writing within a tradition that treats laws of nature as general volitions of God. He revises that tradition by omitting God. He does this not by denying his existence but by smaller impieties: casting doubt on the similarity between God's intellect and our own, denying that he has moral attributes, casting doubt on the design argument, and arguing that piety has a corrupting influence on daily life. (As David Berman puts it, "Hume gradually but devastatingly strips the concept of God of religious meaning" 385).

Still, Hume believes in laws, and he believes that human beings act "according to the laws which nature has established for the government of such a creature" (*EHU* 11.25). Among these ultimate laws are principles of elasticity and communication of motion governing collisions, the principles of coherence governing the ultimate constituents of matter, and the law of gravity, governing all material things. These laws come from an unknown source in something resembling the way general volitions come from an intelligent agent. We can't tell how close this resemblance is, and no good will come out of forming strong opinions about the matter. The laws fix certain patterns in the world, and when those patterns include constant conjunctions, the elements of those constant conjunctions stand in causal relations to one another. That's what Hume thinks the laws of nature are.

Bibliography

Hume's Work

- "Contract" "Of the Original Contract," in *Essays: Moral, Political, and Literary*, edited by Eugene F. Miller. Indianapolis: Liberty Fund. 1985
- "Idea of a Perfect Commonwealth" "Idea of a Perfect Commonwealth," in *Essays: Moral, Political, and Literary*, edited by Eugene F. Miller. Indianapolis: Liberty Fund. 1985
- DNR *Dialogues Concerning Natural Religion* in *Principal Writings on Religion including Dialogues Concerning Natural Religion and The Natural History of Religion*, edited by J.C.A. Gaskin. Oxford: Oxford University Press. 1993. Cited by part, paragraph, and page number
- EHU *An Enquiry Concerning Human Understanding*, edited by Tom L. Beauchamp. Oxford: Clarendon Press. 1999. Cited by section and paragraph. My reference with a page number is the Beauchamp's editorial apparatus
- EPM *An Enquiry Concerning the Principles of Morals: A Critical Edition*, edited by Tom L. Beauchamp. Oxford: Clarendon Press. 1999. Cited by section and paragraph
- "Letter from a Gentleman" "A Letter from a Gentleman to His Friend in Edinburgh," in *An Enquiry Concerning Human Understanding: with Hume's Abstract of A Treatise of Human Nature and A Letter from a Gentleman to His Friend in Edinburgh*, 2nd edition. Indianapolis: Hackett. 1993
- Letters *The Letters of David Hume*, edited by J.Y.T. Grieg, 2 volumes. Oxford: Clarendon Press. 1932. Cited by volume and page
- "The Platonist" "The Platonist," in *Essays: Moral, Political, and Literary*, edited by Eugene F. Miller. Indianapolis: Liberty Fund. 1985
- NHR *The Natural History of Religion* in *A Dissertation on the Passions and The Natural History of Religion*, edited by Tom L. Beauchamp. Oxford: Clarendon Press. 2007. Cited by section and paragraph
- "Suicide" "Of Suicide," in *Essays: Moral, Political, and Literary*, edited by Eugene F. Miller. Indianapolis: Liberty Fund. 1985
- T *A Treatise of Human Nature*, edited by David Fate Norton and Mary J. Norton. Oxford: Oxford University Press, reprinted with corrections. 2003. Cited by Book, Part, Section, and Paragraph

Cicero's Work

- DL *De Legibus* in *De Re Publica and De Legibus* with an English translation by Clinton Walker Keyes. Cambridge, Mass.: Cambridge University Press, 1928
- DND *De Natura Deorum: Liber I*, edited by Andrew R. Dyck. Cambridge: Cambridge University Press, 2003

John Locke's Work

- 2nd Reply "Mr. Locke's Reply to the Bishop of Worcester's Answer to his Second Letter," cited by volume and page in *The Works of John Locke*, 10 volumes. London: Thomas Tegg. 1823
- Books "Remarks upon Some of Mr. Norris's Books," cited by volume and page in *The Works of John Locke*, 10 volumes. London: Thomas Tegg. 1823
- "Elasticus" "Elasticus Motus," in J.R. Milton, "Locke, Medicine, and the Mechanical Philosophy," *British Journal for the History of Philosophy* 19: 451-72
- Essay *An Essay Concerning Human Understanding*, edited with an introduction by Peter H. Nidditch. Oxford: Clarendon Press. 1975. Cited by book, chapter, and section

Nicolas Malebranche's Work

- OC *Œuvres complètes de Malebranche*, 20 volumes, edited by A. Robinet. Paris: J. Vrin. 1958–84.
Cited by volume and page
- ST *The Search after Truth*, edited by Thomas M. Lennon and Paul J. Olscamp. Cambridge: Cambridge University Press. 1997
- TNG *Treatise on Nature and Grace*, translated by Patrick Riley. Oxford: Clarendon Press. 1992

Isaac Newton's Work

- Opticks* *Opticks or A Treatise of the Reflections, Refractions, Invlections, & Colours of Light*, based on the 4th edition. New York: Dover Publications. 1979.
- Principia* *Philosophiæ Naturalis Principia Mathematica*, 1st edition. London: Joseph Streater for the Royal Society, 1687
- CW *The Principia: Mathematical Principles of Natural Philosophy*, translated by I. Bernard Cohen and Anne Whitman. Berkeley: University of California Press. 1999

Gottfried Leibniz's Work

- G *Die Philosophische Schriften von Gottfried Wilhelm Leibniz*, 7 vols, edited by C.I. Gerhardt. Berlin: Weidmann, 1875-90, reprinted Hildesheim: Georg Olms, 1996
- GM *G.W. Leibniz: Mathematische Schriften*, 7 vols, edited by C.I. Gerhardt. Halle: H.W. Schmidt, 1849-63, reprinted Hildesheim: Georg Olms, 1962
- L *Philosophical Papers and Letters*, translated and edited by Leroy Loemker, 2nd edition. Dordrecht: Kluwer. 1969

Richard Bentley's Work

- 4th Sermon *A Confutation of Atheism from the Structure and Origin of Human Bodies: Being the Fourth of the Lecture Founded by the Honourable Robert Boyle*. London: J.H. for H. Mortlock. 1693
- 7th Sermon *A Confutation of Atheism from the Origin and Frame of the World: Being the Seventh of the Lecture Founded by the Honourable Robert Boyle*. London: H. Mortlock. 1693

John Keill's Work

- Introductio* *Introductio ad Veram Physicam*, 3rd edition. London: H. Clements. 1713
- Introduction* *Introduction to Natural Philosophy*. London: M. Senex. 1745. Translation of *Introductio*

George Berkeley's Work

- Alciphron* *Alciphron, or the Minute Philosopher*, in *The Works of George Berkeley: Bishop of Cloyne*, volume 3, edited by T.E. Jessop. London: Thomas Nelson. 1950. Cited by dialogue and section
- Dialogues* *Three Dialogues between Hylas and Philonous*, in *The Works of George Berkeley: Bishop of Cloyne*, volume 2, edited by T.E. Jessop. London: Thomas Nelson. 1949
- Principles* *The Principles of Human Knowledge*, in *The Works of George Berkeley: Bishop of Cloyne*, volume 2, edited by T.E. Jessop. London: Thomas Nelson. 1949

Other Sources from before 1900

- Atheism* Francis Bacon, "Of Atheism," in *The Major Works*, edited by Brian Vickers. Oxford: Oxford University Press. 1996
- EV Samuel Clarke, *A Demonstration of the Being and Attributes of God and Other Writings*, edited by Enzo Vailati. Cambridge: Cambridge University Press. 1998
- Fluxions* Colin Maclaurin, *A Treatise of Fluxions*, two volumes. Edinburgh: T. W. and T. Ruddiman's. 1742.

- LS Long, A.A. and D.N. Sedley, *The Hellenistic Philosophers*, 2 volumes. Cambridge: Cambridge University Press. 1997
- ST Thomas Aquinas, *Summa Theologica*, translated by the Fathers of the English Dominican Province, New York: Benziger Brothers, 1947. I consulted the Latin and English at dhspriority.org. Cited by book, question, and article
- Percussion Edmé Mariotte, *Traitté de la Percussion ou Chocq des Corps*, 3rd edition. Paris: Estienne Michallet. 1684

More Recent Work

- Alexander, Peter. 1994. "Solidity and Elasticity in the Seventeenth Century," in *Locke's Philosophy: Content and Context*, edited by G.A.J. Rogers. Oxford: Clarendon Press
- Beauchamp, Tom L. and Alexander Rosenberg. *Hume and the Problem of Causation*. Oxford: Oxford University Press, 1981.
- Berman, David. 1983. "David Hume and the Suppression of 'Atheism'," *Journal of the History of Philosophy* 21: 375-87
- Black, Tim and Robert Gressis. 2017. "True Religion in Hume's *Dialogues Concerning Natural Religion*," *British Journal for the History of Philosophy* 25: 244-64
- Cordry, Benjamin S. 2011. "A More Dangerous Enemy? Philo's 'Confession' and Hume's Soft Atheism," *International Journal for Philosophy of Religion* 70: 61-83
- Curd, Martin. 1996. "Miracles as Violations of Laws of Nature," in *Faith, Freedom, and Rationality: Philosophy of Religion Today*, edited by Jeff Jordan and Daniel Howard-Snyder. Lanham, Maryland: Rowman & Littlefield
- Demeter, Tamás. 2016. *David Hume and the Culture of Scottish Newtonianism: Methodology and Ideology in Enlightenment Inquiry*. Leiden: Brill.
- Denzinger, Heinrich and Peter Huenermann. *Enchiridion Symbolorum: A Compendium of Creeds, Definitions, and Declarations of the Catholic Church*, 43rd edition. San Francisco: Ignatius Press. Cited by number in the new numbering
- Dragona-Monachou, Myrto. 1976. *The Stoic Arguments for the Existence and the Providence of the Gods*. Athens: S. Saropulos's Library
- Earman, John. 2000. *Hume's Abject Failure: The Argument Against Miracles*. Oxford: Oxford University Press
- Everitt, Nicholas. 1987. "The Impossibility of Miracles," *Religious Studies* 23: 347-9
- Flew, Antony. 1969. *God & Philosophy*. New York: Delta Books
- Fogelin, Robert J. 2003. *A Defense of Hume on Miracles*. Princeton, Princeton University Press
- Garrett, Don. 1997. *Cognition and Commitment in Hume's Philosophy*. Oxford: Oxford University Press
- 2012. "What's True about Hume's 'True Religion'," *Journal of Scottish Philosophy* 10: 199-220
- Gaskin, John Charles Addison. 1974. "Hume and Natural Belief," *Philosophy* 49: 281-94
- 1976. "Hume's Critique of Religion," *Journal of the History of Philosophy* 14: 301-11
- 1988. *Hume's Philosophy of Religion*, 2nd edition. Atlantic Highlands, New Jersey: Humanities Press
- Gingerich, Owen. 1975. "'Crisis' versus Aesthetic in the Copernican Revolution," *Vistas in Astronomy* 17: 85-95
- Hardy, Lee. 2012. "Hume's Defense of True Religion," in *The Persistence of the Sacred in Modern Thought*, edited by Chris L. Firestone and Nathan A. Jacobs. South Bend: University of Notre Dame Press.
- Harman, Peter M. 1988. "Dynamics and Intelligibility: Bernoulli and MacLaurin," in *Metaphysics and Philosophy of Science in the Seventeenth and Eighteenth Centuries: Essays in Honour of Gerd Buchdahl*, edited by R.S. Woolhouse. Dordrecht: Kluwer
- Harris, James A. 2015. *Hume: An Intellectual Biography*. Cambridge: Cambridge University Press

- Harrison, Peter. 1995. "Newtonian Science, Miracles, and the Laws of Nature," *Journal of the History of Ideas* 56: 531-553
- 2008. "The Development of the Concept of Laws of Nature," in *Creation: Law and Probability*, edited by Fraser Watts. Farnham, Surrey: Ashgate
- Hill, James. 2009. "Primary Qualities, Secondary Qualities, and Locke's Impulse Principle," *British Journal for the History of Philosophy* 17: 85-98
- Holden, Thomas. 2010. *Spectres of False Divinity: Hume's Moral Atheism*. Oxford: Oxford University Press
- Hurlbutt, Robert H. III. 1985. *Hume, Newton, and the Design Argument*, revised edition. Lincoln: University of Nebraska Press.
- Kemp Smith, Norman. 1947. Introduction to *Hume's Dialogues concerning Natural Religion* by David Hume, 2nd edition. London: Thomas Nelson and Sons
- Labaree, Leonard W. 1964. "Benjamin Franklin's British Friendships," *Proceedings of the American Philosophical Society* 108: 423-8
- Logan, Beryl. 1993. *A Religion Without Talking: Religious Belief and Nature Belief in Hume's Philosophy of Religion*. New York: Peter Lang.
- Lorkowski, Chris Michael. 2015. "Mysticism, Evil, and Cleanthes' Dilemma," *International Journal of Philosophy and Theology* 76: 36-48
- Maudlin, Tim. 2007. *The Metaphysics Within Physics*. Oxford: Oxford University Press
- McCracken, Charles J. 1983. *Malebranche and British Philosophy*. Oxford: Clarendon Press
- McKinnon, Alistair. 1967. "'Miracle' and 'Paradox,'" *American Philosophical Quarterly* 4: 308-14
- Metzger, Hélène. 1938. *Attraction Universelle et Religion Naturelle chez quelques Commentateurs Anglais de Newton*. Paris: Hermann & Cie
- Millican, Peter. 2002. "The Context, Aims, and Structure of Hume's First *Enquiry*," in *Reading Hume on Human Understanding*. Oxford: Oxford University Press
- 2007. "Against the New Hume," in *The New Hume Debate*, revised edition. London: Routledge
- Mossner, Ernest Campbell. 1980. *The Life of David Hume*, 2nd edition. Oxford: Oxford University Press
- Nadler, Steven. 2011. "Occasionalism and General Will in Malebranche," in *Occasionalism*. Oxford: Oxford University Press
- Ott, Walter. 2009. *Causation and Laws of Nature in Early Modern Philosophy*. Oxford: Oxford University Press
- Priest, Graham. 1985. "Hume's Final Argument," *History of Philosophy Quarterly* 2: 349-52
- Radner, Daisie. 1978. *Malebranche: A Study of a Cartesian System*. Amsterdam: Van Gorcum, Assen
- Russell, Bertrand. 1918. "On the Notion of Cause," in *Mysticism and Logic*. London: Longmans, Green. Republished in 2004, Mineola, NY: Dover Books.
- Russell, Paul. 2008. *The Riddle of Hume's Treatise: Scepticism, Naturalism, and Irreligion*. Oxford: Oxford University Press
- Schliesser, Eric. 2009. "Hume's Attack on Newton's Philosophy," *Enlightenment and Dissent* 25: 167-203.
- 2010. "Copernican Revolutions Revisited in Adam Smith by Way of David Hume," *Revista Empresa y Humanismo* 13: 213-48
- Scott, Wilson L. 1970. *The Conflict between Atomism and Conservation Theory: 1644 to 1860*. London: Macdonald
- Slavov, Matias. 2013. "Newton's Law of Universal Gravitation and Hume's Conception of Causality," *Philosophia Naturalis* 50: 277-305
- 2016. "Hume on the Laws of Dynamics: The Tacit Assumption of Mechanism," *Hume Studies* 42: 113-36. Page references are to the version archived at philpapers.org

- Stanford, P. Kyle. 2002. "The Manifest Connection: Causation, Meaning, and David Hume," *Journal of the History of Philosophy* 40: 339-60
- Strawson, Galen. 1987. "Realism and Causation," *The Philosophical Quarterly* 37: 253-77
- . 1989. *The Secret Connexion: Causation, Realism, and David Hume*. Oxford: Clarendon Press
- Swartz, Norman. 2003. *The Concept of Physical Law*, 2nd edition <https://www.sfu.ca/~swartz/physical-law/cpl-all.pdf>
- Temple, Dennis. 1992. "Hume's Logical Objection to Argument from Design Based on the Uniqueness of the Universe," *Religious Studies* 28: 19-30
- Tweyman, Stanley. 1986. *Scepticism and Belief in Hume's Dialogues Concerning Natural Religion*. Dordrecht: Martinus Nijhoff
- Wadia, Pheroze S. 1978. "Professor Pike on Part III of Hume's *Dialogues*," *Religious Studies* 14: 325-42
- Walsh, Julie and Eric Stencil. 2016. "Malebranche on the Metaphysics and Epistemology of Particular Volitions," *Journal of the History of Philosophy* 54: 227-56
- Watson, Brandon. 2011. "On Hume's Full Definition of Miracles," *Siris*, April 30, 2011, <http://branemrys.blogspot.com/2011/04/on-humes-full-definition-of-miracles.html>
- Wilson, David B. 2009. *Seeking Nature's Logic: Natural Philosophy in the Scottish Enlightenment*. University Park: Pennsylvania State University Press.
- Yoder, Timothy S. 2008. *Hume on God: Irony, Deism, and Genuine Theism*. London: Continuum Books