HUME’S FACULTY-BASED ACCOUNT OF REASONING

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By

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ABSTRACT

I resolve several longstanding disputes about Hume’s view of reasoning and his faculty psychology by clarifying Hume’s use of terms related to reasoning. After first arguing that Hume uses many terms in more than one sense without alerting his reader to this fact, I present a novel interpretation that takes the activity term “reasoning” and the faculty term “reason” each to have two distinct uses. I use this framework, along with my explication of why Hume posits the faculties that he does, to explain why the understanding—or, the faculty of conception—should be seen as the chief cognitive faculty. This means that all other faculties (e.g., imagination, memory, and both faculties of reason) should be seen as subsfaculties of the understanding for Hume. Having explicated Hume’s faculty psychology, I explain why his insights in this arena remain relevant today; put simply, I argue that Hume’s claims about the mind stem directly from his scientific naturalism and that the theses derived from this naturalism fit together to form a coherent framework for studying the mind. I conclude by showing how this same framework appears in the Humean views recently articulated by Jerry Fodor, Peter Carruthers, and Jesse Prinz.
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Introduction: Hume, Reason

David Hume is a pivotal scholar in the English-speaking philosophical tradition. Hume’s training in logic—a general term that captures aspects of today’s conception of logic as well as the psychological processes that underlie cognition—was Aristotelian in character, but he was also educated in the new mechanical sciences and had access to the accompanying natural philosophy. This mix of influences makes him unique amongst the prominent figures from the Early Modern period in Great Britain: his philosophical education was scholastic, but his scientific education was notably Modern. That Edinburgh’s curriculum for young students so heavily endorsed Scholastic logic separates Hume from Berkeley, whose philosophical training was primarily Modern.¹

Hume was familiar with and deeply influenced by the new science and mechanistic philosophy of his time. Hume’s attempt to apply this new scientific method to novel subjects bequeaths us a number of problems, both philosophical and interpretational. Early interpreters of Hume, typified by Reid and Beattie, took it to be obvious that Hume was skeptical and that his arguments rendered our inductive inferences unjustified (or at least attempted to do so).

Reid says of the author of the Treatise of Human Nature—Reid does not identify Hume by name—that

It seems to be a peculiar strain of humour in this author, to set out in his introduction by promising, with a grave face, no less than a complete system of the sciences, upon a foundation entirely new—to wit, that of human nature—when the intention of the whole work is to shew, that there is neither human nature nor science in the world. (Reid 1983, 8)

¹ Regarding Hume’s intellectual background, M.A. Stewart (2005) presents a very careful overview; sections I and II cover Hume’s time at college in Edinburgh. See Echelbarger (1997) for a discussion of Hume’s training in and influence by both Scholastic and Modern logics. Barfoot (1990) covers Hume’s training in natural science; particularly instructive is the emphasis placed on Boyle. See Downing (2011) regarding Berkeley’s education.
On Reid’s interpretation, Hume carries Berkeley’s principles “to their full length.” In so doing, Hume undermines personal identity and he “leaves nothing in nature but ideas and impressions, without any subject on which they may be impressed.” Science is thus undermined because induction has been undermined, compromised in part by Hume’s radical view of personal identity. The question of whether induction can be justified or its conclusions warranted came to be known as “Hume’s Problem.”

Later interpreters contested the conclusion that Hume’s goal was to render induction unjustified, and the early interpretive consensus gave way to a scholarly debate, beginning with Kemp Smith (1905), about whether and to what extent Hume should be interpreted as skeptical. Within this larger debate about skepticism generally, there were debates about skepticism with respect to more particular issues: the senses, reason, causation, &c. These debates continued well into the latter half of the 20th century.

In the last half of the 20th century, however, a new genus of interpretation arrived, started by Beauchamp & Mappes (1975). This view takes it that one of Hume’s key concern in the sections often taken to be the loci classici for skepticism about induction—Treatise 1.3.6 and section 4 of the first Enquiry—is to describe the features of induction as it is practiced by humans, and give an explanation of the mental mechanisms by which it works. This genus of view is further developed by Beauchamp & Rosenberg (1981) and others. Hume’s arguments about the

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2 Loeb (2006), particularly the first section, surveys nicely the history of interpretation. In my account here, I draw heavily on this work.

3 An admittedly incomplete—though chronological—catalog of statements in the debates over how skeptical Hume is, what the contours and limits of the skepticism are, and with respect to which issues Hume is skeptical includes Kemp Smith (1905, 1941), Ducasse (1926), Russell (1945), Quine (1946), Will (1947), Popkin (1951), Flew (1961), Ayer (1963), Stove (1973), Robison (1973), Stroud (1977), Pencelhum (1979), and Wilson (1984).

inferences that generate human beliefs regarding unobserved matters of fact, they took it, depend crucially on his view of what human reasoning is and how it works. Apropos of his position with respect to the new mechanistic physics and its explanatory successes in astronomy, ballistics, physiology, &c., this view sees Hume as trying to determine how the unseen springs, pulleys and levers of the human mind eventuate in the fantastic variety of behaviors we see humans evince on a daily basis. Still, though, the proponents of this view agreed that Hume was concerned about whether the inductive inferences we regularly engage in could be justified or how the conclusions reached could be warranted.

In the late 1990s, a new species of this view emerged, one that doubled down on the descriptive character of Hume’s project. It is not just Treatise 1.3.6, they argued, that is free of normative epistemological content. This new species of view, articulated both by Don Garrett and by David Owen, eschews the supposition held by prior interpreters that Hume was worried about whether induction was justified at all in part 3 of Book I, instead claiming that concerns about the justificatory status of our reasonings were put off until part 4 of Book I.5

One place where prior interpreters faltered, Garrett and Owen each claimed, was in not adequately distinguishing Hume’s categories of demonstrative and probable reasoning from the contemporary categories of deductive and inductive reasoning. Nor was Hume’s conception of argument like the conception philosophers have now. Instead, they argued, Hume’s view of argumentation arises more directly from his theory of impressions, ideas, and the dynamics that obtain between them. This new understanding of Hume’s view of reasoning, they took it, would

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prove to be the key to understanding his views regarding the nature and limitations of human reason.

Like these prior interpreters that take Hume’s aim to be primarily descriptive, in this dissertation I argue that Hume is involved in a very early form of cognitive science in Treatise 1.3 and Enquiry 4. I provide an interpretation that depicts Hume as articulating a descriptive psychology that, building on our observations, gives us a picture of how the mind works that is consistent with the new science he finds himself embedded in (while, at the same time, rebuffing more traditional conceptions). Each of the descriptive views I have described takes it that Hume’s adventure into the workings of the mind would lead him to conclusions about the nature of reasoning and, more broadly, the nature of inference itself. These conclusions in turn had consequences for thinking about causal reasoning, objects, ourselves, morality, &c. Determining the character of reasoning and inference was just one part of this larger project, but a particularly interesting and fruitful one. My view mirrors the more extreme descriptive views of Garrett and Owen, claiming that Hume’s project in this part of the Treatise (and the corresponding parts of the first Enquiry) is primarily one of cognitive science.6

In this dissertation, I correct and bring to final fruition the new direction in Hume scholarship originated by Beauchamp & Mappes. I show how the weaknesses of Garrett and Owen’s more thoroughly descriptive interpretation of Hume can be fixed and the disagreements within its ranks quelled. I focus primarily on Hume’s view of human reasoning and faculty psychology, eschewing discussions of justification and inductive skepticism. I further the interpretive tradition in two ways. First, I make extensive use of Hume’s widely ignored or

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6 Though just because it is primarily descriptive does not mean that it is purely descriptive: Garrett sees Hume as engaging in a partially descriptive, partially normative project that seeks to show what could possibly underpin or justify the practice of induction. This point is dealt with at much greater depth later.
neglected sections on non-human animal reasoning. These texts give us new information on Hume’s view of reasoning that prior interpretations have not dealt with adequately. Second, I take a close and direct view of Hume’s terms themselves. Aside from some attention to how many senses of “reason” Hume deploys and some disagreement over the nature of the phrase “founded on,” Hume’s individual terms have not been interrogated with respect to their univocity or consistency. I show that several key terms have either been misinterpreted or not properly disambiguated.

Over the course of the dissertation, I develop and defend what I take to be the correct interpretation of Hume’s view of reasoning and the faculties of the mind. I articulate the basis on which Hume posits psychological faculties, suggesting that they result from observed mental activity. These mental activities come in sets and sub-sets, and by determining the defining activity for a faculty, we can determine that faculty’s place in the overall structure. I argue that, for Hume, “the understanding” picks out the faculty of conception; that is, that the faculty of the understanding’s primary activity is coming to conceive. All other cognitive (i.e., non-passionate) actions of the mind are more specific ways of coming to conceive, I argue; thus all other cognitive faculties—imagination, memory, reason, &c.—are subfaculties of the understanding.

My interpretation is that Hume aims to do just what the subtitle of the Treatise claims: show how new ideas about what reasoning consists in can help investigate and clarify how the mind works. In the final chapter, I show how the science of mind Hume develops is still relevant by illustrating its influence over contemporary philosophers of psychology and cognitive science. Hume’s view, I argue, comprises five distinct theses that, taken together, articulate a consistent and coherent specification of his scientific naturalism about the mind. By so doing, Hume makes available a framework for understanding the human mind that is still being deployed today.
Chapter 1: Terminological Inexactitude

Hume’s discussion of human reason has deep roots in the philosophy that came before him, and the vocabulary that he uses reflects this. Hume was versed in the Scholastic tradition, along with Early Modern responses to and reformulations of this tradition. Hume’s vocabulary for human reasoning is quite complex. It includes terms for certain mental activities, the results of those activities and the faculties that produce those activities, e.g., respectively, “reasoning,” “proofs” and “the understanding.” Hume does not simply appropriate the vocabulary of his predecessors, and doing so would be difficult anyway: some key terms change in meaning in the shift between the Scholastics and the Early Moderns. Hume will often use terms in novel ways or disambiguate them in ways different than his predecessors did. Hume also introduces definitions for some terms (e.g., “proof”) and taxonomies of kinds within the larger kinds (e.g., his taxonomy of the “province of intuition,” which is itself nested within the division of knowledge, which is in turn within human reason).

This inventive and complex vocabulary is appropriate for a system of works—Hume’s *An Enquiry Concerning Human Understanding* and Book I of his *A Treatise of Human Nature*¹—focused on giving a substantially new account of human understanding and the capabilities and limits of human reason. Hume’s writing seems very clear but I will argue that the smoothness of Hume’s writing obscures the unclarities and inconsistencies in Hume’s use of these terms related to human reasoning. The way several of Hume’s key terms have been understood is insufficiently exact to sustain an interpretation. Any attempt to explicate Hume’s view will be

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¹ Hereafter, I will refer to the *Enquiry* as *EHU* (or “the first *Enquiry*”) and *A Treatise*... as the *Treatise*. I will also follow common practice and cite Hume’s works by section and paragraph number, with the appropriate preceding initials, e.g., *Treatise* Bk. I, Part 4, Section 1, paragraph 2 would be rendered as T 1.4.1.2. All citations are to the Norton & Norton edition of the *Treatise* and the Oxford edition of *EHU*, ed. T.L. Beauchamp, cited in the bibliography as Hume (2000) and Hume (1999), respectively.
subject to counterexamples from the text or will lack significant interpretational *desiderata* if it does not first attend to the meanings of these key terms. Hume’s usage of key terms related to human reasoning is inexact in a number of ways; in this chapter alone I will show how Hume leaves crucial terms undefined, how there is systemic unclarity about how terms in “or” constructions are related, and how the terms he does define are often used in a sense inconsistent with the definition.

After I address some methodological concerns and explicate the first two of these kinds of inexactitude, I will suggest that, in light of this inexactitude, we must determine the different senses and carefully vet the arguments that make use of these terms: by attending to the implicit meanings of these terms, we can resolve the difficulties Hume’s inexact usage presents to us.² In the latter half of the chapter, I will show how one group of terms suffers from the last species of inexactitude, work to identify the different senses, and recover their meanings.

I. Prima facie methodological concerns addressed

Before I move to the examples, I want to clear up two potential issues. First, why should we assume that Hume’s use of these terms is coherent? The first *Enquiry* and Bk. I of the *Treatise* are primarily concerned with how human reasoning works, starting with the most basic

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² I mean “terminological inexactitude” throughout to be read literally, not in the—perhaps more common—sense of dissembling or lying. All I mean to accuse Hume of, in saying that his texts evince this sort of inexactitude, is that his use of terms suffers various defects that make interpretation difficult, such as un-noted or un-noticed polysemy of important terms, ambiguous constructions that cannot be uniformly disambiguated, obscure meanings for technical terms, &c. Basically, I mean to say that Hume’s writing, while mellifluous, needs its terms to be systematically disambiguated, precisified and have their meanings made explicit in order to sustain an interpretation of the text. As such, I will use “terminological inexactitude” as a blanket term for all of these faults, and identify more specific faults (such as ambiguity) as appropriate.
cognitive capacities of humans and concluding by examining reason’s limitations. Given that the focus of these books is human reasoning, to assume from the outset that Hume’s usage of reasoning terms is intractably inconsistent or equivocal would be supremely uncharitable. Charity demands we take Hume’s view to be broadly consistent unless we find insurmountable philosophical problems. If interpreting Hume’s terms univocally leads to problems, though, charity demands we abandon univocal use of terms in search of a consistent, coherent view. It is this latter path I will follow, reverse-engineering a set of definitions by carefully attending to Hume’s (admittedly untidy) usage.

The second worry is one that is particular to Hume. One might worry that comparing the Treatise and the first Enquiry is what generates the inconsistency in Hume’s use of his terms. If this is the source of the inconsistency, why should we think that matters? Each work, this concern would conclude, could have its own interpretive vocabulary. My response is that while there are no doubt issues to be found by relating Hume’s usage of certain terms in the early work to his usage in the later work, these are not the issues that I will be exploring. That is, though there are some clear shifts in how certain words get used between the two works these shifts do not generate the tensions I will explicate. So, though the Treatise and EHU do differ in the arguments they provide—sometimes substantially—my investigation concerns Hume’s usage of

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3 Both works begin their discussion of the human mind with its simple constituents, impressions and ideas (T 1.1.1.1, EHU 2.3).

4 Both works conclude with discussion of skepticism with regard to reason (T 1.4, EHU 12).

5 Hume’s occasional unclarity is useful in evaluating the text, too: it enables us to delineate the areas where Hume’s thinking is less clear and focus on these areas as possible sources of interpretational disputes or sources of error in Hume’s arguments or logic. Assuming that Hume’s view is largely consistent and coherent and that this consistency is covered up by some infelicitous usages grants us additional interpretational opportunities.

6 e.g., “knowledge,” which is used just to mean something like ‘certainty resulting from the comparison of ideas’ in the Treatise is used in a sense much closer to the contemporary sense in EHU. I do discuss “knowledge” very briefly in note 22 below.
the terms on which the arguments are based, not the arguments themselves; i.e., I am investigating what he means to be referring to when he uses the term “inference,” and not the arguments that make use of that term.

II. Two examples of inexactitude

In discussing human reason, Hume’s usage of terms is inexact in multifarious ways. I show two of the ways Hume’s usage is inexact in subsections (A) and (B) below. I address these two ways because each makes a particular point: Hume does not define the key term “argument,” as discussed in (A), and this leaves open to interpretation (and re-interpretation) one of his most critical arguments. That Hume fails to be explicit about how he means for certain pairs of terms to be related in “or”-constructions, as discussed in subsection (B), means that interpreters can be misled about how those terms are related if they do not carefully focus on the meanings of the terms themselves.

A. Crucial terms undefined

The first kind of inexactitude results from the fact that Hume leaves crucial terms undefined. Take Hume’s famous “negative argument” from Treatise 1.3.6 and Enquiry 4 to the conclusion that our beliefs about unobserved matters of fact are not “determin’d by reason” (T 1.3.6.12). In order to establish this conclusion, Hume relies on results he proves along the way, e.g., that “there are no demonstrative arguments to prove, that those instances, of which we have had no experience, resemble those, of which we have had experience” (T 1.3.6.4, italics in the original).7

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7 Or, as it appears in the first Enquiry, “that there are no demonstrative arguments in this case.” (EHU 4.18)
Hume is denying that there can be a particular sort of argument for a certain kind of conclusion. But there is dispute about what Hume means to be showing by claiming that humans are not “determin’d by reason” in the negative argument’s final conclusion. To determine this, we are called on to interpret the term “argument” in these intermediate conclusions.

But Hume does not tell us precisely what class of things “argument” is supposed to refer to. The broad contours are easy enough to see: arguments are supposed to play some role in our mental lives, some other items in our mental economy are supposed to be “founded” on them, &c. But there is no account of just what an argument is.

This might seem like a technicality: we might think that Hume’s usage should make it apparent what he means by “argument,” and/or that it probably does not matter much just what Hume’s precise conception of argument is. These are prima facie reasonable suppositions but in reality there has been significant scholarly disagreement about just what the word “argument” is supposed to mean in these passages, and how one interprets “argument” can drastically alter one’s reading of the conclusion.

For instance, the commentator D.C. Stove (1973) claims that when Hume uses the term he means something like our contemporary conception of a deductively valid argument, i.e., a set of (logically) linked claims that establish some conclusion, and, in order to save some of Hume’s claims from triviality, Stove extends this conception to include the codicil that they must also have necessarily true premises. Stove interprets Hume as claiming that this criterion cannot be met by certain sorts of arguments and resultantly casts Hume as inductive skeptic. Beauchamp & Rosenberg (1981) adopt the same definition of argument, and this leads them to deny that Hume is an inductive skeptic, because, given this interpretation of “argument,” the conclusion is a
narrow rejoinder to the rationalist not a broad deliverance on reasoning, generally. Thus, Stove and Beauchamp & Rosenberg come to opposite but related conclusions.

Owen (1999), by contrast, claims that Hume’s conception of argument is nothing like the contemporary conception. As a result, Owen claims that the “negative argument” is not even about the same thing that Stove and Beauchamp & Rosenberg thought. By shifting what one of the crucial terms means, we are able to shift the entire focus of the argument and redefine the place it holds in the progression of ideas in Treatise Bk. I and EHU.

Owen presents much evidence against the Stove and Beauchamp & Rosenberg readings, and the final reading that Owen presents is open to much criticism. This illustrates that each view I have presented here is open to some counter-evidence. The availability of counter-evidence for every existent view in turn suggests that none of them are the final, correct interpretation.

The currently available interpretations are unstable due to this countervailing evidence to each. The state of affairs in interpreting the negative argument approximates a gestalt swap: depending on how one thinks about certain terms, one interpretation or another will make itself evident in the text. This is unstable, though, because by reading other interpreters who make other terms or definitions salient, that interpretation will become the evidently correct one. By

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8 Owen claims that it is about the causal etiology of our beliefs about matters of fact (i.e., the psychological processes that result in humans having certain sorts of beliefs) and not at all about their justification or warrant.

9 See, for instance, the exchanges found in Garrett (2000, 2001) and Owen (2000, 2001).

10 These are just three examples that show starkly how the understanding of the word “argument” bears on our understanding of Hume. Other examples can be found in Millican (2002) and Garrett (1997).

11 While it might not be the case for every historical figure, everyone involved in the debate seems to believe that there is or should be a coherent, consistent version of Hume available: he appears to be careful, he defends substantially the same views over the course of his career, and his starting points are easily explicable and well-known. In light of this commitment of the interpretive community, it would seem that the extent to which the current views are plagued by counter-evidence is problematic.
examining the terms themselves, I mean to surmount this difficulty (and these interpretations). By determining the meaning of the word “argument” and other, related terms, I will develop a stable framework that can be used, in turn, to determine the correct interpretation of the text itself.

Hume does not define argument (and other crucial terms), and the lack of specification leads to interpretive difficulties. Only by finding Hume’s implicit meanings can we delineate the correct interpretation.

B. Unclear relationships of terms in “or” constructions

A second form of terminological inexactitude stems from Hume’s habit of deploying constructions that claim that a phenomenon does (or does not) result from something or something else. This can make his writing easier to get an initial grip on. With these constructions, though, it is not always clear if the two items wedded together by “or” are being treated as closely related, contrasting, or synonymous. When an “or” is used to highlight closely related items, we see two items that are similar. “Or,” when used to show contrast, gives us a range that emphasizes the breadth of the conclusion. Finally, “or” can be used to aid comprehension by giving us items that are equivalent, but might be known by a different name.

I want to treat these uses of “or” as distinct from the disjunctive arguments that Hume gives, e.g., when he deploys neither…nor… or either…or… constructions. What I am concerned with are not disjunctive conclusions that Hume is giving, but rather what appear to be Hume’s way of making the text easier to understand. As such, I have selected a very narrow range of uses of “or,” but these uses form a distinct class. These three sentences should serve as a guide to the three types:

1. Similar terms: “I could go for some apples or pears.”
2. Contrasting terms: “I wouldn’t say no to some cereal or a steak.”
3. Synonymous terms: “I love eating pancakes or flapjacks.”

Synonymous uses of “or” are usually written in contemporary English with parentheses around the second item, e.g., “I love eating pancakes (or flapjacks).” but there is no indication that Hume employs this convention in these works.
Hume uses a lot of or-clauses, and—in part because he has not defined any of the terms—it is not always clear how Hume intends the “or” to be taken. Consider the list below from *EHU* 4 and 5:

(A) “Our conclusions from that experience are *not* founded on reasoning, or any process of the understanding.” (EHU 4.15, italics original)

(B) “Now this is a process of the mind or thought, of which…” (EHU 4.16)

(C) “…without some new argument or inference” (EHU 4.21)

(D) “…by any process of argument or ratiocination.” (EHU 4.23)

(E) “… which is not supported by any argument or process of the understanding.” (EHU 5.2)

(F) “… without being impelled by any reasoning or process of the understanding.” (EHU 5.5)

(G) “This principle is *custom* or *habit*.” (EHU 5.5)

(H) “…which no reasoning or process of the thought and understanding is able, either to produce, or to prevent.” (EHU 5.8)

(I) “This process of the thought or reasoning…” (EHU 6.2)

And just a few from a small stretch of the Treatise, including one that uses “and” instead:

(J) “we shall now examine the nature of that inference, and of the transition from the impression to the idea.” (T 1.3.6.3)

(K) “A LIVELY IDEA RELATED TO OR ASSOCIATED WITH A PRESENT IMPRESSION.” (T 1.3.7.5)

(L) “… without any new operation of the reason or imagination.” (T 1.3.8.10)

(M) “… that the understanding or imagination can draw inferences from past experience, without reflecting on it.” (T 1.3.8.13)

Sometimes the relationship seems fairly straightforward, as in (B), (G) and (J), which seem to provide synonyms. Sometimes, as in (D) and (K), we have a contrastive “or” where one
term is supposed to be a narrower specification of the other. Hume sometimes just seems to want to expand the scope of the conclusion with a contrastive “or,” as in (C) and (M).

These different usages of the same construction make it hard to see the relationship the construction is trying to express in many cases. Take quotation (E), which relates “argument” to “process of the understanding” and quotation (F), which relates “reasoning” to “process of the understanding” (as does quotation (A)). If, in each case, the terms on either side of the “or” are synonymous, then “argument” and “reasoning” will be interchangeable for Hume. This would be a significant result, but one we would be entitled to only if every “or” construction in Hume rested on synonymy. But they do not, so we need to provide an argument for this interpretation, because it faces the following *prima facie* problem: it results in a contradiction (or, at the very least, a deeply infelicitous use of terms): in quotation (E), Hume says that in some reasonings there is a “step taken by the mind” that is not supported by “any argument or process of the understanding.” If we treat the instances of “or” in (E) and (F) as synonymy-conveying, we get the result that some reasonings are not instances of reasoning: this result follows because there would be a step in an instance of reasoning that is not itself reasoning. This would seem to mean that what Hume explicitly calls reasoning there is not reasoning.

This may well be Hume’s view, but to arrive at it on the supposition that “or” always relates synonymy is too quick. Given that “or” is a natural language conjunction, this should not be surprising: there is a depth and variety of use to natural language conjunctions that cannot

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14 Some of these claims about how the “or” is to be read are substantial interpretational claims on my part. But the point—that Hume uses “or” in at least these three senses—should still be clear.

15 “Though we should conclude, for instance, as in the foregoing section, that, in all reasonings from experience, there is a step taken by the mind, which is not supported by any argument or process of the understanding…” (EHU 5.2)

16 To drastically oversimplify to make the point clear: if argument = process of the understanding = reasoning, but reasonings (from experience) ≠ argument, then, by substitution, reasonings (from experience) ≠ reasoning.
always be captured by one strict interpretive rule. Interpreting “or”-constructions like these as always conveying synonymy, then, is a substantive conclusion, one that requires an interpretation of the relevant terms that makes their usage here consistent. In addition, the interpretation should explain the appearance of other usages elsewhere. It must also account for the different uses of “or” constructions. Blindly treating the “or” as univocally substitutional results in a contradiction (or an infelicity) that requires explaining. Alternatively, treating both the instances of “or” as being contrastive uses, particularly the widening usage of, e.g., quotation (C), makes quotations (E) and (F) consistent but uninformative.

Either way we do it, treating the instances of “or” in these seemingly nearly identical constructions with the same interpretation precipitates interpretational difficulties. But treating these instances of “or” differently requires an explanation and defense. It should be clear that there is no way to interpret “or” as having just one meaning, even if we confine our efforts to one bit of text and/or one set of terms.

There are two, interrelated conclusions to be drawn from this example: first, we must be sensitive to the interpretational issues that the different uses of “or” can produce and be careful that our interpretations of the other (defined or undefined) content terms do not hinge on treating these instances of “or” in one particular way or another (without some good, independent

17 Additionally, quotation (I) further complicates matters, by introducing “process of thought,” which does not seem straightforwardly like a substitution for “process of the understanding,” especially given the way those two are related by quotation (H).

18 Instances of reasoning from experience, on this interpretation, are not arguments, and, insofar as they are not arguments, they are not--qua argument--in the containing set, the set of processes of the understanding. All (F) then claims is that instances of “reasoning” are also members of the containing set of processes of the understanding; this allows that “reasonings” and “reasonings from experience” are included qua reasonings in the set of processes of the understanding, but are not arguments (and so are not included qua argument). This makes the quotations consistent with each other. The problem with this reading is that the two phrases, taken as wholes in their respective arguments, are supposed to be equivalent. If we treat these instances of “or” as cases of contrastive widening, then we make the internal relations consistent at the price of making the complete phrases inconsistent.
reason). Second, the relationships that Hume’s reasoning terms bear to each other—i.e., the terms “argument,” “inference,” “reasoning,” “ratiocination,” “process of the understanding,” &c.—are not clear, particularly given that Hume uses “or” in all these different ways. Because interpreting “or” is so problematic, we have less information—less text—that can unproblematically serve as the basis for interpretation.

III. So what’s to be done about Hume’s terminological inexactitude?

As interpreters, we must decide how to proceed in light of Hume’s inexactitude in using these terms. Hume’s account of the functioning of the human mind is rife with terminological inexactitude, but important interpretational issues depend on our understanding of these terms. It is not just within Hume’s account of human reason that there are interpretational ramifications, either.19

My suggestion is that the source of the inexactitude and the reason for the appearance of inconsistency is that insufficient attention has been paid to Hume’s use of the particular terms themselves. Focusing on the terms themselves will reveal that Hume is using some of these words in multiple senses. Postulating that Hume uses these terms in multiple senses provides an interpretive way forward: if we delineate the multiple senses of these words, this can then serve as the basis for an interpretation of the text.20

19 Hume’s account of human reason filters down into the theory of the passions, the ethics, and so on. We find its tendrils running throughout the entirety of Hume’s philosophy, so resolving this issue may turn out to have important ramifications in all areas of Hume scholarship, and, indeed, all areas where Humeanism remains popular.

20 At the very least, a class of possible textual interpretations can be delineated.

One might be concerned that the words we take to have multiple senses and the senses we take those words to have will be the result of a textual interpretation, not an enabling condition on it, i.e., determining the senses of these words cannot be done independently of a theory of the meaning of the text: to suppose that they can be done separately is to beg the question, if very carefully and artfully, in
Though questioning the univocity and consistency of a philosopher’s use of their terms may be common in scholarship for other figures, it is relatively unpracticed with respect to Hume. Other than the disagreement about how many senses of “reason” Hume deploys—which I will discuss at length in chapter four—not many interpreters take it that Hume’s usage is untidy, and no interpreters, to my knowledge, have taken the time to show or deal with the extent of the untidiness that I have demonstrated here. I take it, then, that by questioning the univocity and consistency of Hume’s usage explicitly, directly and at length, I will add something to Hume scholarship. This method may be a tool in the historian of philosophy’s toolbox, but it seems to favor of one’s own favored view. The response to this worry is two related points: first, any circularity need not be vicious. Second, this is an issue faced in all textual interpretation. Even if the interpretation of the text and the interpretation of the senses of the words depend on each other, as the objector supposes, it does not follow that this sort of circularity is always vicious. In philosophical texts, generally, the meaning of the text and the meanings of the terms are co-constituting, and as such our investigation of them must be responsive to this: only by determining what the terms mean, the structure of the sentences, &c., do we have any sense of the meaning of the text, and what we take the terms to mean depends in large part on what we take the text to mean. So while it is often possible to see that a term may have multiple senses, it might very well not be possible to explicate those senses without relying on an understanding of the text. But this does not mean that by determining and holding steady either the meaning of the terms or the meaning of the text, we beg the question in determining the other on that basis. The investigation can proceed from text to terms or from terms to text, or even attempt to fix both simultaneously. In all likelihood, every attempt to interpret a difficult text will make use of all three of these strategies. My claim is that, with respect to Hume on human reason, the first strategy—fixing the meaning of the terms, then interpreting the text—has been underutilized and will prove fruitful. I seek to build and develop a set of interpretive tools that make use of this direction of interpretation, and show how they can be fruitfully applied to Hume’s view of human reasoning. I expect that they could be fruitfully applied elsewhere in Hume interpretation, too.

Consider this also: If the objector is right that textual interpretation must come first, then the situation with respect to interpreting the text is just as it is now, except we now have the ability to show that certain interpretations of the text require certain classes of interpretation of the terms and vice versa. (The third kind of inexactitude will show that there are classes of interpretations of terms that are required, not just interpretations of individual terms.) That this strategy yields new ways to evaluate interpretations is itself reason enough to pursue it. So, since this problem—in so much as it is a problem at all—is a problem for all textual interpretation, unless some further reason is given to think that my approach is particularly troublesome, I hope that my work here will be proof that it can be done in a non-viciously-question-begging way.

21 Throughout this dissertation, I will use “they” and related terms for gender inspecific third parties: I think it is the correct political choice, despite the grammatical compromises inherent in it.
not be a (popular) tool in the Hume interpreter’s toolbox. I aim to change that by showing how the method can be fruitful.

For the rest of the chapter, I will apply this method to a particular case that calls out for it: Hume’s multifarious and seemingly inconsistent uses of the term “proof.” This should illustrate how I plan to proceed. I will then deploy this method over the course of the dissertation, leaving epistemological terms like “proof” and “certainty” and turning to psychological and cognitive-scientific terms related to Hume’s account of the mechanisms of human and non-human animal reasoning. In particular, I will look at the terms “inference” and “argument” as a way of clarifying “reasoning” and the related faculty terms “reason,” “the imagination” and “the understanding.”

Some of these terms will have multiple senses, some multiple inconsistent senses, and sometimes there will be a single central usage amongst these multifarious uses. Some terms will have just a single sense that is obscured by how Hume deploys it in such vastly different circumstances. (This, I will argue later, is the case with “the understanding.”) I will examine Hume’s use of each of these particular terms and how they relate to each other to try and identify how many senses of each term there are and give—as explicitly as possible—an account of what those different senses mean. This will provide sentence-, argument- and account-level clarifications of Hume’s view and will have some consequences for how we think about Hume’s project and its contours.

So: in the next few sections I mean to show, by using “proof”—and, concomitantly, “certainty” and “evidence”—as an example, that headway can be made to understanding Hume’s claims by looking carefully at Hume’s multifarious usages of terms and how they relate to one another.
IV. “Proof” and Inconsistent usage

At several points, Hume delineates two senses of a term. Sometimes he does this to
distinguish the ‘popular’ use from the philosophical use, as with “relation” (T 1.1.5.1) and
“power” (EHU 4.16 n7), among others. Sometimes it is in order to distinguish between two
senses that he himself will deploy, as he does with “imagination” (T 1.3.10.19n22). There is no
question that Hume is (sometimes) attentive to his use of language and (sometimes) careful about
what his words mean, but in this section I show that there is at least one case in which he very
much is not. Unlike the term “argument” noted above, with the term “proof” Hume offers an
explicit definition. He then goes on to use the word in ways contrary to that definition repeatedly.

This is the way that Hume introduces the term “proof” in the Treatise:

For this reason, ’twould perhaps be more convenient, in order at once to
preserve the common signification of words, and mark the several degrees
devidence, to distinguish human reason into three kinds, viz. that from
knowledge, from proofs, and from probabilities. By knowledge, I mean the
assurance arising from the comparison of ideas. By proofs, those
arguments, which are deriv’d from the relation of cause and effect, and
which are entirely free from doubt and uncertainty. By probability, that
evidence, which is still attended with uncertainty. (T 1.3.11.2)

There are several things to note about these definitions. First is that several of the key
terms do not appear to be used in a sense that makes their parts of speech correspond to their
usage in contemporary English, and these sometimes seem to differ within the paragraph itself.
“Knowledge,” “evidence,” and “reason” all fall into this category. Note also that the three

22 I will not be considering Hume’s use of the term “knowledge.” This is for several reasons: first, as
noted before, Hume’s use of “knowledge” changes over time: it is not clear that the sense found in the
Treatise and the later sense refer to the same phenomenon. Second, Cartesian and Lockean uses
influence Hume’s use, and in order to do justice to the term, I would need to spend more time than is
appropriate here unpacking that influence. Finally, “knowledge” is a term that shows how deeply the
epistemological and psychological are linked for Hume, which raises a nest of issues that is dealt with
below, somewhat, but the difficulty of which would be compounded exponentially by the addition of
“knowledge.”
kinds are defined in terms of different sorts of phenomena (assurance, arguments, and evidence). Further, note that Hume is marking a distinction in degree by introducing a distinction in kind. Finally, though Hume says that it is a distinction in kinds of “human reason”—which makes it sound like he is developing a view about subfaculties of human reason—what he goes on to say seems to indicate that he means to be marking off different kinds of arguments or reasonings, each of which correspond to a different degree of evidence.\(^{23}\)

For these reasons, Hume’s definitions in this passage are not immediately clear and the passage itself is obscure. Some interpretive work will have to be done to recover its meaning. The passage purports to give a distinction in the degrees of evidence, so the term “evidence” is where I will start.

The term evidence is used today as a noun, indicating some item that is possessed that ought to give positive epistemic value toward belief in some proposition, that is, evidence is something that I have and that influences (or ought to influence) what (other) proposition(s) I believe.\(^{24}\) This is not how the term is used by Hume or in Hume’s time.

Hume’s use of evidence probably relates to the usage found in Bayle and others of the French term “l’évidence,” which was used in the 17th century to mean “the mark of truth, which, when present, makes it impossible to doubt a proposition” (Bayle 1991, 199n).\(^{25}\) L’évidence is a

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\(^{23}\) For the purposes of this discussion, I will remain ambivalent about any distinction between arguments and reasonings; see chapter three through five for a full discussion of the relationship between these terms.

\(^{24}\) “Evidence” is sometimes used as a verb to mean something like “provided evidence for.” As such, it still appeals fundamentally to the having and giving of (the noun) evidence.

\(^{25}\) This way of putting it is Popkin’s; he references Furetière’s Dictionnaire universel as the basis of his description and discussion of “l’évidence.”

Linking Hume to Bayle should be uncontroversial: Hume had read Bayle’s Dictionary and was engaged with both it and its targets of engagement, so linking Hume’s usage, strange as it is to our contemporary ears, to Bayle’s usage and the larger dialogue surrounding “l’évidence” explains much of the seeming strangeness of Hume’s use of the term.
characteristic of a proposition itself and it does not in any way admit of degree: either a proposition has the characteristic of (necessarily) creating full endorsement of its content or it does not. Evidence is also linked to assurance: if a proposition has l’évidence, on the view popular at the time, that proposition must be true. The basic quality that is under discussion is a quality that is attached to the proposition itself and makes the proposition itself apparently and obviously true. As such, if a proposition has “l’évidence” that means something like that it is maximally evident or obvious. (Popkin translates the term as “self-evidence.”)

The sense of “evidence” that Hume uses has been modified to admit of degree, though: Hume claims that in introducing “proof” he means to “mark the several degrees of evidence” so we should think of evidence in Hume as something like “degree of evident-ness.” But the degree of evident-ness of a proposition (that is, its evidence) is not just a function of the proposition itself anymore in Hume either. It appears to be a summation of all the cognitively available information for or against the proposition (the sum of the evidence, in the contemporary sense of that term). This reading is borne out by a statement Hume makes in the

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26 For his part, Bayle disputes that there is such characteristic that can serve both the function of creating complete psychological endorsement and as an indicator of the truth of the proposition. See the Pyrrho entry more generally (Bayle 1991, 194ff).

27 The German term “Evidenz” is used similarly and is often translated as “self-evidence.” Hanna (1993, 262) puts it this way: “Insight [‘Einsicht’] or self-evidence [‘Evidenz’] is non-empirical, non-inferential, propositional, apodictic cognition.” He links this use to the Cartesian tradition. Unlike “Einsicht,” “Evidenz” is clearly a romance-language import and so it is likely that this usage and Hume’s both stem from the same source.

28 This modification of “evidence” appears in Locke’s usage, too. See Essay IV.ii for many instances of Locke’s use of the term.

In this part of this discussion of “evidence” I am indebted to the critical notes to Hume (2007) made by David Fate Norton and Mary Norton—particularly to the note to T 1.3.11.2 found on p. 753—for scholarly direction as to where connections amongst these issues might be found. My discussion of l’évidence is original, though, and the interpretational work that I do here is substantially my own and at points differs both from the sources they give and the position they take.
Dialogues Concerning Natural Religion, where Hume, in recapitulating a bit of argument also found in EHU 9.1, claims

> The exact similarity of the cases gives us a perfect assurance of a similar event; and a stronger evidence is never desired nor sought after. But where-ever you depart, in the least, from the similarity of the cases, you diminish proportionally the evidence. (DNR, 2.7)

In these two sentences, Hume shows us that evidence must come in degree, and it must depend on features of the cognizer’s mental economy, but that it still attaches directly to the proposition itself (and not yet, as it will in the contemporary sense, to the items that count in favor of that proposition). Evidence also does not equate directly with truth on Hume’s use of the term, either; at best maximal evident-ness suggests or indicates truth (similar to, but different from what is found in l’évidence); any evident-ness that falls short of that maximal standard will not (of itself) directly indicate truth.

This background and these modifications of the going notion of evidence explain why Hume can mark a difference in degree (of evidence) with a difference in kind (of “reason,” i.e., argument or reasoning). The argument or reasoning (or other mental items) count in the calculus that renders a proposition more or less evident. It is these arguments or reasonings that come in different kinds and each produces a different amount of evident-ness.

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29 Hume also makes clear here that he thinks of the highest evidence in the case of reasoning about matters of fact to be enumerative induction: perfectly resembling cases, all of which render the same result. I will return to this point in more depth later.

30 Hume’s view here seems similar to Bayle’s claims about l’évidence noted in footnote 26 above.

31 Again, the relationship of the terms “argument” and “reasoning” to each other (and to other terms) will be explored in depth later in this dissertation; for our purposes here, the precise meaning of these terms is immaterial.
Hume claims that “knowledge” is complete evident-ness, though this is only clear on the background of his earlier discussion in *Treatise* 1.3.1 and 1.3.2. Hume, extending and transmuting the view given by Locke (*Essay* IV.xv), acknowledges two broad sorts of reasoning: (1) reasoning by intuition or demonstration, which concerns relations of qualities of the ideas themselves, and (2) probable reasoning, which relies on relations that can be changed without changing the ideas themselves, such as causation and contiguity in space and time (T 1.3.1.1-5). In *Treatise* 1.3.1.2, Hume claims that comparison of ideas (that is, comparison of the intrinsic features of the ideas themselves) is intuitive and demonstrative reasoning, and that these are the only forms of reasoning that can uncover the relations that are the “objects of knowledge and certainty” (T 1.3.1.2). Knowledge and certainty are only present together, and they only come from the discovery of relations of ideas, which is accomplished only by intuitive and demonstrative reasoning. The complete degree of evident-ness results only from comparison of ideas.

In contrast to intuition and demonstration, which give the relations apt to “knowledge,” probable reasoning is the kind of reasoning that trades on the relation of cause and effect (T 1.3.2.1-3). Hume defines proofs as being “arguments from the relation of cause and effect.” Thus, proofs must be a species of probable reasoning. Despite this, they are “entirely free from doubt and uncertainty.” Though they may be “free from doubt,” proofs must mark a different degree of evident-ness from the complete evident-ness that attended knowledge, as Hume explicitly states he means to give an account of the *different degrees* of evidence. Given that

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32 See note 22 above for my reasons for not addressing the term “knowledge.” In these few paragraphs I do use the term, but nothing depends on its particular interpretation: I can treat Hume’s use here merely as an instance of labeling, not of deploying a substantive concept of *knowledge*.

33 In as much as this, intuition and demonstration rely on *intrinsic* features of the ideas involved, probable reasoning on *extrinsic* features.
knowledge is both maximally evident and is derived from intuition and demonstration (and so not probable reasoning), it must be the case that proofs make their conclusions as evident as any conclusion that does not regard the (intrinsic) relations of ideas can be. That is, the conclusion of a proof is maximally evident for a conclusion of probable reasoning. This conclusion is ratified by the fact that the evident-ness that arises from probabilities—which are instances of probable (and so cause-and-effect) reasoning—is in turn less than that of proofs, though they rely on the same sort of reasoning proofs do.

Hume restates his definition of “proofs” in EHU 6, and this restatement further supports this reading. Hume claims that it is something more than “only probable” that “all men must die, or that the sun will rise to-morrow” (EHU 6n10). As such, Hume introduces the term “proofs” to mean “such arguments from experience as leave no room for doubt or opposition.” They are from experience, and so instances of probable reasoning (and so definitionally distinct from relations of ideas and demonstration/intuition), but yet they “leave no room for doubt or opposition.”

So, Hume introduces the term “proof” to indicate a particular class of arguments that leave no room for doubt or uncertainty, although they result entirely from evidence from experience (and trade on the relation of cause and effect). Proofs are by definition, then, distinct from intuition and demonstration, which trace the intrinsic relationships between ideas. Proofs are instead produced by a different set of inferential mechanisms, ones that result from the connection of ideas in experience. Given Hume’s definition, there can be no “demonstrative proofs”: such a thing amounts to a contradiction.

Despite offering a definition, Hume repeatedly uses “proof” in a manner inconsistent with that definition. For instance, in his discussion of human liberty, Hume claims that the
feeling of freedom has been “employed as a demonstrative and even intuitive proof of human liberty” (T 2.3.2.2 and EHU 8.22n18). This language appears in both the Treatise and the revised editions of EHU.

One might respond to this apparent inconsistency by claiming that Hume is speaking in the voice of his opponent: they claim this as a proof, he is just replicating their language. Hume says nothing to suggest that this is the case, but even if it were, as the definition of the word “proof” appears in both texts before the discussion of human liberty we would expect Hume to show, from the nature of proofs that this could not be a proof, or, if it is a proof, that it could not be demonstrative or intuitive. But that is not what Hume does: instead he argues against the content of the claim. Thus the use of the word “proof” is unnecessary and serves only to cloud the issue.

Furthermore, this one usage is not an isolated occurrence: elsewhere “proof” seems to just suggest evidence (in the contemporary sense of that term), not specifically argument (e.g., at T 1.3.3.1 & T 1.3.9.10). At Treatise 1.3.3.3, Hume claims that “The latter position is incapable of a demonstrative proof” but not because there cannot be any demonstrative proofs at all. Hume uses “proof” in reference to a demonstration he performs at T 1.3.9.10, and he claims that an “Algebraist” or mathematician employs proofs at T 1.4.1.2. Related words like “prove” and “prov’d” are also used in this manner, c.f. T 1.3.7.3: “The answer is easy with regard to propositions, that are prov’d by intuition or demonstration.”

There are other cases where Hume uses “proof” contrary to his definition as well. The usage in EHU is generally much closer to the stated definition explicated above. That Hume apparently sometimes uses the word in ways contradictory to his settled and stated view on its

\[34\] But, as I will return to below, may still be problematic.
meaning—even in his repeatedly revised work—compounds the difficulty for the meanings of
words it is not clear he ever considered. Even in cases where Hume gives definitions, we should
be wary of applying them without careful consideration.

V. “Proof” as defined

So, as “proof” is repeatedly used in ways contrary to the definition that Hume gives it, it
is an ideal candidate for my method of focusing on the particular usage and determining what
multiple senses of the term might be in play. My approach allows that Hume may be deploying
more than one sense of “proof,” so there need be no inconsistency. Interpreting the term “proof”
requires noticing and treading carefully over the different senses. It requires getting clear on the
different use-cases of “proof,” and it requires showing how they are distinct yet related. By
disambiguating the different senses of “proof,” we gain the ability to examine clearly the
arguments that make use of it and related terms. So, instead of assuming that there is one usage
that we need to uncover from Hume’s seemingly different usages of the term “proof,” I posit that
there are three different terms, each corresponding to the same lexicographic form.

I take it that the first obvious usage of “proof” corresponds to the definition that Hume
gives: proofs are “such arguments from experience as leave no room for doubt or opposition”
(EHU 6n10). This is the usage associated with most of EHU, as well as uses like

The constant conjunction of our resembling perceptions, is a convincing
proof, that the one are the causes of the other; and this priority of the
impressions is an equal proof, that our impressions are the causes of our
ideas, not our ideas of our impressions. (T 1.1.1.8)

These proof as defined uses of “proof” indicate a type of argument, one that traces the
relationships between ideas based on how we experience them, i.e., in what order, seemingly
causally connected in what way, &c., and not features inherent in the ideas themselves. As such,
these arguments work differently than demonstration, but they do produce overwhelming belief: they are the limit case of probable reasoning.

The relationship of “proof” to an attenuated form of l’évidence is apparent here. Recall that l’évidence is the mark of a proposition, whereby it is unable to be doubted and whereby it can be known to be true. In the Treatise, Hume introduces “proof” as a term for arguments that produce a certain sort of evident-ness in their conclusion. The degree of evident-ness proofs grant makes their objects are “entirely free from doubt and uncertainty” (or, as in EHU 6, “leave no room for doubt or opposition”). Hume’s definition of “proof” is designed to conserve the relationship between high degrees of evident-ness and lack of doubt.

But there are many questions yet to be answered about this sort of proof. What exactly does the lack of doubt caused by a proof amount to? How are proofs supposed to work, that is, does Hume have an account of what features these arguments share? And how do these features, if there are any, make proofs special as compared to other sorts of probable reasoning? In what follows, I will give an account that attempts to answer these questions. Developing an account of proof as defined will position me to illuminate connections between it and the other senses of “proof.”

To start, I will examine one of the few direct accounts of Hume’s notion of “proof.” M.J. Ferreira’s “Hume’s Naturalism: ‘Proof’ and Practice” (1985) gives an account of Hume’s use of “proof” to show that Hume’s reply to the skeptic is incipient in Hume’s definition of proof. As such, much of what Ferreira does in the article is not of interest to me here; I will focus on her account of the defined sense of “proof.”

Ferreira argues that Hume’s definition in the Treatise—which claims that proofs are “entirely free from doubt and uncertainty” (T 1.3.11.2)—is ambiguous between the absence of
doubt and a psychological inability to doubt the proof’s conclusion (1985, 49). Ferreira argues that Hume’s intention can be found by seeing that the *EHU* definition makes a stronger claim, that proofs are “such arguments from experience as leave no room for doubt or opposition” (*EHU* 6n10). Thus, she argues, it is not that we do not doubt or are not able to doubt the conclusion of proofs. Rather, because proofs leave no “room” for doubt—or even opposition—that the status of “proof” is tied to a *lack of reasonable grounds* for doubting.35

Presumably, though Ferreira does not say so, this lack of reasonable grounds results from the entirely uniform experience on which proofs are based (*EHU* 10.4, 10.6, 10.12). Recall also that, as I cited earlier, Hume claims in his *Dialogues Concerning Natural Religion* that

The exact similarity of the cases gives us a perfect assurance of a similar event; and a stronger evidence is never desired nor sought after. But where-ever you depart, in the least, from the similarity of the cases, you diminish proportionally the evidence. (DNR 2.7)

I take it that Hume, in talking about the strongest evident-ness for a conclusion regarding a matter of fact means to be talking about proofs-as-defined, as they are the maximally strong arguments from experience. Hume emphasizes in particular, here, the “exact similarity of cases” and says that *this* is what generates the highest degree of evident-ness (as can be found in matters of fact). Proofs-as-defined, then, are to be cases of enumerative induction: in observing exactly resembling cases—which, in virtue of their being exactly resembling, all generate the same result—we gain a level of evident-ness for that result that is unsurpassed by any other kind of argument or degree of evident-ness. Proofs generate their evident-ness *via* enumerative induction. This is what is special about the structure or content of proofs-as-defined: they are concatenations of exactly resembling cases that all give the same result.

35 “Hume’s phrase ‘no room for doubt’ might then be significant, signaling the possibility that he connected the category of proof with the idea of a lack of *reasonable* grounds for doubting (as opposed to a simple lack of doubt or psychological inability to doubt)” (Ferreira 1985, 49).
But what can we conclude about these proofs, other than their structure? Ferreira closes her discussion of the meaning of “proof” by relating a quotation from Hume’s February 1754 letter to John Stewart, in which Hume writes

There are many different kinds of Certainty; and some of them as satisfactory to the Mind, tho’ perhaps not so regular, as the demonstrative kind. (Grieg 1932, 185)

Ferreira concludes on this basis, along with other quotations, that on Hume’s view, proofs in the defined sense must be certain:

The conclusion of “proofs” are of the “highest certainty” and “justly inferred”, and these are attributions of more than just unavoidability. (Ferreira 1985, 53)

But the claim that proofs are certain will not amount to much unless we have an account of what Hume means by “certainty” (and its relationship to other terms like “evidence”). Ferreira’s attribution of certainty and Hume’s use of the term in the letter, raise the question of what exactly Hume means to be attributing to “proofs” by saying that they are certain.

In trying to give an account of the meaning of “proof” itself—not just, as most interpreters do, an account of the role that the notion plays in EHU 10, “Of Miracles,”—we have been led to see that its meaning depends on the meaning of another term, “certainty,” and, as we will see presently, it is a term that is itself ambiguous.

VI. Certainty

There are two broad senses of the term “certainty” in modern English. One sense tracks the surety or regularity of some relationship. In this sense, it is a certainty that $2+2=4$. Each time two is added to itself, the result comes back four. Indeed, it is part of what it means to be two,
that when it is doubled it is four. The relationship between these two is thus solid and dependable; the relationship is maximally regular or sure. Whenever I have got something that is two, I know that if I doubled it, it would be four. It is a certainty that this relationship obtains: nothing could prevent it obtaining, and nothing could make my claims about its obtaining to be false.\(^37\) It is this kind of relationship that is supposed to be captured by Leibniz’s eternal truths and the truths Descartes clearly and distinctly perceives. Hume will attribute certainty in this sense to the relationships that obtain between intrinsic features of ideas, as we will see below, and the chief question of this section will be whether this is a sense in which proofs can also be said to be certain for Hume.\(^38\)

The other sense of “certainty” relates to psychological conviction: I can be certain that Jones is the murderer because I saw him do it with my own two eyes, in good lighting, with my vision unobscured and my mind unaltered. This sense of “certainty” does not make a claim about the world in the way that ‘regularity’ sense does; instead it makes a claim about my psychological state: I feel as if there is no way for me to possess more conviction about this matter.\(^39\)

Hume uses both of these senses of “certainty” and does so in broadly recognizable ways. In this section I investigate how and where Hume deploys the first of these two senses: the

\(^{37}\) Of course, I could be mistaken about what counts as belonging in this category, but if I have really discovered relationships that reach this level of regularity or surety, then nothing could make my true claims about them false.

\(^{38}\) I have tried to characterize this sense of “certainty” without defining it in terms of Humean relations of ideas so that I might ask this question. It is clearly true that this sense applies to relations of ideas—and that relations of ideas are a paradigmatic instance of it—but whether relations of ideas exhaust this sense is just what is at issue.

\(^{39}\) These two senses seem to correspond to objective and subjective states of certainty: I am subjectively certain that Jones is the murderer, but I think it’s objectively certain \(2+2=4\). As Hume does not distinguish between the objective and subjective features of the two uses, I will avoid appealing to these senses as such.
regularity sense, which claims some relationship consistently and without-exception obtains, is the sense that Hume usually deploys in the *Treatise*. In the next section I explore Hume’s use of the second sense, “certainty” as complete psychological conviction, and show that it is the primary usage in *EHU*.

**A. …and regularity in the *Treatise***

In the *Treatise*, Hume claims that “resemblance, contrariety, degrees in quality, and proportions in quantity and number” are the only philosophical relations that “can be the objects of knowledge and certainty” (T 1.3.1.2) and after eliminating the first three as intuitive rather than demonstrative,

> There remain, therefore, algebra and arithmetic as the only sciences, in which we can carry on a chain of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty. (T 1.3.1.5)

Hume asserts that certainty only derives from these relations of ideas and only on some occasions. And, indeed, he goes on to say just this:

> All certainty arises from the comparison of ideas, and from the discovery of such relations as are unalterable, so long as the ideas continue the same. (T 1.3.3.2)

Hume is declaring there to be a *security* in the relationships discovered through the comparison of ideas that is impossible to replicate through any other sort of reasoning. This reading is ratified by his claim that if a “probability” were so strong as to guarantee that its contrary were not true, then it would be “a certainty”:

> First, We may observe, that there is no probability so great as not to allow of a contrary possibility; because otherwise ’twou’d cease to be a probability, and wou’d become a certainty. (T 1.3.12.14)

Being a certainty or embodying certainty is a fact about the item or process itself: relations whose contrary is disallowed are certainties; and it is this fact that *makes them what*
they are. There are some psychological overtones here, surely, but that is because knowledge of these certain relationships is utterly secure. The knowledge of these relationships is secure because it is by their very nature that these relationships hold, and do so securely.

This interpretation is borne out when Hume argues from the impossibility of a further investigation into the nature of our idea of extension to that we can be certain that it arises from particular impressions we have:

But if it be impossible to show any thing farther, we may conclude with certainty, that the idea of extension is nothing but a copy of these colour’d points, and of the manner of their appearance. (T 1.2.3.4)

Because it is impossible to generate a further investigation of the origin of this idea, we can conclude with certainty that it arises from this impression. It is the claim of impossibility here that connects Hume’s discussion of certainty with his discussion of necessity, and, hence, demonstrability, showing that all three concepts are linked together.40

This is, I take it, an account of Hume’s use of the term “certainty” in its observer-independent, metaphysical sense that deals with how regular the described connection is. I will call this the regularity sense of “certainty.” If this is the sense of “certainty” Hume is deploying in describing “proofs,” Hume would be claiming that the relationship that holds between items in certain cases of probable reasoning holds as securely as the relations between ideas that are discovered through intuition and demonstration.

The attribution of certainty to proofs is done on the basis of an EHU-era letter and EHU. If Hume were to be claiming that the regularity of connection that proofs discover is as great as

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40 On the linkage of demonstrability to conceivability and possibility: “The plain consequence is, that whatever appears impossible and contradictory upon the comparison of these ideas, must be really impossible and contradictory, without any farther excuse or evasion” (T 1.2.2.1). Also, “‘Tis an establish’d maxim in metaphysics, that whatever the mind clearly conceives includes the idea of possible existence, or in other words, that nothing we imagine is absolutely impossible. We can form the idea of a golden mountain, and from thence conclude that such a mountain may actually exist. We can form no idea of a mountain without a valley, and therefore regard it as impossible” (T 1.2.2.8).
that found in intuition and demonstration, it would constitute a significant shift of position: as we saw above, Treatise-era Hume thinks that probable reasoning can never secure connections as fully as intuitive and demonstrative reasoning can. As proofs are all based on probable reasoning, neither can proofs. So this EHU-era attribution of certainty to proofs would be a dramatic change of opinion on Hume’s part, if it could be substantiated.

But this interpretive claim—that Hume means to shift so drastically in what he takes it that probable reasoning can accomplish—cannot be substantiated: EHU itself makes repeated use of the fact that a state of affairs is not impossible in order to show that it must be linked up to probable—and not demonstrative—reasoning (e.g., at EHU 4.18; the principle itself is stated explicitly at EHU 4.2). So it cannot be the Treatise-era, regularity sense of “certainty” being applied to proofs: if probable reasoning could generate connections as secure as those in intuitive and demonstrative reasoning, then this argumentative move that Hume makes repeatedly would be illegitimate. So treating the sense of “certainty” being attributed to proofs as the regularity sense of “certainty” is a non-starter. That Hume uses this principle in EHU suggests that when EHU-era Hume uses the term “certainty,” and in particular when he applies it to proofs, it is not (or at least not purely) in the regularity sense.

**B …and conviction in EHU**

That Hume cannot be using the regularity sense of “certainty” does not yet mean that we know what sense Hume *is* applying. There is a stable, coherent sense of “certainty” found in the first Enquiry; it is the psychological (not metaphysical) use of the term. This section will explicate that sense before I go on to examine whether it could be *this* sense that Hume is applying to proofs.
In contrast to the *Treatise*’s deployment of the regularity sense, most of the uses of “certainty” in *EHU* are of the psychological sense of that term. Directly contrary to Hume’s *Treatise* statement that a probability could not become a certainty, Hume here says

This possibility is converted into certainty by farther observation; when they remark, that, upon an exact scrutiny, a contrariety of effects always betrays a contrariety of causes, and proceeds from their mutual opposition.

(EHU 8.13)

In addition to the argumentation given in the last section, this quotation also conclusively demonstrates that Hume is deploying a different sense of “certainty” here than he was in the *Treatise*. In this passage, Hume argues as follows: I rank some observed regularity as less than perfect, i.e., I observe that $e$ usually follows $c$, but sometimes $c$ occurs and $e$ fails to occur. Thus, when I observe a $c$, I believe that there is a possibility, perhaps even a good one, that an $e$ will follow, but it is not certain—in either the regularity or psychological sense—that an $e$ will follow from a $c$. Then, my interlocutor remarks that, if I observed more carefully, I would find that not every case I thought to be a case of $c$ is actually a case of $c$. That is, my interlocutor makes apparent some further facts that I was missing that show that $c$ is not actually operative in the not-$e$ cases. (The interlocutor points out that there are some hidden contrary causes.) This transmutes my evidence from “$c$ usually leads to $e$” to “$c$ always leads to $e$.” Or, more accurately, “In every observed case, $c$ has led to $e$.”

As a result of excluding the previously contradictory evidence, it becomes clear that the evidence is entirely uniform, as is required for a proof; this converts the prior “possibility” into “certainty.” In this case, certainty comes about because of a change of mental states that count in favor of or against the conclusion, that is, a change in my belief about the regularity of the connection between the two objects. This is a psychological change, and it has a psychological
effect: I go from *ranking* the connection as merely possible or probable to believing fully in that connection.

The nature of the connection between \(c\) and \(e\) does not change but the nature of my psychological states does. And while the ascription of certainty does depend on the believed regularity of the relationship, it is just the change in the character of this *belief* that does the work in converting the possibility into a certainty. I am certain in this case like I was when I claimed that Jones was the murderer after seeing him do the act, in broad daylight, with an unobstructed view, after identifying himself as Jones, &c. My *belief* that it was Jones is very strong, just like my *belief* about the connection between \(c\) and \(e\) is very strong. It has nothing to do with the features of \(c\) and \(e\) themselves, only what I believe about them. Thus the sense of “certainty” here is the psychological sense.

Similarly, Hume says

I shall say, that I know with certainty, that he is not to put his hand into the fire, and hold it there, till it be consumed: … Above one half of human reasonings contain inferences of a similar nature, attended with more or less degrees of certainty, proportioned to our experience of the usual conduct of mankind in such particular situations. (EHU 8.20)

Here Hume is deriving certainty from past experience and acknowledging degrees of certainty. Acknowledging degrees of certainty is already contrary to the sense of “certainty” found in the *Treatise* and explicated above. Further, in these cases the contrary is quite conceivable, in the broad sense of that term: there is no relation of ideas or law of logic that prevents a person from holding their hand in the fire until it is consumed. That this is the case shows that the notion of “certainty” at work here differs from the one operant in the *Treatise* along another important dimension. Hume’s use of “certainty” to pick out a psychological state of utter conviction—*feeling certain*—means endorsing a belief so thoroughly that it is *psychologically* inconceivable that it could not be true. I mean to say that Hume is claiming that
“certainty” in this sense means that it is *inconceivable to one, given one’s psychology* that it not be the case. This contrasts with the inconceivability *tout court* that is required for impossibility.\(^4^1\)

This reading seems to be vindicated elsewhere, as Hume uses the term “stability” (which I take to be similar to the sense of “certainty” as security I found in the *Treatise* use) to mark off a different phenomenon from certainty:

> It is still supposed imperfect, without the assistance of experience, which is alone able to give stability and certainty to the maxims, derived from study and reflection. (EHU 5.5n8)

> To begin with clear and self-evident principles, to advance by timorous and sure steps, to review frequently our conclusions, and examine accurately all their consequences; though by these means we shall make both a slow and a short progress in our systems; are the only methods, by which we can ever hope to reach truth, and attain a proper stability and certainty in our determinations. (EHU 12.4)

Thus I take it that the sense of “certainty” that is most frequently deployed in *EHU* is the sense that denotes complete psychological conviction.

### C. Mixed senses of “Certainty” in *EHU*

So, while I have shown that the regularity sense of “certainty” cannot be the one that *EHU*-era Hume uses to describe proofs, I have yet to show that it must be the other primary sense, the psychological sense, that I just described. This is because, while the psychological sense is primary in *EHU*, it is not the only sense in *EHU*. Sometimes Hume still refers to the objects as being certain or uncertain, e.g., when he claims: “All effects follow not with like certainty from their supposed causes” (EHU 10.3) and

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\(^4^1\) And this is, perhaps, why Hume links inconceivability *tout court* to demonstration. It seems likely that there will be many logically possible things I find broadly inconceivable because of facts about my psychology (for instance, propositions for which I do not have the appropriate ideas to construct them). But if something (actually) is demonstrably true (or false), this depends not on my psychology. Whether I can be sure that what I am doing is a true demonstration or not, however, is a difficult issue.
We suppose, that there is some connexion between them; some power in the one, by which it infallibly produces the other, and operates with the greatest certainty and strongest necessity. (EHU 7.27)

Hume should not refer to the objects or events themselves as certain if “certainty” is meant to be univocally psychological in EHU. But the sense of “certainty” at work here, while non-psychological, is also not the regularity sense. The psychological sense of “certainty” in EHU, by which it is my conviction that is being addressed, can be greater or lesser, it can arise from concatenations of probable evidence, &c. The regularity-sense of “certainty” denotes that some beliefs/relationships are secure by their very nature. The sense used in the quotation above seems to denote a phenomenon that can come in degrees like the EHU-discovered, psychological sense of “certainty,” but it also seems to relate to the objects themselves (and not any psychological state).

There appears also to be another, mixed sense in EHU as well. In EHU 10, Hume claims that “in our reasonings concerning matter of fact, there are all imaginable degrees of assurance, from the highest certainty to the lowest species of moral evidence” (EHU 10.3). In talking about “assurance” here, Hume is echoing the security of the Treatise sense, but allows that there are degrees, as in the psychological sense, and the psychological overtones are reinforced by the fact that this statement comes on the heels of Hume’s assertion that sometimes-conjoined events occasionally “disappoint our expectations.”

This quotation from EHU 10.3 is the chief quote that Ferreira draws on when she asserts that “proofs” are “of the ‘highest certainty’” for Hume (1985, 53). The quotation is problematic, though, because it mixes features of the psychological sense with features of the non-psychological sense. Hume seems to move from the regularity of the event, item or relationship to our degree of conviction. It is true that the two get linked up through the experience we accumulate living our lives: experience informs us that a certain relationship holds regularly, so
we evince a strong conviction that that relationship holds with perfect regularity. But only psychological states—i.e., ideas or connections between ideas that we actually have—can serve as the ground for our conviction. And when we consider matters of fact, we nowise have all possible experience. With relations of ideas, we do not need any experience: there are not more trials to run to determine if 2 is fewer than 3, whereas there are more trials to run to determine if one horse is faster than another.

So, if Hume is claiming certainty *tout court* for proofs, i.e., both regularity for the phenomena and complete conviction in the belief, Hume is then attempting to generate from proofs the same degree of security that demonstration and intuition provide, and the reasoning for this would have to be that they generate the same degree of conviction. Psychologically, they *feel* identical in strength; both *seem* equally evident. This is to say the introspectively available conviction arising from the limit cases of probability is just the same as the introspectively available conviction arising from (at least clear cases of) demonstration or intuition. But the identical phenomenology does not mean that there are equivalently secure causes. There has been a subtle equivocation between the two chief senses of “certainty.” Proofs (i.e., arguments from experience that are “free from doubt and uncertainty”) and demonstrations are equal in one sense of “certainty,” the psychological sense, but unequal in another, the regularity sense. In order to free Ferreira’s Hume from equivocation, we must relativize the conclusion: instead of saying that “proofs” are of the “highest certainty,” we should be clear and say that “proofs” generate maximal psychological conviction—they *appear* maximally evident—and that the security they do have is derived from the fact that the evidence on which they are based is entirely uniform, both in the complete similarity of cases and the sameness of result in each case.
Ferreira may object to this claimed equivocation and say that there could be more than two senses of certainty, and that she is pointing to an *entirely third* usage of certainty, one that relates directly to lack of reasonable doubt. This would be unsatisfying for two reasons, though.

First, it would collapse “certainty” into “proof.” Instead of “certainty” being used to explicate a feature of “proof,” “certainty” would mean only this particular feature that proofs have; it would be investigable *only* through proofs. Ferreira means for the sense of “certainty” she ascribes to proofs to undergird Hume’s response to the skeptic. It appears to be a substantive conclusion— for Ferreira and, if true, for Hume—that proofs are certain. Defining “certainty” in terms of proofs does not accomplish the task Ferreira sets for herself, a task that is supposed to be accomplished by showing proofs to be certain. In essence, ascription of this third sense of “certainty” to proofs would add nothing to our knowledge of proofs: it would thus be ineffective in scaffolding out the notion of proof such that it could support the kind of response to the skeptic that Ferreira wants to find in it.

Second, it would be problematic, interpretatively, because we ought to stick as close to the writer’s native language as possible. The two senses of “certainty” I have ascribed to Hume are both (and were both, in Hume’s day) *already in English*. This response on Ferreira’s behalf would have us *add a new sense* of “certainty”, when Hume does not define a new sense, or give any indication that his use should be read as distinct from the typical senses of “certainty” in English.43

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42 This objection on Ferreira’s behalf is due to comments Gregg Osborne gave on a related paper I presented.

43 Note also that of the three senses of “proof” I will find in Hume, one Hume explicitly introduces and the other two are (and were) already in English. This case is different from “certainty” insofar as we are allowed to posit a third use, not already in English, *because Hume explicitly introduces it*. This is not the case with this proposed third sense of “certainty.”
But what of “certainty” in the other quote Ferreira adduces, the one from Hume’s letter to John Stewart of February 1754? There Hume says

There are many different kinds of Certainty; and some of them as satisfactory to the Mind, tho’ perhaps not so regular, as the demonstrative kind.

The use of “certainty” here cannot be the *Treatise* sense, because there is only one kind of certainty allowed by the *Treatise*, that which arises from demonstrative or intuitive connection. Further, the regularity of the relationship itself is what the *Treatise* sense picks out, so when Hume says that this sense of “certainty” is not “regular,” he is ruling out that the sense of “certainty” can be the sense that requires complete regularity.

Similarly, it does not seem like it is straightforwardly the psychological sense either, which would allow for difference in degree, but not difference in kind. This may be explicable, however, if we take it that Hume means to be using something like the psychological sense but claiming that there are not different kinds of conviction that one has— that would be very strange, given his theory of belief—but rather different methods that can produce that same conviction. If we can account for difference in “kind” by transmuting it to difference of method, and account for difference in degree by way of Hume’s implicit statement that some of these methods are more satisfying to the mind than others (and so, grant different degrees of conviction), then it is possible that this sense is actually the psychological sense of *EHU*.

So, after disambiguating Hume’s uses of “certainty,” when we look closely at the evidence for the claim that proofs must be certain we find that the quotes on which Ferreira relies

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44 Hume holds that believing a proposition is merely that proposition presenting itself forcefully or being held in a particular way: “Belief does nothing but vary the manner, in which we conceive any object, it can only bestow on our ideas an additional force and vivacity” (T 1.3.7.5) “and this different feeling [that attends propositions which are believed] I endeavor to explain by calling it superior force, or vivacity, or solidity, or firmness, or steadiness … in philosophy we can go no farther, than assert, that it is something felt by the mind, which distinguishes the ideas of the judgement from the fictions of the imagination.” (T 1.3.7.7)
to show that proofs are certain are best understood as using the psychological sense of “certainty.” This will have consequences for our view of what Hume means to claim when calls something a proof, in any of the senses of that term.

VII. The Three Senses of “Proof”

So, then, the cases will in reality vary from one to the next and, in so much as this, it may be that more closely resembling cases require fewer trials in order to generate proof. For instance, if I wanted to know of a particular object at a particular time whether it exhibits a particular quality, I need only check that object the one time: one trial is completely sufficient for that purpose; I have all the trials I need and the one observation will prove that the property is had by the object at the time. This relates to a much less common (nowadays) sense of “proof” as test: I prove the claim in this case by testing it with a simple observation.

By contrast, with claims that span times, objects, causal mechanisms, &c., I require more tests, and those trials can resemble each other to a greater or lesser extent. As such, it is open to Hume to claim that whether something counts as proof is a matter of its having a sufficient number of sufficiently resembling trials, where the first factor there depends upon the second.

Second, it is not clear to me that other background beliefs might not play a role in determining whether something is (or ought to be) convincing. As such, the argument’s status as a proof may depend on psychological facts about the agent examining it. If this is the case then there may well be no single answer to how many trials are sufficient.

This is to say, the question about just what the evidence (in the contemporary sense of that term) must be such that the argument it is embedded in reaches the level of proof is in reality a question about what good evidence for some conclusion consists in. Hume goes some way toward answering that question—a sufficient number of sufficiently resembling trials—but a full
account would far outstrip both what Hume says on the topic and the scope and aims of this chapter.

To return to the main thread of argument: when I do have an argument that generates complete conviction based on (sufficient) entirely uniform experience, though, I have a proof. The status of this argument is distinct from the knowledge derived from relations of ideas but also distinct from less secure probable reasonings. This is the class that Hume is carving off with the term “proof”: proofs are of a kind with probable reasoning but the associated psychological conviction–and their apparent security–is more like that which comes from demonstration and intuition. So, while nothing about the definition of proof entails that there is no possible grounds for doubt, when ‘possible’ is construed widely as metaphysical (or even nomological) possibility, “proof” indicates that the available information taken all together is sufficient to establish a maximally strong evidential relationship between the cases and the conclusion (and, so, that none of the information contraindicates the conclusion).

Ferreira claimed that Hume thought proofs were free from “reasonable doubt” (and thus certain). I have shown that proofs can be certain in the primarily psychological sense of that term, and that proofs are indeed free from doubt. But proofs are proofs not out of lack of doubt nor a tout court inability to doubt, rather the freedom from doubt in proof is epistemically respectable, in so far as it demands sufficient uniform experience in favor of the conclusion to generate complete conviction (which will require having no contrary information, and, perhaps, other facts to obtain about my psychology). This is my account of the first usage of proof, proof as defined. I now hope to show how the other two senses of “proof” are related to this primary, as-defined usage.
The second sense of “proof” is used to indicate mathematical arguments that are capable of producing certainty. In these cases, it is not the technical, defined sense of proof that Hume is using: these mathematical arguments concern the relations of ideas such as proportion in quantity or number. So these are instances of demonstrative reasoning and cannot be “proofs” in the sense defined above. This is the usage of the Treatise discussion of geometry (e.g., at T 1.2.4.17) and all other discussions of mathematics.45

The term “proof” (and its Latin and French cognates) already had this mathematical usage, so it is easy to see why Hume would occasionally and perhaps unreflectively adopt that usage. This mathematical use of “proof” does, however, also seem broadly consistent with the spirit of the defined use. That is, if “proof” is understood as being primarily about how evident a proposition is, then it is understandable that Hume sometimes uses this related sense of “proof” to describe mathematical cases because once we have “prov’d” some proposition by “intuition or demonstration” (as we would in mathematical cases) we are “necessarily determin’d to conceive [the ideas] in that particular manner” (T 1.3.7.3). Being necessarily determined to conceive the involved ideas in a particular manner will make the proposition evident and will result in complete conviction.

The third way that Hume uses “proof” is in a more loose and popular sense, where it just means information that is sufficient to make the proposition evident (i.e., proof in these cases is used to denote evidence in the contemporary sense of that term). I call these uses of “proof” “evidential proof,” because it is a proof only insofar as it is supposed to make the proposition evident by some means—though not by enumeration of cases, like in proof-as-defined, or

45 e.g., “There is no Algebraist nor Mathematician so expert in his science, as to place entire confidence in any truth immediately upon his discovery of it, or regard it as any thing, but a mere probability. Every time he runs over his proofs, his confidence encreases” (T 1.4.1.2).
maximally evident (relative to the type of investigation being engaged in) like in proof-as-defined and mathematical proof cases.

_Evidential proof_ should account for all the cases not covered by _proof as defined_ and _mathematical proof_; e.g., _evidential proof_ will make sense of the problematic case where Hume relates a feeling to a “demonstrative and even intuitive proof” (T 2.3.2.2 and EHU 8.22, n18) as the feeling of a demonstrative or intuitive connection is supposed to make evident the claim that humans have libertarian freedom. Thus the usage is not either of the two usages given above, but instead a third usage that merely indicates purported information that counts in favor of some conclusion. In this case there is not an _argument_ involved, _per se_, though there is information that is sufficient or convincing in favor of the conclusion, meaning that it outweighs all other information that might counter the conclusion.

Further, understanding that the condition on proof is its evident-ness such that the information available generates conviction (and does not allow doubt) enables us to see why the evident-ness generated by the feeling-of-freedom fails to constitute a proof: because in this case we still have grounds for doubt—our belief in the deterministic character of the physical world—despite the fact that we are psychologically unable to doubt.

The _as defined_ and _mathematical_ senses of “proof” will both fall under the usage demarcated by evidential proof. Thus we see that my account of proof is sound and provides the kernel of all three usages of proof, though Hume’s definition only specifies one of them.

Distinguishing these three usages, while showing what they have in common, allows us to be maximally specific about what Hume might mean by “proof” at every particular point. Further, disambiguating these three senses allows us to respect the definition Hume offers: though we _could_ treat every use as an instance of evidential proof, to do so would be to disregard
Hume’s own explicit, repeated statement of his definition of proof, and to do so despite the fact that Hume’s usage often seems to be explicitly employing this sense. It also allows us to do all this without claiming that he has used the term inconsistently. To be clear, Hume’s usage will be free of inconsistency because the terms *mean something different* at different places in the text, i.e., they are different—yet related—terms that share the same written word; the term is multiply ambiguous. So, while I have shown that Hume can avoid inconsistency, I have yet to show that Hume avoids equivocation.

**VIII. “Proof” in “Of Miracles”**

Showing that Hume’s arguments do not suffer from equivocation when they make use of “proof” is a task far beyond the scope of this paper. Even determining whether Hume equivocates in “Of Miracles” is a complicated task, as the literature on “Of Miracles” is extensive and not much of it deals explicitly with the question of what constitutes a proof for Hume; it would require extensive reconstruction of each commentator’s implicit interpretation of “proof” in their multifarious reconstructions.⁴⁶

What I can do, though, is resolve the problem I put forward earlier, showing how cases where “there is proof against proof,” (EHU 10.11) i.e., cases in which two proofs seem to establish contradictory conclusions, cause no problem for Hume. If proof demanded actual belief

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⁴⁶ Few interpreters of Hume’s argument in “Of Miracles” treat the question of the meaning of “proof” in that context directly, though notably Garrett (1997, 2002) and Owen (1987) do. Owen and Garrett address “proof” in order to resolve the *prima facie* problem I have outlined here. Owen, for instance, tries to resolve the conflict by concluding that a “proof” is “an argument with very high probability indeed,” as long as it is not demonstrative (189n). While Owen is correct that this is how Hume (sometimes) uses the term, Owen treats this usage as if it is *equivalent* to Hume’s definition, which it is not. Neither of their interpretations is satisfactory because neither adequately addresses the different uses of “proof” in the text.
and indefeasible conviction, then it would seem impossible for either of the arguments involved in the conflict to have been—or continue to be—a proof.

My discussion above shows that both of the senses of “proof” that could be at work in “Of Miracles”—Hume is clearly not deploying the mathematical usage—can be read unproblematically with respect to this objection, even if Hume is equivocating. This is because these two uses share a key feature: each of them requires that the information that is had generates conviction, and that there is no psychologically available information that would undercut the relationship between the information that counts in favor and the evident-ness of the proposition (because otherwise they would fail to generate such conviction).

“Proof,” whenever it is used, denotes lack of psychologically available counter-evidence: if this condition were not met, then the conclusion would not be evident in the way that is needed to rise to being a proof on any sense. Because this feature is shared by both of the possible uses that Hume could be deploying in this section, the prima facie problem in “Of Miracles” is not a problem at all; to be a proof does not denote that there exists no such material that could undercut the relationship between the information that counts in favor and full conviction, just that the information is not functioning in this way at the time.47

It is thus possible to see how we could have psychological materials, even those in the form of convincing probable arguments, that would lead to contradictory conclusions and yet still have both of those conflicting arguments count as proofs. This is because it is only when the two contradictory conclusions are seen in light of each other as being contradictory does the evident-ness of the conclusion on the basis of the information that counts in favor of it come into

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47 Interestingly, because of Hume’s account of the mechanisms of demonstration and intuition (that they constrain the mind to conceive of the ideas involved in certain ways), the mathematical uses of proof will additionally entail that there is no possible counter-information.
question. Only when the conclusions can be viewed as being in conflict does having convincing argumentation for the opposite conclusion result in a dearth of evident-ness for the conclusion. The conflicting information will not produce conflicting evident-ness until the two proofs are seen as leading to opposite conclusions.

Once the tension between the two proofs is seen, the proofs can be weighed against each other and the superior one may still produce (psychological) certainty. That is, though we might be initially compelled to believe both, because the balance of cases favors the stronger proof against the lesser proof—the stronger proof being the one with a larger quantity of (more) uniform experiences in its enumerative base—the stronger proof can, on this picture, destroy the lesser one by undercutting the relationship of the inductive base to the conviction, making it less than maximal. It does so, crucially, without providing counter-cases: it undercuts the relationship in the same way that my beliefs about roulette wheels undercut the consistent trials in that case. Even after it does this, the stronger proof’s uniform base of cases will continue to be operative, and (may well) still generate (perhaps sufficient or maximal) evident-ness for its conclusion, even despite the past conflict. So we may continue to have enough cases that are (sufficiently) uniform to continue to maximally endorse the conclusion of the (stronger) proof.48

Given this interpretation, the passage that generates this prima facie problem does not depend on different uses of “proof.” My way of understanding the linkages between the different uses of “proof” undermines the force of the objection, even if it does not show that Hume is not equivocating. The force of the objection comes from the possible equivocation or inconsistency it seems to identify. But there is no inconsistency, and, because each use of “proof” shares the

48 Further, reading the evidential use of “proof” as operative in any of the particular uses is non-problematic in much the same way because the information that counts in favor of the conclusion in evidential proof is just a broader specification of the uniform cases that serve the same function in proof as defined.
crucial feature (lack of information that would undercut the relationship between the information that counts in favor and the conclusion) then the force of the objection is nil, because even if Hume is equivocating between uses, each of the uses has the features that can make sense of Hume’s claims.

The work I have done here should show that the method I have endorsed in my clarification of the senses of “proof” in the text will be fruitful: it illuminates just what commitments interpreters are making about the nature of proof, and it makes clear just what relationship their claims have to the definition that Hume gives us in *EHU* 6n10 (and reiterates repeatedly in *EHU* 10). By examining the related meanings of the different uses of the word, I was able to show that a long-standing and sometimes-addressed objection to or unclarity within “Of Miracles” was actually unproblematic.

This discussion of “proof” gives us a general pattern for evaluating the arguments that use these problematic terms: if the different usages are not deployed within the same argument or if they appear but do not do any argumentative work, then Hume avoids equivocation. Hume also avoids equivocation if, in uses ambiguous between the different senses, each of the senses shares the relevant feature or features. If, however, the different senses of the term are doing argumentative work, or the relevant features are not shared by all of the uses, then it is possible—nay, likely—that there is some degree of equivocation. Only by sorting out the multiple senses of other terms will we be able to spot these instances of—perhaps subtle—equivocation. When confronting the text, one should stop and evaluate what sense of the word is being used.

**IX. Conclusion of This Chapter**

Hume’s texts call out for their meanings to be clarified by investigating his use of terms, and what has gone before in this chapter should show that approaching the terms directly can
yield results beyond simple sentence-level clarifications. I used this method above to identify, disambiguate and define the senses of the term “proof,” which required applying the method to Hume’s use of the terms “certainty” (which had two senses) and “evidence” (which had only one, though it was quite different from the contemporary sense).

This is the method I will employ for the remainder of my project: attempting to determine any different sense of the words used and determining what import this has for our interpretation of Hume’s view of the psychology of human reasoning.

Generally, I will proceed by clarifying terms and following the issues raised by those interpretations to new terms and areas. My investigation will primarily focus on Hume’s view of human reasoning, and in particular its mechanics, as presented in *Treatise* 1.3 and *EHU*. I will begin my investigation by clarifying “argument” and “inference.” I will then move through “reasoning” and “reason” themselves and conclude by discussing “the understanding” and Hume’s faculty psychology, as well as its relationship to contemporary philosophy of cognitive science and Early Modern views of animal reasoning.
Chapter 2: Repairing “Argument” and “Inference”

This chapter deals with the terms “argument” and “inference.” In the previous chapter, I argued that the term “argument” is both important to understanding Hume’s view of human reasoning and that it is subject to interpretational dispute. Hume’s usage of the term “argument” leaves what that term means—and, as a result, the conclusions of arguments that it figures prominently in—problematically unclear. Prior interpretations of Hume’s use of the term “argument” fail because they do not properly account for the way that Hume links the term “argument” to the term “inference.”

I will argue that the best interpretation of “inference” is one advanced initially by Connon (1979) that treats “inference” as mental transitioning from an impression (or an idea) to an idea. I will modify this view to stipulate that the transition must be in accordance with the philosophical relations. I will also argue that by “argument” Hume means to denote a subset of inferences, namely, that subset that has more than one step. To show that this is the best available interpretation, this chapter shows how the account Garrett (1997) gives fails, and the next chapter shows how the other major contemporary account of Hume on reasoning, the one articulated by Owen (1999), fails as well.

I. Preliminaries: Why Start with “Inference”? 

It seems there might be a number of good starting points to investigate Hume’s use of terms related to human reasoning. This section explains why understanding the notion of inference (and the related notion of argument) is paramount and gives background about Hume’s goals and strategy. At the most fundamental level, “argument” and “inference” provide the best
starting point because Hume is concerned with both of them, they are related, and Hume starts his investigation both in the *Treatise* and in *EHU* with inference.

Hume’s broad project over all his works is to establish a “science of human nature”\(^1\) that will explain human reasoning and cognitive faculties,\(^2\) passions,\(^3\) moral capacities,\(^4\) their relationship to religion,\(^5\) and so on. *Treatise* Bk.I and *EHU* are the first stage of this project; Hume begins his science of human nature by examining the nature and limits of human inferential abilities. Insofar as the investigation is scientific—and not, e.g., speculative—it begins with certain sorts of obvious behavior humans evince, like making inferences and responding to arguments.\(^6\) Inference and, to a lesser extent, argument, are the mental functions Hume is seeking to explain. Inference is the explanandum for which Hume’s theory is the explanans. The obvious inferential activities of humans are Hume’s first starting point. Hume’s other starting point is the (what he takes to be obvious) piece of introspectively available data that the mind has “impressions and ideas.” Hume asserts this first starting point and moves on to give an explanation of human reasoning behavior in terms of it.

The section titles in the *Treatise* alone show Hume’s progression from the ideas and impressions themselves to the etiology and operations of the mind with respect to those ideas. First Hume gives their origin (T 1.1.1, “Of the origin of our ideas”), then the broadest taxonomy

\(^1\) Hume describes his project thusly as early as the introduction to the *Treatise*, where it is rendered as “science of man” but described as relating to “human nature” (T intro.4); Hume links these two explicitly at T 1.4.7.14 (“Human Nature is the only science of man.”) though the phrase “science of human nature” first appears earlier at T 1.1.1.12. See also the first sentence of *EHU* 1.1.

\(^2\) *Treatise* Bk. I “Of the UNDERSTANDING” and *EHU*

\(^3\) *Treatise* Bk. II “Of the PASSIONS”; *A Dissertation on the Passions*

\(^4\) *Treatise* Bk. III “Of MORALS”; *An Enquiry concerning the Principles of Morals*

\(^5\) *Dialogues concerning Natural Religion; The Natural History of Religion*

\(^6\) See chapter seven for my full account of how Hume’s approach to the mind is natural-scientific in character.
Once Hume has broadly defined “ideas,” he begins an account of the etiology of those ideas (T 1.1.3, “Of the ideas of the memory and imagination”), discussing the powers of the mind related to those ideas and then continues on to explore the relationships those ideas have to each other in virtue of the system in which they are embedded (T 1.1.4, “Of the connexion or association of ideas,” T 1.1.5, “Of relations”).

Similarly in EHU, when Hume introduces impressions and ideas, he does so by appealing to the difference between the mental operations that are germane to them; this is the very first sentence of EHU 2:

> Every one will readily allow, that there is a considerable difference between the perceptions of the mind, when a man feels pain of excessive heat, or the pleasure of moderate warmth, and when he afterward recalls to his memory this sensation, or anticipates it by his imagination. (EHU 2.1)

To make the distinction between impressions and ideas, Hume adverts to the activities of the mind; one of those chief activities—anticipation—requires an inference (as EHU 4, 5 and 9 will make clear later). Hume goes on to explicate the difference between impressions and ideas (EHU 2.1-2.3) in order to consider the powers of the mind:

> Nothing, at first view, may seem more unbounded than the thought of man, … to form monsters, and join incongruous shapes and appearances, costs the imagination no more trouble than to conceive the most natural and familiar objects. (EHU 2.4)

Hume has here moved from discussing what the mind has, to what the mind does, and he frames this as the subject of his enquiry:

> But though our thought seems to possess this unbounded liberty, we shall find, upon nearer examination, that it is really confined within narrow limits. (EHU 2.5)
This quotation shows that Hume’s goal is to discuss the nature of the mind: he wants to investigate the capacities and capabilities of the mind—i.e., the character and limits of its activity. Human thought, he has told us, forms monster, it joins incongruous shapes, and it does so at (some, though perhaps little) trouble (i.e., effort). It is this forming, joining, and all the other activities in which the mind engages that Hume is telling his reader about. This is the end point of the trajectory Hume started on with the distinction between impressions and ideas. Hume starts with impressions and ideas because they are what is operated on by the mind: the mind operates by joining its ideas, moving between them, &c.; what the mind does it does to or with these perceptions. Impressions and ideas are not identical to the operations of the mind, nor can they themselves alone explain the operations of the mind.

This latter is the case because, while it is true that impressions and ideas enter into the mind and influence its operations—for instance, they may prompt inferences or result in passionate reactions—and so it is true also that the mind operates both with the ideas and in response to impressions and ideas. On Hume’s view, impressions and ideas themselves do not produce the inferences or passionate reactions; the mind produces these in response to the impressions or ideas. The mind is the set of structures that enables and manipulates these perceptions. It is the medium in which impressions and ideas occur. Impressions and ideas are inert; they only have the life that the mind gives them. For this reason, they cannot by themselves explain the operations of the mind.7

A note here about the mind, which Hume is investigating. The mind, in this case, is to be distinguished from the brain: nothing that Hume says (and nothing that I will say) will suppose any particular sort of relationship between minds and brains. Hume’s discussion takes place

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7 For more on Hume and the ways in which the mind is active, see chapter seven, section III.
entirely at the level of impressions, ideas and faculties: he makes no commitments regarding how those things might be implemented in brains. My discussion will operate at this same level.

Minds have impressions and they have ideas. Impressions and ideas are perceptions the mind has; they are representations, and they form what I will refer to as the “contents” of mind. On Hume’s view, different contents are apparent to the mind at different times, depending on a number of different factors. These different contents become apparent as a result of functions the mind performs. I mean functions here in a mathematical sense: these functions are operations that produce certain outputs from particular inputs (as such, it should not be taken to imply any teleology). In speaking about the “operations of the mind,” I mean to isolate just these functions.8

In the most general terms, then, an individual mind is some set of these contents connected to some set of operations: my mind, for instance, has current impressions of a computer screen and keyboard. When Hume considers the human mind, he means to abstract away from the particular contents of individual minds and consider the operations that are shared between individuals: he means to tell us what is true of human minds in general. Because the content drops out in discussing the human mind, the distinction between the operations of the mind and the human mind itself is non-existent at this level of discussion.

Hume is investigating reasoning in humans; so, because the mind is possessed of perceptions and perceptions are essential to explaining reasoning, Hume will need to determine the character of those perceptions (and the connections between them). Hume’s science of human nature begins with a discussion of impressions and ideas because impressions and ideas are the materials the mind operates on and with. One obvious and important kind of operation of

8 These functions will later be collected and the resulting, generalized collections treated as faculties. See chapters five, six and seven.
the mind is inference: “inference,” at its broadest for Hume, denotes a kind of transition of mind that the cognitive faculty or faculties of mind make with impressions and ideas.9

Hume seeks to explain one fundamental datum, *that the mind operates by making transitions*—in this case, he is concerned with cognitive transitions, i.e., inferences—with reference to the other fundamental datum, *that we have impressions and ideas*. Inference is fundamental for Hume insofar as it is the explanandum for which his theory is the explanans: he endeavors to explain the transitions of mind by adverting to the things being transitioned between.10 Hume argues in the *Treatise* and in *EHU* by making use of fundamental constraints on those impressions and ideas—e.g., that the ideas must be copies of the impressions (T 1.1.1, EHU 2), that there cannot be real connections between distinct ideas (T 1.1.3), &c.—to explain the operations of the mind. It is the nature of these inferential and argumentative transitions that Hume discovers through this process that will later license Hume’s conclusions about the psychological mechanisms of reasoning,11 as well as its limitations12 and its warrant.13

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9 The term “cognitive” does not appear in the *Treatise* or *EHU*. In part I use it because it is free from interpretive baggage. By “cognitive” I mean to pick out those mental items or processes related to perception, memory, reasoning, &c.; the chief contrast to the cognitive, for Hume, is the passionate: in response to any stimuli I might have both cognitive and passionate reactions, and these seem to be of distinct types, making use of distinct mechanisms, and producing distinct types of effects. For instance, while walking in a graveyard, I may think of a loved one who is buried there. This associative transition, as we will see, is cognitive. On thinking of the loved one, I may experience sadness at their passing. This transition is not cognitive: I enter a new passionate state on the basis of some experience, and, while there might be some cognitive upshot of this state (I may recognize that I am sad), there need not be.

10 It is *prima facie* possible that he could have started with the transitions of the mind and explicated the ideas in terms of the connections humans tend to see between them: causation, necessary connection, powers, &c. But this is not how Hume argues in either of the works I will treat.

11 T 1.3.6-15, EHU 5-7

12 T 1.3.6; EHU 4

13 T 1.4, EHU 12
So, Hume’s science of human nature in Bk. I of the *Treatise* and in *EHU* is his explanation of one sort of mental transition, transitions from impressions to ideas or between ideas. This is why it is imperative to determine what Hume means by inference: the story of inference is the story of the *Treatise* Bk. I, and it is the story of *EHU*. No other issues can be settled until we are clear on what inference means and it is not immediately clear what more can be said about inference than that it starts with an idea or impression and concludes in an idea. We have not yet said what makes it a *cognitive* transition, and it is as yet not clear what the relationship is between inference and argument. By exploring their relationship, we can find the nature of Humean inference.

**II. The Connon & Kemp Smith Accounts of Inference**

There is no common account of what it is to be an inference in Hume’s philosophy. The most direct statement of a view is R.W. Connon’s claim that inference is “a particular kind of mental transition from one thought to another, and not, as some commentators have assumed, an exclusively logical operation” (1979, 128). Connon mentions Norman Kemp Smith’s account approvingly. Of inference, Kemp Smith says:

\[
\text{Inference, then, instead of being based on the relation of cause and effect and presupposing it, is itself identical with that relation. It is nothing but the custom-bred transition from an impression to an enlivened idea. … [Hume] declares the operation of the mind, by which we infer effects from causes, to be, like that of moral judgment, so essential to the subsistence of all human creatures, that it cannot be trusted to the fallacious deductions of our reason. (1905, 164)}
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\[14\] Connon correctly notes that Hume often uses “reasoning”—and not “inference”—“to denote the act of inferring [in the contemporary sense] conclusions from premises” (128n34). The relationship is more complex than this, though, and I address this wrinkle in Hume’s terminology in chapters three through five.
Connon’s account and Kemp Smith’s account are substantially similar insofar as they both treat inference, of itself, as requiring nothing but transitioning between ideas. They differ in important ways, however, as Kemp Smith’s account is an account of causal inference. We can see that Kemp Smith presupposes that inference is simply causal inference because, while he begins by talking about inference seemingly generally, he then restricts his claims to those inferences that are (supposedly) based on and presuppose the relation of cause and effect. Despite the fact that inference based on causation is often (at least implicitly) treated as being the only form of inference for Hume—as Kemp Smith does here—there are several other kinds of inference that Hume countenances.

One passage that shows neatly that Hume acknowledges more than one kind of inference: in EHU 4 part 2 Hume argues that our basic causal inferences, that is, the causal inferences upon which our more sophisticated causal judgements—like that all things must have a cause, that the same causes produces the same effect, or even our scientific type causal reasonings that depend on these (and other) principles—cannot result directly from argument, reason or ratiocination. That is, Hume argues that no argument, or instance of reasoning or ratiocination can immediately result in a basic causal judgement.

Before I explain how EHU 4 part 2 shows that there is more than one sort of inference, I need to resolve a potential conflict. One might think that this interpretation of EHU 4.2 conflicts with Treatise 1.3.15, titled “Rules by which to Judge of Causes and Effects.” That section, I take

15 Though some commentators equate the two, I shall try to be ambivalent about the relationship between what Hume calls causal or probable reasoning, i.e., that which concerns matters of fact, and the contemporary category of induction.

16 E.g., in the index for Hume (2000), Norton and Norton’s index entry for “inference” says “see probable or causal inference.” Similarly in Millican (2002c) the index entry for “inference” refers to the entry for induction. It is hard to tell if this is because commentators only see interest in discussing Hume’s account of causal inference, or because they take inference to be only causal inference. Regardless, the point remains that there is no common account of inference simpliciter.
it, is meant to explicate rules for the regulation of causal judgements.\textsuperscript{17} One might object that, if there are rules to be applied to judge of causes and effects, that means that there are arguments that could be provided (appealing to the rules) that would result in causal judgements. I do not think this objection holds, as the general rules promoted in \textit{Treatise} 1.3.1.5 are rules to \textit{regulate} the causal judgements that we instinctively and irreflectively make by the processes described in \textit{Treatise} 1.3.6-8 and \textit{EHU 4}. \textit{Treatise} 1.3.15 seeks “to fix some general rules” to make these judgements more consistent or better in line with our reflections about the nature of causation; they are meant to be correctives. As such, when I say here that basic causal reasoning does not result from argument, reason or ratiocination, I mean that non-basic causal reasoning does so \textit{immediately}.\textsuperscript{18} There may be instances of immediate causal reasoning that, in some sense, result from reasoning, argument or ratiocination that has constrained the immediate, habitual operations of probable reasoning (if that is indeed the process by which these rules are generated or applied), but in those instances the reasonings, arguments, \&c., do not produce the inferences immediately. There may also be instances of causal reasoning that are non-basic that can result from argument or reasoning.\textsuperscript{19}

Over the course of his argument that no argument, or instance of reasoning or ratiocination can immediately result in a causal judgement in \textit{EHU 4} part 2, Hume allows that there are certain inferences humans make and then sets about to determine of what kind those

\textsuperscript{17} See Hearn (1970); Martin (1993).

\textsuperscript{18} Causal reasoning only immediately results from reflexive probable reasoning (see my description of reflexive probable reasoning later in this chapter), but this reflexive probable reasoning can be colored or constrained (i.e., “trained up”) by these general rules (or other operations of the understanding or the passions).

\textsuperscript{19} See section V below.
Hume does not argue that, because they are inferences, they must not be demonstrative or intuitive (though, for other reasons, Hume does ultimately reach the conclusion that they cannot be). Instead, over the course of the argument Hume countenances that, as inferences, they might be one of many different sorts of inference: they might be “drawn by reasoning and argument,” they might be demonstrative or they might be intuitive or even experimental inferences (i.e., probable inferences, related to experience); they might be inferences that are founded on argument. This passage should be sufficient to show that inference simpliciter is a broader notion than just causal (or inductive) inference for Hume and more than just habituated transitions.

One might try to save Kemp Smith here by claiming that he is trying to show that all inferences are instances of the causation relation (not that all inferences are based on the causation relation); that is, by asserting that we can distinguish between inferences that concern causation or make use of the relation of cause and effect from inferences that are themselves instances of a causal relation or can be explained by appeal to the relation of cause and effect. The arguments that I give here concern the former: I see no reason to read Hume in this section as arguing that causal inference (or any other sort of inference) can be (or must be able to be)

20 In EHU 4.16—“I shall allow, if you please, that the one proposition may justly be inferred from the other: I know in fact, that it always is inferred.”—Hume addresses the inference to the proposition that future causal particulars will be a certain way based on the proposition that past causal particulars have been a certain way. (That is, the inference from “The X have always caused Y in the past” to “X-ish objects will, when observed in the future, cause Y-ish effects.”) In EHU 4.21 Hume addresses the inference to a connection between “the sensible qualities and the secret powers.” What matters here is that Hume grants that each is an inference, then investigates what sort of inference it is.

21 Presupposed by “There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument.” (EHU 4.16)

22 “The inference is not intuitive; neither is it demonstrative. Of what nature is it then? To say it is experimental, is begging the question.” (EHU 4.21)

23 “The question still recurs, On what process of argument this inference is founded?” (EHU 4.21)
explained via determination of causal relationships. Hume certainly does endorse this thesis, but is not concerned to argue for it, and it does not seem to bear on Connon and Kemp Smith’s discussion of causal inference (i.e., inference that renders judgments about or makes use of cause and effect relationships).\textsuperscript{24} If there is a way to read Kemp Smith’s account such that he is discussing the explicability of inference \textit{via} the causal relation, then, first, my points below will not count against that view, but, second, the Kemp Smith view will not be an account of inference in the sense that I seek, thus it will not count as a competitor to the view that I go on to articulate.

The view that Kemp Smith advocates, then, is either wrong or elliptical because Kemp Smith’s account only addresses causal inference and cannot be expanded to encompass demonstrative inference. Kemp Smith either does not provide an account of inferences that do not relate to cause and effect or the account he gives is incompatible with the text.\textsuperscript{25}

Connon’s account is broader and less specific than Kemp Smith’s. Where Kemp Smith treats inference as always and only being the result of custom, Connon’s account takes it only that inference is a particular kind of mental transitioning between ideas. I will show that this account succeeds as an account of inference \textit{simpliciter}, that is, as an account of inference

\textsuperscript{24} See chapter seven’s discussion of Hume’s view of the mind in relationship to the new, mechanistic science.

\textsuperscript{25} At least, if we assume that what Hume says elsewhere of demonstration at least broadly holds of demonstrative inference, i.e., that demonstration/demonstrative reasoning trades on the relations of ideas (EHU 4.1, T 1.3.1.2), not impressions.

Another version of this argument: Hume allows at, e.g., \textit{EHU} 4.1, that “Though there never were a circle or triangle in nature, the truths, demonstrated by Euclid, would for ever retain their certainty and evidence.” Certain of our inferences about circles come not from custom, and are not from any impression to an idea, which is just how Hume describes causal inference, recall that T 1.3.6 is “Of the inference from the impression to the idea.” Rather these inferences trace relations between ideas we have. Thus, as Kemp Smith’s account of inference claims to be an account of the inference from the impression to the idea, it cannot be an account of demonstrative inference, which deals with the relations of ideas.
whereby each of the disparate types of inference I have drawn out from Hume’s text will
genuinely count as inference. The argumentation in the rest of the chapter will show that
Connon’s is the correct account, once a suitable restriction has been added: inference is all (and
only) transitions made in accordance with the seven philosophical relations. This is the general
account of inference I will advance: “inference,” for Hume, picks out mental transitioning that
begins in an impression or idea and terminates in some (distinct) idea and moves from the one to
the other by way of tracing one (or more) of the seven philosophical relations.

Throughout the rest of the chapter, I will explicate and defend my version of this view,
while defending it against the interpretation given by Don Garrett (1997). I will show that
Garrett’s view is inadequate because it fails to satisfactorily explicate the connection between the
terms “inference” and “argument.”

III. Garrett & the non-synonymy of “inference” and “argument”

Garrett’s view links “argument” and “inference” but uses them as if they are equivalent
or synonymous for Hume. In this section, with its several subsections, I will show that this
interpretation cannot be correct because there is good evidence that, for Hume, all arguments
must have a “medium” or a middle step linking the starting point to the conclusion. Inferences,
on Hume’s view, do not require a middle step. Therefore, there are at least some inferences that
are not arguments. Garrett therefore is mistaken and “argument” and “inference” cannot be used
interchangeably in interpreting Hume. To my knowledge, Garrett’s interpretation of the terms
“inference” and “argument” is never directly stated by him, but much of Cognition and
Commitment in Hume’s Philosophy (1997) presupposes it. Garrett allows that there are both
demonstrative and non-demonstrative inferences,\textsuperscript{26} so Garrett’s view, implicit as it may be, at least avoids the problem I found with Kemp Smith’s view.

**A. Garrett takes “Argument” and “Inference” to be Synonymous**

Garrett (1997, ch. 1) frames his explication of Hume as an account of Hume’s faculty psychology; he takes himself to be clearing up the relationship of the imagination to the understanding in Hume.\textsuperscript{27} Garrett first addresses Hume’s view of inference when he is outlining Hume’s view on the faculty of reason: “reason is the faculty of reasoning: of making inferences, or providing, appreciating, and being moved by arguments” (27). This way of putting it seems to offer “providing, appreciating, and being moved by arguments” as a synonym for “making inferences.” As we saw in the previous chapter, though, constructions like this that use “or” can be tricky in Hume, and this is still the case even when contemporary authors like Garrett deploy them. Garrett continues on, however, equating argument and inference: “Hume recognizes that there are a large number of other operations or aspects of the imagination in addition to argument or inference” (27). The contiguity involved in seemingly miraculous occurrences “can enhance one’s belief in those events without any additional process of argument or inference” (27-8).

Garrett claims that Hume follows closely the Lockean usage of reason as “simply the inferential or argumentative faculty” (85). Even “reasoning” is muddled together with “argument” in Garrett: “Imagination in the second sense includes all of these ways except argument and reasoning” (28).\textsuperscript{28}

\textsuperscript{26} That Garrett takes the time to label the inferences he is investigating as non-demonstrative, as on, e.g., p. 76, shows that he must think that there are demonstrative inferences, too.

\textsuperscript{27} I hold off on this task until chapter six.

\textsuperscript{28} Much as it is in Owen, and, ultimately, in Hume; see chapters four through six.
But there are no textual citations and no argumentation to show that argument and inference must be identical (or even, for these purposes, interchangeable) for Hume. Though Garrett does not produce it, it is likely that much of the seeming evidence comes from constructions like those I addressed in chapter one that make use of ambiguous constructions using “or,” which link together “argument” with “reasoning,” “process of the understanding” and “inference.” But as I showed earlier, we cannot take all of these terms to be synonymous or interchangeable for Hume without some further argument.

**B. Text Shows “Argument” and “Inference” Distinct**

Looking directly at the text suggests that argument and inference ought to be distinct for Hume. At *EHU* 6n10, Hume gives an exhaustive taxonomy of arguments. Hume says that there are three types of arguments: “demonstrations, proofs, and probabilities.” *EHU* 4.21 suggests that there are three types of inference. Were these two taxonomies to be identical, then attributing synonymy (or interchangeability) to “argument” and “inference” in Hume would be appropriate. However, the three types of inference implicit in *EHU* 4.21 are intuitive inference, demonstrative inference and experimental inference: “The inference is not intuitive; neither is it demonstrative. Of what nature is it then? To say it is experimental, is begging the question” (*EHU* 4.21).

This quotation, along with the earlier-adduced quotation from *EHU* 4.16 (“There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument.”), very clearly intimate that Hume thinks that there are intuitive *inferences*, and that they are properly called inferences.

Despite this, one might suppose that Hume should think that intuition is simply or solely a kind of perception or sensation rather than a kind of inference, given passages like T 1.3.1.2,
where Hume seems to equate intuition with perception, but this is not so: in chapter five, once I have explicated the connection between “inference” and “reasoning,” the reason for this will be clear, but suffice it to say that I think these passages from *EHU* 4 part 2 give us good reason to take it that intuitive transitions of mind are a kind of inference, and that the *Treatise* passage in question gives us reason to think that the connection between “reasoning” and sensation or perception is in need of further exploration; I make use of the former result here, and I deal with the latter problem in chapter five. In short, though, just because Hume says that when we see the relations of resemblance, contrariety and degree of quality are “discoverable at first sight” and that we judge them “without any enquiry or reasoning” that does not mean that the transition involved on the basis of the perception of the relation is not an inference, just that, in order to perceive the relation one does not have to do any (additional) work.

Notice also that it is the word “reasoning” that generates the problem here, not “inference.” This is more evidence that the relation of “reasoning” to “inference” is in need of clarification. In conclusion, *Treatise* 1.3.1.2 does not preclude intuitive inference, but it does raise interpretational issues that I will address later.

Given that the taxonomies are different, “inference” and “argument” are, at least, distinct. Argument and inference are also, of course, intimately related, but spelling out that relation is difficult. Hume has divided the “objects” of Human reason in two types, relations of ideas and matters of fact (*EHU* 4.1) and each of these kinds is subdivided in one but not the other of the two taxonomies. The problem rests on the fact that they are subdivided into non-isomorphic taxonomies: the taxonomy of inference divides the relations of ideas into intuition and demonstration, and the taxonomy of arguments divides arguments related to matters of fact into proofs and probabilities. Further, when Hume subdivides the kinds of “reasonings” at *EHU* 4.18,
he only gives us two categories: demonstrative and moral. The graph below (figure 1) illustrates these taxonomies and their relations to one another.

C. An Objection and Reply

I have claimed that “inference” and “argument” are distinct, that is, that they pick out different classes of object. There is the basis here for an objection. The divisions within the
taxonomy of human reason’s objects and within the taxonomy reasoning’s kinds correspond to each other: demonstrative reasonings have as their object the relations of ideas, moral reasonings have as their object matters of fact (EHU 4.18). The objection would then be that the division between “relations of ideas” and “matters of fact” is the key division. The objector would claim that we can see this because this particular division recurs in each of the other taxonomies: in the taxonomy of inference, intuitive and demonstrative inferences are contrasted with experimental inferences by lining up with relations of ideas and not, as experimental inferences do, with matters of fact. The objector would remind us that in the taxonomy of arguments, proofs and probabilities (which relate to matters of fact) are contrasted with demonstrations (which relate to relations of ideas). The objector would take it, then, that Hume is free to have “inference” as equivalent to “argument,” despite the apparent differences within the taxonomies.

The objector’s key claim would be that the taxonomies only suggest that “argument” and “inference” are not equivalent, and they only suggest this non-equivalence because Hume is concerned with different things at different stages: when discussing inferences, the objector would argue, it is relevant for Hume to label a subdivision within the category that concerns the relations of ideas as being “intuitive.” Concomitantly, when discussing argument it is relevant to include proofs as a subdivision of probabilities. So, the objector would conclude, there is only one underlying phenomenon that Hume addresses in two ways–quaq argument and qua inference–and different subdivisions within that one phenomenon are salient depending on which aspect of it is being discussed. This would constitute an argument that arguments and inferences are the same.

29 It would be salient to distinguish the two because intuitive inferences, unlike demonstrative inferences, can be seen immediately.

30 Because, as we saw in chapter one, they have special psychological status.
Though this objection makes some interesting points, its argument fails to support the conclusion. If different things matter when addressing inference than matter when addressing argument, argument and inference are different: they cannot be the same. Thus, the conclusion of the objection is incorrect. What does remain to be shown, though, is whether the difference between inference and argument is a difference of aspect (i.e., a difference in the way of seeing the same set of items or events) or of extension (i.e., that the class of things referred to by “inference” is non-identical to the class of things referred to by “argument”). This is difficult to determine, in part because there will be substantial overlap: on any interpretation of Hume, many instances of inference will also be instances of argumentation; to complicate matters, inferences can be related to arguments by being made by argument, supported by argument, or be “engaged” in because of argument. The next section begins my argument that the terms “argument” and “inference” differ in the extension for Hume, not just in aspect.

IV. Inference, Intuition and Demonstration

Intuition and demonstration are types of inference, and Hume sometimes says that demonstrations are arguments. By examining how these four terms are connected, we can gain

31 “But if you insist, that the inference is made by a chain of reasoning, I desire you to produce that reasoning.” (EHU 4.16)

32 Each of these quotations presupposes that there are some inferences that are founded on reason/reasoning/&c: “The question still recurs, on what process of argument this inference is founded?” (EHU 4.21) “I want to learn the foundation of this inference.” (EHU 4.21) “It be impossible, that this inference of the animal can be founded on any process of argument or reasoning,” (EHU 9.5) Similarly, “We always presume, when we see like sensible qualities, that they have like secret powers, and expect, that effects, similar to those which we have experienced, will follow from them. ... Now this is a process of the mind or thought, of which I would willingly know the foundation.” (EHU 4.16)

33 “There is a step taken by the mind, which is not supported by any argument or process of the understanding” (EHU 5.2)

34 “If the mind be not engaged by argument to make this step, it must be induced by some other principle of equal weight and authority” (EHU 5.2) “Nor is it, by any process of reasoning, he is engaged to draw this inference.” (EHU 5.4)
insight into how the term “inference” is related to “argument.” I ultimately suggest that the terms have different extensions, and, more specifically, that “argument” is a subset of “inference.”

A. Demonstration is Iterated Intuition

Hume gives us some indication of what an inference is when he says that

The connexion between these propositions is not intuitive. There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument. (EHU 4.16)

As this quotation intimates, intuition requires no intermediate idea to provide the link between the idea with which the inference begins and the idea with which it finishes: the relations susceptible to intuitive inference are “discoverable at first sight” (T 1.3.1.2). This is in contrast to demonstration, which requires a “chain of reasoning” (T 1.3.1.5). Similarly, Hume links demonstration to “a train of reasoning and enquiry,” which can “trace, by a variety of mediums,” the relations of equality or inequality in mathematical quantities (EHU 12.27).

The sole difference between intuition and demonstration is the medium: intuition makes no use of an intermediate idea, demonstration requires an intermediate idea. To see this, take, for instance, this discussion from the Treatise section on belief:

The answer is easy with regard to propositions, that are prov’d by intuition or demonstration. In that case, the person, who assents, not only conceives the ideas according to the proposition, but is necessarily determin’d to conceive them in that particular manner, either immediately or by the interposition of other ideas. (T 1.3.7.3)

In this passage, Hume contrasts the belief that arises from probable inference with belief that arises from intuitive inference and demonstrative inference; in intuition and demonstration, the mind is “necessarily determined to conceive [the ideas] in a particular manner,” whereas in probable inference the mind is not determined to conceive the ideas in a particular manner. Intuition and demonstration are of a type insofar as they work by the same constraining
mechanism. But this passage also gives us a contrast between intuition and demonstration that explains why intuition and demonstration are distinct rather than identical: one of them—intuition—is immediate, that is, it has no need for intermediate ideas. The other—demonstration—requires “the interposition of other ideas,” i.e., one or more intermediate ideas.

So, some inferences require no medium; intuitive inferences are among this group. (I will address the other kind of inference that requires no medium—a kind of probable inference—in the next section.) This is what makes them distinct from demonstrative inferences. David Owen has argued that this is the only distinction to be found between intuition and demonstration. Owen argues that for Hume, like for Locke, demonstration is iterated intuition (1999, ch. 5). On this view, demonstration is more than one round of intuition, one of which follows on another; this enables the mind to move between ideas that are not immediately connected but can be linked by following those relations. For example, we might infer that a quantity is equinumerous with some other quantity, but then we might go on to infer that this second quantity is inferior to some third quantity. Each of these steps is an instance of intuition, but the inference that shows that the first quantity is less than the last is demonstrative. The first and last quantities are not linked by intuition in this case, but by interposing an idea in the middle of another quantity, we can construct a chain of numerical relation to show how they are related.

Owen and I both endorse the conclusion that demonstration is iterated intuition. Owen argues for this claim by arguing against the notion that demonstration is comparable to our contemporary sense of deduction. One of the strongest arguments Owen gives for this conclusion

35 There are other passages that show how intimately related intuition and demonstration are. For instance, when Hume introduces the distinction between the two at T 1.3.1.2, it is by saying that the philosophical relations apt to intuition and demonstration are the ones that “can be the objects of knowledge and certainty.” Though Hume sometimes contrasts intuition and demonstration, they are intimately related and often appear paired in the texts.
is that deduction is always *deduction from* some set of premises. Demonstration, for Hume, is almost always explicated in terms of demonstrability *simpliciter*, not demonstrability from some premises. Further, this makes sense of Hume’s criterion of demonstrability: that something is demonstrable if and only if it implies no contradiction (100) as it mentions no premises *from* which something is demonstrable. Owen claims that, given that reading Hume as meaning something like the contemporary sense of deduction is untenable, the best understanding of Hume’s view of demonstration takes it to be iterated intuition.

My view is that the passage in which Hume introduces the concepts of intuition and demonstration clearly shows that intuition and demonstration differ only in whether or not they require a medium. Intuition first appears in the *Treatise* in Hume’s discussion of reasoning. In *Treatise* 1.3.1, Hume first recapitulates the seven philosophical relations he explicated in T 1.1.5. Hume partitions these relations twice. First, he partitions off those relations that concern solely the relations of ideas from those that do not. Then, of those that concern solely the relations of ideas, three of these, he says, “more properly fall under the province of intuition than demonstration” (T 1.3.1.2). These three are resemblance, contrariety, and degrees of any quality. These, Hume says, are “discoverable at first sight” and that we judge of them “without any enquiry or reasoning.” By contrast, the relation of *proportions of quantity or number* is one by which “we can carry on a chain of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty” (T 1.3.1.5).

These features of intuition and demonstration make it clear that intuition does not involve a chain of reasoning; it is immediately present to the mind. Demonstration, however, takes place when we chain these individual findings “which are comprehended in an instant, and where we

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36 See my earlier explication (in section III) on how I interpret the connection here between perception/sensation and reasoning and its promissory note to return to the issue in chapter five.
perceive an impossibility of falling into any considerable error” (T 1.3.1.3). Hume claims that we immediately perceive the diversity of quantities when there are great differences in proportions or number, or when the quantities involved are very small, and that by linking these smaller perceptions together we can produce (certain) judgments for larger or more difficult quantities or proportions. The first kind of judgment is intuition: it is immediately comprehended. The second kind is demonstration: it requires linking disparate ideas, the relationships between which are not immediately apparent, via these relations.

For instance, if I have a group of three blue buttons and group of four green buttons, I form an idea of their union. I see immediately the idea of the fusion of the two groups as related, via the equinumerosity relation, to the idea of a group of seven buttons. This lets me know that when I have got my two groups of buttons, I have got seven buttons. This is intuition in action: I can “see” the group of four, when united to the group of three, as equinumerous with a group of seven.

I could go on from this, though; were I to now see the group of seven as fewer than a group of eight, this would be an inference with multiple steps. I would first see the union of the group of three with the group of four as equinumerous with a group of seven, in the manner of the first example given above. I could then see this group as fewer in number than a group of eight, that is, I could see it as inferior in number. In this case, the relation between the idea of the union of the two groups and the idea of the group of eight is seen via a middle step, the group of seven; it is the equinumerosity of the first two, and the non-equinumerosity of the second that the mind sees. The group of seven is not the first idea, nor is it the last when this procession of thoughts is considered as a whole, but it is an integral middle step that links the idea of the union with the idea of the group of eight. It enables the transition: without it, there would be no
connection, via these relations, between these two ideas. By linking together these two instances of intuition, we are able to see through more than one step, and perceive something not “seen” directly by the mind in the same way it was in both instances of intuition. This is demonstration.

**B. Demonstrations are Arguments, Intuitions are Not**

So, if demonstrative inference is multistep and intuitive inference is not multistep, what bearing does this have on the view of what “argument” means? I will argue that the difference between intuition and demonstration—making use of a medium or middle step—is the same difference that is to be found between a plain inference and an argument. Only once in the *Treatise* does Hume explicitly refer to “intuitive” arguments, and it is to say that, in the case being considered, there are none:

> Thirdly, We may now be able fully to overcome all that repugnance, which ’tis so natural for us to entertain against the foregoing reasoning, by which we endeavour’d to prove, that the necessity of a cause to every beginning of existence is not founded on any arguments either demonstrative or intuitive. (T 1.3.14.35)

First, it is ambiguous whether there are intuitive arguments in any other cases: this passage does not commit Hume to the existence of any intuitive arguments at all, so the denial of intuitive arguments is entirely consistent with this passage. Given how Hume puts his claim here, though, this passage is only weak evidence against the existence of any intuitive arguments.

Further, Hume here is talking about ‘proving’ something: the other two cases in which Hume seems to implicitly refer to intuitive arguments (T 2.3.2.2 and EHU 8.22, n18) are the two problematic cases in which he uses “proof” in a sense contradictory to his definition. (See chapter one.) He equates demonstrative and intuitive arguments with “proof” and, as we have seen, “proof” cannot be straightforwardly equated with arguments because the usage of “proof”
that demands argument is the one use of “proof” that Hume certainly cannot be intending here, on pain of inconsistency.

So we are left with just the one usage, in just the one passage, that makes a negative existential claim and so does not straightforwardly imply that there are such things, and, further, is tied up in the kind of problematic “or” construction I addressed in the first chapter. This is not a lot to speak in favor of using this one line to guide our entire interpretation of Hume as allowing intuitive arguments, particularly given the reasons I will give against this interpretation.

But what is the positive story about how we ought to read this passage, to make the problem go away or, at least, seem less troublesome? When confronted with a problematic passage of this character, we should look at what the aim of the whole passage is. Hume should be read here as blocking off a certain misunderstanding on the part of his reader: his main claim in this passage is to show that there are not demonstrative arguments to the conclusion that there is necessarily a cause for the beginning of an existence. That is the point of the passage. My interpretation of the passage would then take it that he also includes that there are not intuitive arguments in order to be sure that his reader does not think, because he has argued here that there are no demonstrative arguments, that there might well be intuitive ones. We should read Hume as saying ‘In this case it’s clear that there are no demonstrative arguments (and, of course, no intuitive ones either).’ Or it could very well be the case that Hume is reiterating a previous conclusion regarding inference in the guise of argument; we might think that Hume thought it too far afield from his conclusion here regarding demonstration and the necessity of a cause to bother making the distinction between inference and argument that I draw out here.

By contrast, when Hume argues that there are no intuitive inferences in a particular case, he always gives a reason: for instance, at EHU 4.16 he informs us that the inference cannot be
intuitive because the propositions are “far from being the same.” Similarly, in the related passage at *EHU* 4.21 Hume reiterates that he seeks a demonstrative connection, demanding “Where is the medium, the interposing ideas, which join propositions” that are not intuitively linked, i.e., that are “so very wide of each other?” These reasons are always given in reference to the *inference* being not intuitive, and asking for the medium for an *argument* that could connect the start and end points, if the connection were demonstrative. Though Hume addresses both arguments and inferences here, he consistently uses the term “intuitive” when speaking of inferences, and only uses “demonstrative” when speaking of arguments.

**C. First Account of “Inference,” “Argument”**

Seeing that intuitive inferences are not called arguments but that demonstrative inferences are is key to the resolution of the problem of “inference” and “argument”: inference, as a class, includes both intuitive inferences and demonstrative inferences. The demonstrative inferences, however, are all multi-step: the best understanding of demonstration is as iterated intuition; *these* inferences are also called arguments. This provides a neat dividing line between inference and argument. (I will tackle how probable reasoning—including proofs-as-defined—relates to the inference/argument distinction in the next section.)

“Inference,” then, is Hume’s name for cognitive transitioning. Over these final sections and in the next chapter, I will work out just what falls under inference (instances of intuition, demonstration and probable reasoning) and the conditions that pick out just these as inferential/cognitive types of transitioning (that they make use of the philosophical relations).

Inference begins with one impression or idea and terminates in another (different) idea: for instance, in the example with the buttons I have above, my inference begins with the idea of the union of the group of three buttons with the group of four buttons. From this idea, I transition
immediately to the idea of a group of seven buttons, via a relation of proportion in quantity or number, the *equinumerosity* relation. This is how I infer that I have a group of seven buttons: I begin with one idea, the union of two disparate groups, and terminate in another idea, the idea of a single, seven-member group, via one of the philosophical relations. This is an intuitive inference: I can “see” the group of four, when united to the group of three, as equinumerous with a group of seven.

Intuition enables other sorts of inferences as well. In addition to my mind moving to the idea of seven via equinumerosity, I could also have moved to the idea of the equinumerosity of the two groups. I begin this time with the idea of the union of the group of four with the group of three and transition to the idea of the group of seven. I “see” the two groups as being equinumerous, as before–this just consists in moving between the two ideas as I did before–but this time the complex idea *the equinumerosity of the union of the group of four and group of three with a group of seven* also comes to mind. When the mind makes the initial transition between the union of the two groups and the group of seven, the mind can also see how these ideas, which it has present to it, resemble the complex idea of the equinumerosity itself. The transition from the idea of the group of seven to the idea of the equinumerosity of the two groups is via the *resemblance* relation, and so is also an intuitive inference. It works much differently than the first example I gave above, but it still involves beginning with an idea and terminating in an idea, and a transition via one of the philosophical relations: this is what is common to all inference.37

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37 I have yet to show why the use of the philosophical relations is required. The argument for this comes in chapter three. Further, one might be concerned that Hume has seemingly said that *only* relations of quantity or proportion can be used in demonstrations when he claimed that these relations are the only ones by which “we can carry on a chain of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty” (T 1.3.1.5). It is the final qualifier in that claim that shows the mistake
Argument, by contrast, is the multi-step subset of the set of all inference. If I went on, in the manner of the second example given above, and move from considering the idea of the group of seven to seeing that group as fewer than a group of eight, this would be an inference with multiple steps. In that case, the movement between the starting idea—the union of the two groups—and the terminating idea—the group of eight—takes place via a middle step, the group of seven. The idea of the group of seven enables the transition. Linking together two intuitive inferences generates a new, complex inference with more than one step, one that is not “seen” directly by the mind in the same way as either intuitive inference. This is an argument, for Hume, but it is still an inference: it begins with one idea and terminates in another, following the philosophical relations along the way. The next section will show how probable reasoning falls into the same single-step/multi-step categories as well.

The difference between inference and argument models the difference between intuitive transitions and demonstrative transitions. Since “intuitive” is only ever applied to inference and “argument” is only applied to demonstration, we see that while there can be demonstrative inferences, there cannot be intuitive arguments.\textsuperscript{38, 39} The class of inferences is wider than the class of arguments and strictly contains the class of arguments. Inferences—transitions of mind according to the philosophical relations—are referred to variously as intuition, demonstration and

\textsuperscript{38} Assuming, of course, that the demonstrations referred to as arguments and those demonstrations referred to as inferences are the same (or the same sort of thing), which, I think is safe, as Hume refers often to demonstrations \textit{simpliciter}, implying that there are not two unique sets of demonstrations, though there are two different ways of classifying them—\textit{qua} argument and \textit{qua} inference.

\textsuperscript{39} There can, of course, be claims that are based on intuitions or intuitive inferences that are not themselves arrived at intuitively; these kinds of transitions are more complicated than the simple cases of reasoning I have been discussing, and they may well involve probable reasoning or passionate reactions.
probable reasoning depending on certain of their features, but some can be referred to both under this heading as “inference” and under the heading of “argument.”

**V. Inference and Probable Argument**

I deferred talking about probable inference and argument earlier in order to show how neatly intuition and demonstration illustrate the difference between the two. With respect to probable reasoning, Hume implies that there are both probable arguments and probable inferences. The distinction that I have drawn on Hume’s behalf between “inference” as denoting the set of all transitions and “argument” as denoting the multi-step subset of inferences will acquire additional support if I can show that Hume’s statements about probable reasoning follow the same pattern.

A few notes about probable reasoning: probable reasoning concerns matters of fact, that is, matters of real existence, as contrasted with the relations of ideas (EHU 4.1, T 1.3.2.1-2). This means that it makes use of the relation of cause and effect, as this is the only relation that lets us “go beyond the evidence of our memory or senses” (EHU 4.4, cognate passage at T 1.3.2.2-3). Hume also calls this “moral reasoning” (EHU 4.18), i.e., reasoning about affairs that concern humans. It is associated with the kind of inference Hume calls “experimental” (EHU 4.21) because it concerns how ideas are found to be linked *in experience*. The contrast for experimental reasoning is demonstration/intuition, which links ideas *in themselves*, as in (EHU 4.6, T 1.3.1.1).

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40 In Beauchamp’s annotations to Hume (1999, 216), he says of the meaning of “moral”:
The word ‘moral’ is often used in *EHU* in a broader sense than is now commonplace. ‘Moral philosophy’ referred in Hume’s day to everything from a theory of manners to a theory of ethics to a theory of mind and action… he is referring to the full range of topics concerned with mind and spirit, as well as conduct and character.
One can think of the distinction between intuition/demonstration and probable reasoning as being one between reasoning that determines the relations *intrinsic* to the ideas involved themselves in the case of the former, and relations *extrinsic* to those ideas, in the case of the latter. Nothing about the *idea* of the movement of the snake-charmer’s instrument considered in itself suggests the *idea* that it has hypnotic power over the snake, only the way the two things (the movement of the instrument and the hypnotization of the snake) have been linked in past experience suggests this: it is not an *essential* feature of the ideas themselves. As such, it is apt to probable reasoning and not intuitive/demonstrative reasoning.

**A. Probable Reasoning and Media**

Hume asserts that there are probable reasonings that have no medium, and they are still reasonings, properly so called: “We infer a cause immediately from its effect, and this inference is not only a true species of reasoning, but the strongest of all others, and more convincing than when we interpose another idea to connect the two extremes” (T 1.3.7.5n20).41

Hume also allows for arguments based on probable reasoning; for instance, when Hume introduces his definition of “proof” he describes proofs as both being derived from cause and effect (and so a species of probable reasoning) and as arguments (T 1.3.11.2). One might think that this assimilation of proofs into probable reasoning is inapt, as in *Treatise* 1.3.11, Hume introduces “proofs” as a third form of reasoning, entirely distinct from intuitive/demonstrative and probable reasoning, as he says that he wishes to “distinguish human reason into three kinds, *viz. that from knowledge, from proofs, and from probabilities*” (T 1.3.11.2).

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41 Similarly, “He immediately infers the existence of one object from the appearance of the other.” (EHU 5.4) I take it here by “immediately” Hume means just what he did in T 1.3.7.5n20 above. He does not mean quickly or without hesitation (though his use does cover those cases also) but rather, literally, without employing any medium. Also, see the next three chapters for my full discussion of Hume’s use of “reasoning.”
Hume goes on to define proofs, however, as “arguments, which are deriv’d from the relation of cause and effect, and which are entirely free from doubt or uncertainty” (T 1.3.11.2). (Similarly in EHU 6n10, Hume says that “proofs” are “arguments from experience.”) I take it that it is this further definition that shows that proofs are a subset of probabilities: Hume has told us that there are only seven relations that we can reason according to, and they are exhausted by the relations he classes as either apt for intuition/demonstration or probable reasoning (T 1.3.1.1-2). Hume has also said that probable reasoning is coextensive with causal reasoning (EHU 4.4, T 1.3.2.2-3). As such, proofs, deriving as they do from cause and effect, must be a species of probable reasoning.

I take it that what Hume means to draw out with the category of proof is that they are arguments, and that they are arguments that have a special sort of epistemic or psychological status, as described in my chapter one.

Similar to the Treatise 1.3.11 implication that proofs are probable arguments, the cognate passage in EHU (6n10) Hume describes his taxonomy of arguments, which includes both probabilities and proofs as kinds of arguments. EHU 4 is also replete with textual evidence that presupposes that there can be probable arguments.42 And at Treatise 1.3.4.2, Hume allows that there can be arguments that concern matters of fact or real existence, i.e., probable arguments.

42 “’Tis impossible that any arguments from experience can prove this resemblance.” (EHU 4.21) “In reality, all argument from experience are founded on the similarity, which we discover among natural objects.” (EHU 4.20) “These arguments must be probable only, or such as regard matter of fact and real existence, according to the division above-mentioned.” (EHU 4.19)
B. Probable Inference and Probable Argument

So what is the connection between probable inference and probable argument? Is it just the same as the connection between intuition and demonstration, that is, iterated instances of the same operation, such that it enables the linking of more distant ideas?

Examining Hume’s account in T 1.3.4.2 will help. Hume says: “Thus we believe CÆSAR was kill’d in the senate-house on the ides of March” because we reach it by a chain of evidence or reasoning that reaches back to those who were present at the event and

’Tis obvious all this chain of argument or connexion of causes and effects, is at first founded on those characters or letters, which are seen or remember’d. (T 1.3.4.2)

This shows that probable reasoning can (and sometimes in fact does) consist in a chain, just like the intuitive species of reasoning sometimes appears in a chain as a demonstration. This is to say that though there are some instances of probable reasoning that need involve no medium (as the footnote to T 1.3.7.5 makes clear), there are some instances of probable reasoning that do involve a medium. That there are instances like the latter is made clear by the fact that probable reasoning can appear in and support chains of reasoning (as T 1.3.4.2 above makes clear): the links in the chain serve as media. Probable reasoning, like the mental transitioning that appears in intuition and demonstration, can occur either immediately or with a medium.

Taking what Hume says here (T 1.3.4.2) and elsewhere (T 1.3.6.14), it is clear that Hume thinks that reading is a paradigmatic form of probable reasoning, and it seems like it must be a chain as well: the markings on the page serve to actuate the ideas of certain letters and phonemes, these serve to actuate the ideas of certain words, the ideas of words actuate the idea of corresponding objects. This is a chain of probable reasoning: nothing connects the letters to the sounds to the words to the ideas but experience and custom. Further, Hume calls this chain an
argument. So, as with intuition and demonstration, the *arguments* that are probable in character are the iterated version: while Hume never calls a probable inference that lacks a medium an argument, he does call each and every probable transition that takes place by way of a chain of ideas an argument.

Initially distinguishing the *mediated* form of probable reasoning from the *immediate* forms is more difficult than distinguishing between intuition and demonstration because they share a single term in Hume’s writings: both are just called probable reasoning.\(^{43}\) It is also true, though, that it is easier to see what is shared between the two forms of probable reasoning because Hume makes statements from time to time about what all probable reasoning must be like (e.g., T 1.3.8.12 and EHU 9.1).

A similar form of probable reasoning uses various principles as media: for instance, suppose that I know that cigarette smoking is correlated with lung cancer. Then suppose I undertake an experiment whereby I expose different lung tissues to individual compounds derived from tobacco and assess them for the kinds of changes one would see in cancerous cells. If I find a strong correlation between one particular compound and cancerous sorts of changes in the cells, I conclude that this compound is the cause of cancer in the individuals who develop lung cancer after smoking. This is a causal judgement, but I arrive at it not from habituated observation, but rather on the basis of considered reflection about correlations, mechanisms, the analogical relationships involved, \&c. This is a form of probable reasoning, and it is mediate in character, but it is not mediate in the same way that the chains of association that Hume describes in the reading example are.

\(^{43}\) Again, I will return to the use of the word “reasoning” in the subsequent chapters, but suffice it to say that one use of the term is applicable to both.
In probable reasoning, then, there are two distinct ways of forming mediated connections: via links in a causal chain or via principles. The habitual causal reasoning we do is of a type with chains of probable reasoning because it is simply the same mechanisms iterated. The causal reasoning we do on principles is of a type of chain of causal reasoning because they both make use of media. Finally, all are of a type because they concern causal relationships, and matters of fact and real existence.

So, there is one way in which probable reasoning is directly analogous to intuitive/demonstrative reasoning (that is, the process that underlies both of these forms of reasoning): in both probable and intuitive/demonstrative reasoning, the singular transition can be chained together to form inferences that link together two ideas that are not transparently connected. In another way, probable reasoning is disanalogous to intuition/demonstration; there is just one way of moving in intuition and demonstration, it is either single or chained; probable reasoning, by contrast, has two ways of moving: via habituated causal links or via principles.

Unfortunately, a full explication of the different species of probable reasoning, how they are related and how they differ is beyond the scope of this dissertation. A full investigation would include an examination of how reflective and reflexive probable reasoning work, why they are both sub-kinds of the same sort of reasoning, how the two different species of reflective probable reasoning relate, how all probable reasonings are dependent, crucially, on analogy, and how the more sophisticated ones are parasitic on the basic ones. In this dissertation, I instead focus just on disambiguating the different types of reasoning and showing how this can help us clear up interpretive disputes about the nature of reason and the cognitive faculties. See figure 2 below.
C. The Taxonomy of Reasoning

In that spirit, I turn for a moment to terminology. Norton (1982), who is followed by Owen (1999, 149, 154), calls immediate probable reasoning “reflexive” probable reasoning. Similarly, he calls the probable reasoning that uses principles as its media “reflective” probable reasoning. The former are immediate conditioned responses and the latter are considered judgments based on past episodes of experience, including our own evaluations of our reasoning abilities. Reflective transitions differ from reflexive ones insofar as they are not initiated by occurrent impressions but rather result from a subject reflecting on the connections given in experience.
I will sometimes deploy Norton and Owen’s terminology and use the terms “reflexive” and “reflective” to describe two different sorts of probable reasoning, but I will need to distinguish chains of probable reasoning as well. To do so, I will deploy two additional terms to capture the mediate/immediate distinction within probable reasoning: “reflexive” vs. “reflective” is the wrong contrast to capture this distinction. It is key to be able to capture all non-immediate transitions that make use of probable reasoning.; i.e., even though it does not happen on reflection, the chain of reasoning given above is interestingly and importantly distinct from single instances of reflexive probable reasoning and importantly similar to reflective probable reasoning. I will call chains of probable reasoning and reflective probable reasoning both “mediated probable reasoning.” The relevant term for reflexive probable reasoning to contrast it with this is “immediate probable reasoning.”

My term “mediated probable reasoning” will contain Owen and Norton’s “reflective” probable reasoning as a part: when I reflect on past experience in order to make causal judgements, I do so by making use of principles like the principle of uniformity of nature, thus ensuring that those inferences are mediated, as those principles serve as media to connect the precipitating idea or event to the concluding one.

So, because all instances of reflexive probable reasoning are cognitive transitions of the mind, they will be inferences, but because they take place without a medium, they will not be arguments. (This is precisely parallel to the way “inference” and “argument” work when applied to intuition but not demonstration.) Because instances of mediated probable reasoning do employ

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44 This should not be read as implying that this reflexive form of probable reasoning takes place without any history of constant conjunction. It is “immediate” insomuch as the inference requires no medium. (It does also often happen quickly, once the mind has made the requisite association.)

45 Owen allows for this when he claims at least some reflective probable reasonings will make use of a medium in explicating that reflective probable reasonings that make use of the principle of uniformity of nature as a medium (1999, 171).
a medium, they will all be arguments (and so inferences, too). (Again, directly parallel to
demonstration.)

As I noted above, that Hume makes a distinction between the immediate and mediated
versions in the case of probable reasoning is harder to see because Hume does not give them
different names, as he does with intuition and demonstration. Though what made the relationship
between intuition and demonstration difficult to see is that they do have different names, so it
was difficult to see that they were the same sort of reasoning, just iterated vs. non-iterated.

From this discussion, we can see that probability and demonstration/intuition are, in
themselves, types of mental operation. The distinction between probability and
demonstration/intuition is a distinction between ways things can be linked by the mind: either
ideas are linked in virtue of some feature of the ideas themselves, or they are linked in virtue of
their relationship to each other as experienced, via impressions, by an individual. The
connections to which demonstration and probability appeal can be traced immediately, by
intuition or by reflexive probable reasoning (respectively). In this case, there is inference but no
argument. The connections can also be traced meditately; in this case—but only in this case—are
there arguments (as well as inferences). This tracing of the connection is a mental operation, an
activity of the mind of the sort that Hume wanted to investigate.

So, though arguments can be distinguished by whether they are constituted by instances
of intuition/demonstration or instances of probable reasoning, “demonstration” and “probability”
do not primarily refer to types of argument. Demonstration and probability serve as the basis for
arguments, so “demonstration” and “probability” do not name, in the first instance, kinds of
arguments. Arguments are different in kind when they are built on different operations, though,
so “demonstration” and “probability” can be used to name types of argument, but they do so only derivatively: their primary reference is to the underlying type of mental operation.

This reinterpretation of demonstration/intuition and probability as types of mental operation—and that can apply in their adjectival forms to both arguments and inferences—explains Hume’s constant assertion, when denying that some mental transition is possible, that it does not come from demonstration or probability simpliciter. (Or, equivalently, denying that it comes from demonstration and denying that it comes from probability.) The kinds of denials I am referring to are the kind found when Hume says “Shou’d any one think to elude this argument; and without determining whether our reasoning on this subject be deriv’d from demonstration or probability, pretend that all conclusions from causes and effects are built on solid reasoning…” (T 1.3.6.8) and “[This] may prove after the same manner, that a superior number of chances produces our assent neither by demonstration nor probability” (T 1.3.11.7).

We might have expected Hume to deny that the transition comes from demonstrative or probable argument or demonstrative or probable inference, but instead he just asserts that it results not from demonstration or probability. My interpretation explains the form of these denials because, used in this way, those terms denote types of mental operation, not demonstrations and probabilities as kinds of argument; Hume’s denial that demonstration and probability can provide the necessary linkages is not just about arguments: neither kind of mental operation, either as inference or argument, can accomplish whatever the task is Hume is talking about when he uses these locutions. The claim is broader than might have been previously thought.
VI. Conclusion

This chapter has shown that the basic character of inference is as a cognitive mental transitioning between ideas or from an impression to an idea. Argument, by contrast, denotes the more restricted set of transitions that involve one or more intermediaries. This shows that Garrett is incorrect to conflate argument and inference: they are distinct, and they are distinct not just in aspect but in extension. It also supports Connon’s claim that inference is mere mental transitioning. I will go on to show in chapter three why we must restrict inference to transitioning in accordance with the seven philosophical relations, and, further, why this interpretation of what Hume means by “inference” needs to be embroidered with an account of the relationship of these terms to other reasoning-related terms, like “reason” and “reasoning.” I will do this by showing why my interpretation is superior to the other popular non-skeptical interpretation of Hume’s view of reasoning, David Owen’s.

46 It also counts against so-called “deductivist” readings of Hume, like that of Stove (1973, ch. 2), which claim that Hume means to denote a deductively linked set of propositions: if all it takes to be an argument is to be multistep inference, then the further restrictions of deductivist-style readings are unfounded. Beauchamp and Rosenberg put similar restrictions on demonstrative arguments (1981, 41-47). Other considerations against these views can be found in Garrett (1997, 77, 83-88), Owen (1999, 120-123), Millican (2002a, 133-136).
Chapter 3: The Relationship of “Inference” to “Reasoning”

Hitherto, I have as much as possible avoided citing passages that address “reasonings” rather than “inferences” or “arguments.” Any account of Hume’s use of the terms “inference” and “argument” (as well as the other reasoning-related terms) will have to explain Hume’s usage of the terms “reasoning” as it relates to the faculty of reason and to the phenomena of inference and argument. In this chapter, I begin by examining David Owen’s account of inference and argument to show how it frames the problem we encounter with the term “reasoning.”

I have made use of Owen’s view as exposited in Hume’s Reason (1999) at several points in my earlier explication. Owen’s interpretation of the character of inference in Hume is mostly implicit, but the view I have defended is similar to the one nascent in that text, which I take to be an updated version of the Connon view I elucidated in chapter two. Nonetheless, I will argue that Owen’s interpretation is inadequate as an account of inference. Owen does not equate argument to inference, as Garrett did, but neither does he explicitly state that inference is mere cognitive transitioning. This latter, though, is the best characterization of his implicit view.

I. Owen and the Relationship of Inference to Reason

Hume’s project, as Owen puts it, quoting Treatise intro.5, “is to explain the principles and operations of our reasoning faculty,” (1999, 66, 82) i.e., that faculty Owen elides between calling reason and the understanding.¹ Despite the fact that the “reasoning faculty” is the aim of Hume’s investigation, Owen claims that reason/the understanding is but a part of the imagination (74-76), and that “there really is no faculty of reason” (66) and there really are “only ideas, impressions,

¹ Until I give my full account of the relationship between the faculties of reason and the understanding, nothing I will say will depend on a particular conception of the relationship between the two.
and the ways they interact” (76). Hume’s story, as Owen sees it, is a deflationary one: it seeks to explain something, “the principles and operations of our reasoning faculty,” while denying that the thing (the faculty of reason) really exists: “At the basic level for Hume, there are ideas and impressions that can be categorized in different ways” (76). Owen thus seeks to deflate the understanding of “reason” in Hume, as it presumptively refers to a faculty, to referring to a mere subset of transitions of the imagination.

On Owen’s view, the perceptions of the mind interact in different ways—impressions cause ideas, ideas are associated with and related to each other, &c.—and one set of these interactions is called “reasonings.” Reasonings result singularly and in chains from the connections the ideas have in the mind.² All of Owen’s conclusions are consonant with the reading I gave in chapter two. Owen’s view is not complete, though, because it is unwilling to assert that inference is transitioning from one impression or idea to another idea, either after a single transition or a chain of them. The only reasonable way to interpret Owen’s view depends crucially on this claim: Owen’s entire discussion in this section requires Hume’s view of inference to have just this character and there is no other view even hinted at in the text.

So though Owen treats inference as a transition in the mind, as I do, as Connon does, and as he should, Owen’s view is inadequate for my purposes because it does not give an explicit account of what inference is. Owen does give an account of what probable inference is, for Hume (134), but does not explain how it (or any other sort of inference) relates to “reasoning.” To see this, note that Owen uses the terms “inference” and “reasoning” as synonyms, e.g., when he declares:

On my account, Hume is not denying that these transitions of mind are ‘reasonings’ or ‘inferences’; but he is denying that the details of the

² Owen explores these points on pages 76-82.
transition can be explained by the traditional account of the faculty of reason. (133)

Because Owen claims that Hume is not actually committed to faculties and uses faculty talk only for its “ease of exposition” (76), Owen is free to equate “reasonings” with inferences because on this view there would be no faculty of reason to which these probable reasonings can have an unclear relationship. Owen thinks that the transitions of mind are best understood as arising from the imagination (though there need not be any special faculty of imagination above and beyond the transitions themselves). Because, on this view, there are no faculties other than the imagination at all, really, Hume need not worry about or explicate any similarities or differences between these probable “reasonings” and any other “inferences.”

Additionally, though Hume deploys faculty terms as a short-cut, he also wants to subvert their use: On Owen’s view, Hume thinks that thinking of the mind in terms of faculties is useful only insofar as it is a ladder that can be kicked away once we understand the mind to consist of nothing but transitions amongst its perceptions. The problem is that Owen’s interpretation of Hume’s view of faculties leaves entirely unexplained why Hume uses the faculty terms in the particular way that he does if his goal is to subvert their use; that is, it does not explain why the faculties that Hume wants to replace have the particular character that they do.

Moreover, it leaves obscure the connection between any faculty of reasoning and the non-probable inferences. Owen’s deflationary story about the faculty of reason/the understanding frees him from the burden of explicating the relationship between inference and “reasonings,” but Owen is only entitled to be free from this burden with respect to probable reasonings. The Owen view leaves the nature and etiology of demonstrative and intuitive reasonings obscure. Only an account that explains what it is to be an inference and how this is the same as or different from being a reasoning can settle such an issue. Further, an account of inference should
provide an explanation for why demonstrative, intuitive and probable reasonings, mediated and immediate, all count as reasonings. Owen’s view simply does not address these issues.

The view that Owen treats as his chief rival—Garrett’s view—has an answer to this conundrum, because it does not deny that there is a faculty of reason:

According to this line of thought [i.e., Garrett’s view], Hume never denies that a probable inference is an activity of the faculty of reason; he just denies that there is any argument to show that this exercise of the faculty is reliable. This explains why Hume is throughout perfectly happy to speak of these transitions of the mind as ‘inference’ or ‘reasoning’; as they are the activities of the faculty of reason, why should they not be called ‘reasonings’? (133)

Owen rejects Garrett’s view because it treats Hume as overly worried about warrant rather than etiology in the negative argument of Treatise 1.3.6 and EHU 4, i.e., that argument to the conclusion that in our probable reasonings we are not “determin’d by reason.” We have seen my reasons for rejecting Garrett’s view in chapter two. But Garrett’s view does explain the relationship between demonstrative/intuitive reasonings, inference, and reason: they are all products of reason; some—the demonstrative/intuitive inferences—we persist in making because they are justifiable, some others—the probable inferences—we persist in making because it is in our nature to do so (Garrett 1997, 92).

This consideration of Owen’s view prompts what I take to be a reasonable condition of adequacy on any interpretation of Hume’s view of inference and reasoning: that it explain why Hume uses the term “reasonings” the way he does, and how the phenomena that term picks out relate to the faculty of reason, however that faculty is construed. Further, it should explain how the different sorts of reasonings are related. Garrett’s view does this, but fails in its account of the nature of inference. Owen’s view succeeds in its account of inference but fails this condition of adequacy.
To summarize, Owen’s deflationary story about reason/the understanding is good as far as it goes: it sets the stage for Owen to discuss probable reasoning, as is his goal. But it does not provide a sufficient explanation for why Hume uses the terms “reasoning,” “reason” and “the understanding” in the way in which he does, particularly if there is no faculty referred to by these latter two terms as Owen claims. The use of “inferences” as interchangeable with “reasonings” is thus insufficiently defended and Hume’s particular use of the terms “reason” and “reasoning” entirely unexplained.

II. One Major Virtue of My Interpretation

Before I present my view about how to meet this condition of adequacy, I will in this section show some interpretive strengths of the view I have been advancing: it can account for some of Hume’s constructions as being philosophical in character and not merely rhetorical.

Hume’s style of writing is disarming; Hume is the kind of writer that is easy to get the gist of, but hard to fully understand; Robert Paul Wolff (1960, 289) puts it this way:

Hume, it is now realized, was engaged in Book I of the Treatise in a serious attempt to answer some of the central problems of philosophy. However, there is rather less clarity about just what his answers were. No doubt the obscurity of Hume’s positive theory is due in part to his smooth and jesting style, free of the ponderous terminology which in other works alerts the reader to the least touch of a theory.

Hume’s writing, it seems to me, has been interpreted as overly smooth. The kind of “or” constructions I addressed in chapter one underscore this: it appears to many interpreters that Hume is repeatedly substituting pairs of synonyms—or, worse yet, producing a couple of terms at random from a pool of equivalent words—in a way that is merely rhetorical. No writer, to my knowledge directly says that this is how they are interpreting these passages. It is evident, though, that they take much of Hume’s writing—and particularly many of the terms Hume
chooses to use—as merely rhetorical in character, and divorced from the deeply complex philosophical content that Hume is trying to convey. In this section, I will show how attention to Hume’s terms, generally, and my interpretation of “inference” and “argument” in particular, can show that these turns of phrase actually bear important and complex philosophical content (and do so very smoothly).

My interpretation of “inference” is as “cognitive transition in the mind” and of “argument” is as “inference with at least one intermediary”; this view of inference (and its relationship to reason and the understanding) explains some of the problematic “or” constructions from *EHU* that I addressed in the first chapter. For instance, Hume’s insistence that

> Let the course of things be allowed hitherto ever so regular; that alone, without some new argument or inference, proves not, that, for the future it will continue to do so. (EHU 4.16)

Two things are apparent here. First, the use of “prove” must be the evidential use of that family of terms: Hume does not seek here either probable indubitability or mathematical inference. Second, the relationship of argument to inference I have sketched, along with the relationship of these to probable and intuitive/demonstrative reasoning, makes this use of “or” both informative and consistent with Hume’s project in *EHU* 4. Hume’s disjunction of argument with inference here makes the claim that, in order to secure this conclusion, either a single step of reasoning (whether probable or intuitive) would be needed, or a chain of reasoning (whether probable or demonstrative) would be needed.

We can see this clearly because Hume later takes this question up again, but in terms of the *kinds* of inference. Hume has advanced an argument that makes use of “argument” and

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3 This is made evident in the foregoing discussions I have given of Garrett and Owen, but it is evident elsewhere in the Hume literature. A good sign that this is occurring can be found whenever anyone recreates Hume’s use of those “or” constructions as if they were unproblematic.
“inference” next to each other to capture the distinction between single-step and multi-step inference. This distinction captures both the intuitive/demonstrative distinction and the immediate/mediate probable distinction. When Hume later concludes

“But you confess, that inference is not intuitive; neither is it demonstrative. Of what nature is it then? To say it is experimental is begging the question.” (EHU 4.21)

Hume has already shown that intuitive/demonstrative sorts of inference cannot be doing the work to move from past experience of regularity to our conviction regarding future regularity. He then goes on to show that probable reasoning is also problematic.

In Hume’s formulation “that alone, without some new argument or inference…” shows that he is already aiming at the further conclusion of 4.21, which excludes every type of inference: no inference, whether of the intuitive/demonstrative or probable kind, whether single-step or multi-step—which is to say, no inference whatsoever, as we have canvassed all the permutations—can account for our conviction in holding the principle of regularity of nature.

This explains what happens next: because Hume has finally shown that no inference can account for our conviction in the principle, Hume immediately follows this conclusion, here, with the skeptical objection and anti-skeptical rebuttal: “My practice, you say, refutes my doubts…” (EHU 4.21). It is because he has established that there can be no inference, of any kind or any length of chain, to establish the conclusion. Treating inference and argument as equivalent does not provoke any contradiction or infelicity here, but it treats the use of both terms merely as rhetorical flourish or hedging on Hume’s part. My interpretation can explain the usage, not as rhetoric, but as philosophy.

My interpretation also explains the following usage:
If you assert, therefore, that the understanding of the child is led into this conclusion by any process of argument or ratiocination, I may justly require you to produce that argument. (EHU 4.23)

Here Hume uses both “argument” and “ratiocination.” On some readings, these may be equivalent. On my reading, they are not. Argument is multistep reasoning, ratiocination is formal reasoning. Hume’s use of the two here is comparative: the child cannot produce arguments—they lack, e.g., the careful attention it takes to produce such chains (c.f., EHU 9.6 and n20)—whether by demonstrative/intuitive linking or by probable linking. Further, they lack crucial, developed faculties that allow for the elective comparison of ideas, those faculties of ratiocination that result in subtle intuitive/demonstrative reasonings. Hume’s use here is, again, not merely rhetorical invocation of synonymous terms. These terms have distinct meanings for Hume, and Hume’s use of each is informative. To suppose otherwise is to suppose that a bright scholar, trained in both Neo-scholastic and modern logics (c.f. Echelbarger 1997) would treat these two terms as flatly synonymous, completely ignoring any distinction between the two.

Finally, though there are many more cases I could enumerate where what may initially appear to be mere rhetorical flourishes can be shown to bear philosophical content, I present one more example from the Treatise.

We shall now examine the nature of that inference [from the belief in the existence of one object to the belief in the existence of another], and of the transition from the impression to the idea. (T 1.3.6.3)

Hume uses “and” in this case, as well he should, but the marking off of a distinction is, again, not merely rhetorical: inference is the transition from an idea or an impression to an idea.

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4 Ratiocination is just reasoning as typically construed; ratiocination is the mental process that eventuates in the logical or mathematical inferences that Hume has called intuition or demonstration, e.g., judgements of equivalence/non-equivalence, resemblance/non-resemblance, equinumerosity, superiority or inferiority in number, &c. It is used as a contrast to scientific or inductive reasoning (e.g., as in the title of Mill’s System of Logic, Ratiocinative and Inductive).
Thus Hume is adding two new areas of investigation, not one; he is saying that he will now treat the nature of transitions from impressions to ideas, and of inferences from one belief to another. This is distinct from the previous concerns with transitions regarding matters of fact, which dealt only with ideas. Seeing Hume as adding two distinct areas of investigation explains the structure and the concerns of the next two sections.

This section shows that my reading is the only one on offer that can make sense of the use of the word “inference” and its relationship to argument and reason as presented in the negative argument in Treatise 1.3.6 and EHU 4. Only my reading can explain just why Hume uses those constructions that he does. Hume uses these constructions because they are the simplest way to portray the complex relationships that he has in mind, and not, as has been implicitly supposed by some interpreters, as mere rhetorical flourishes. Further, it vindicates my general approach: taking Hume’s use of terms as serious and philosophical, and not as merely stylistic or rhetorical, will yield insights into the construction of his system, which, as the Wolff quote that opened this section reminded us, is “a serious attempt to answer some of the central problems of philosophy” (Wolff 1960, 289).

III. The Dilemma

The virtues of the view I have outlined are significant but it also leads to a seemingly undesirable consequence: my view seems to suggest that inference—in and of itself—has no linkage to reason or the understanding, as these faculties are commonly construed. This is to say that if inference is simple mental transitioning, and if reason and/or the understanding are construed as the faculties responsible for ratiocination and/or demonstration and intuition, then there will be no intrinsic link between inference and those faculties.
While Owen is happy to accept this consequence—his deflationary story about the faculty of reason is consonant with it—if we wish to take Hume’s endorsement of a faculty of reason at face value, or at least wish to remain agnostic on the issue for now, then we will need an account of how inference is related to reason.\(^5\) Inference is related to reason in some way, and I have made explaining this relationship a condition of adequacy on any interpretation of Hume.

The most apparently plausible way reason and inference might be related is directly; that is, it might be the case that inferences just result from reason and reason is simply the faculty that produces inferences. If reason and inference directly correspond—that is, if all inferences result from reason and every transition produced by reason is an inference—I face a *prima facie* dilemma: either reason will enact more transitions than just those of intuition and demonstration, or I will have to reject that inference regards as many transitions as I outlined above. If we accept the arguments I gave above *contra* Garrett, then inference is simply transitioning between ideas, so it therefore encompasses more than just this narrow range of transitions. Thus I would be required to accept that reason enacts more transitions than just those of intuition and demonstration.

As we saw Owen outline above, this is the option that Garrett accepts. This option is untenable, however, if reason is defined as that faculty responsible for demonstrative and intuitive inference. That definition seems *prima facie* reasonable, and here we have assumed it *arguendo*. On this proposed interpretation, all inference is *produced* by reason (and, on Garrett’s specification of this account, only some of them can be *justified* by reason). But demonstrative/intuitive and probable inferences are, for Hume, different in kind: one thing

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\(^5\) I address the issue of whether Hume should be read as having a faculty psychology of any sort and whether Hume ought to endorse any form of faculty psychology at all in chapter six.
*Treatise* 1.3.6 and *EHU* 4 make clear is that demonstrative/intuitive inference and probable inference have different conditions, work in different ways, and have different characters.

To see that probable reasoning and demonstrative/intuitive reasoning have different conditions and different characters, look again at the negative argument, both in the *Treatise* and in *EHU*. Observe that in his longer exposition of the negative argument in *EHU* 4 part 2, Hume distinguishes (again) the two kinds of “reasonings” humans make: demonstrative and probable (*EHU* 4.18). Hume has made this distinction earlier (*EHU* 4.1) and will go on to rely on it again later (*EHU* 4.21). He goes on to produce distinct arguments, which appeal to diverse features of these kinds of reasoning, in order to show that neither of them can explain the beliefs humans have about unobserved matters of fact (*EHU* 4.18-20). This shows that the two kinds of reasoning have different characters: one works by taking advantage of relations of ideas (*EHU* 4.18); one works by taking advantage of connections that are found through experience. (*EHU* 4.19).

The *Treatise* is structured similarly: Hume distinguishes demonstration and probability (*T 1.3.1-2), then argues that neither demonstration nor probability could produce the beliefs (starting at and framed this way at *T 1.3.6.4*), first arguing that demonstration cannot explain them (*T 1.3.6.5*), then arguing, for distinct reasons, that probability cannot explain them either (*T 1.3.6.6-7*). In both the *Treatise* and *EHU*, Hume produces distinct arguments, appealing to diverse characteristics to show that each kind of reasoning could not explain our beliefs in unobserved matters of fact. If this argument shows nothing else, it should show that Hume viewed demonstration and probability as having distinct mechanisms, i.e., as arising from different capabilities or capacities.
Thus, if the mental mechanisms responsible for either sort of reasoning are also responsible for the other sort of reasoning as well, as I was seemingly forced to accept in resolving the dilemma given above, then the distinction between the two types of reasoning will be moot. If probable reasoning is just a form of demonstrative reasoning, then the structure of Hume’s arguments here would not make any sense. If “reason” is defined as the faculty that produces demonstrative transitions of mind, but it also produces non-demonstrative transitions of mind, then we have not given an account of reason, despite having given an account of reason (because one of its major activities will not have figured into that description at all).

Taking the Garrett approach while defining “reason” as the faculty responsible for demonstrative inference leads to a collapse of the important distinctions between different types of inference. Any interpretation must account for the difference between that which produces probable inferences and that which produces intuitive/demonstrative inferences. Shoe-horning them all into the same faculty will not do.6 Accepting this consequence expands reason too far beyond its traditional purview and renders the term “reason” meaningless. If I accepted this horn, given my account of inference, I would face the same sort of objection I aimed at Owen.

Thus, the assumptions—that, one, “inference” is synonymous with “reasoning” and, two, that reason is the faculty responsible for demonstrative inference—end up requiring a choice between two difficult options: either that reason is wider than was stipulated or inference is narrower than my account allows. But notice that the entire dilemma is predicated upon this definition of “reason” as the faculty responsible for demonstrative/intuitive inference and the

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6 Hume seems to struggle with this in distinguishing reason from the understanding and distinguishing both of these from—while also including them in—the imagination. I will return to the issue of the relationship of the different faculties to each other, and how they relate to the distinctions between kinds of reasoning, in chapter six.
further connection of all inference to reason, so construed. Thus the dilemma demands an impossible task, a squaring of the circle so to speak.

The way out of the dilemma, then, would be to reject one of these demands. Alternatively, one could show that the terms are being used equivocally. I reject that “reason” is used in the same sense in both horns of the dilemma: I reject that inferences are the sole provenance of reason, when reason it is construed as the faculty that makes particular kinds of inferences, i.e., logical (e.g., equivalence, non-equivalence, resemblance, non-resemblance) or mathematical (e.g., equinumerousity, superiority in number) inference.

My interpretation avoids the dilemma by explicitly accepting that inference is a wider category than just those inferences that are from reason, when reason is construed as just the faculty of ratiocination. This will leave open that inferences do correspond to some use of the term “reason,” just not this narrow use. That will be the next major project I address. But now, as I have claimed that term “inference” captures more than just logical or mathematical reasoning, I must address just which transitions are captured under the term, as task that is complicated by the fact that Hume sometimes seems to use “reasoning” and “inference” interchangeably.

IV. Issues Raised by Rejecting the Dilemma

Rejecting a tight connection between inference and reason-as-typically-construed generates seeming interpretational problems because Hume often substitutes the terms “reasoning” and “inference” for each other, implicitly treating them like synonyms.
A. Uses of “Reasoning” and “Inference” as Synonyms

In the Treatise, Hume seems to use “inference” and “reasoning” as synonyms at T 1.3.4.1, T 1.3.6.6, T 1.3.6.16, T 1.3.8.8-12, and T 1.3.9.11. Particularly instructive is this passage:

No surely; this is not the method, in which he proceeds in his reasoning. The idea of sinking is so closely connected with that of water, and the idea of suffocating with that of sinking, that the mind makes the transition without the assistance of the memory. … This removes all pretext, if there yet remains any, for asserting that the mind is convinc’d by reasoning of that principle, *that instances of which we have no experience, must necessarily resemble those, of which we have*. For we here find, that the understanding or imagination can draw inferences from past experience, without reflecting on it; much more without forming any principle concerning it, or reasoning upon that principle (T 1.3.8.13).

Here Hume begins by explicitly considering a transition of mind, from the initial confrontation one has with a river whilst traveling to whatever mental occurrence stops one short of walking directly into it. This Hume explicitly calls an instance of reasoning (“this is not the method, in which he proceeds in his reasoning”) and later, he says that this shows that “the understanding or imagination can draw inferences from past experience, without reflecting on it.” This treats “reasoning” and “inference” like synonyms. Similarly, earlier Hume says:

’Tis therefore by *experience* only, that we can infer the existence of one object from that of another. … Thus we remember to have seen that species of object we call *flame*, and to have felt that species of sensation we call *heat*. We likewise call to mind their constant conjunction in all past instances. Without any farther ceremony, we call the one *cause* and the other *effect*, and infer the existence of the one from that of the other. In all those instances, from which we learn the conjunction of particular causes and effects, both the causes and effects have been perceiving’d by the senses, and are remember’d: But in all cases, wherein we reason

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Lest the reader object that I am neglecting the end of the quotation where Hume says that this does not count as an instance of reasoning upon a principle and claim that this shows that it is not reasoning: what is salient here is that it is not reasoning *upon a principle*, i.e., using a principle to connect two disparate ideas; the point of this passage is to show that the transition is immediate, thus “upon that principle” is a relevant qualification.
concerning them, there is only one perceiv’d or remember’d, and the other is supply’d in conformity to our past experience. (T 1.3.6.2)

Here Hume links inference and reasoning, though he uses the activity term “reason” rather than the count-noun “reasoning.” Hume claims that there is an inference when we are exposed to some object (the idea of flame) that causes us to come to have another idea (the idea of heat). This counts as an inference, as Hume explicitly and repeatedly says. Because of their prior connection, when one of the pair is not present with the other, the mind infers the existence of the other (again here it is called an inference). This, Hume implies, is an instance of reasoning. So here again, inference and reasoning are treated as referring to the same things. This interpretation is confirmed by Treatise 1.3.6.6.

Similar patterns of usage are found in the first Enquiry, particularly at EHU 4.4, 4.6, 5.4, 5.7, 8.5, 8.17, 8.20 and most clearly at EHU 9.1, where Hume says:

All our reasonings concerning matter of fact are founded on a species of ANALOGY, which leads us to expect from any cause the same events, which we have observed to result from similar causes. Where the causes are entirely similar, the analogy is perfect, and the inference, drawn from it, is regarded as certain and conclusive. (EHU 9.1)

Here we see that Hume again starts off by discussing our reasonings concerning matter of fact and then, without transitioning to a new subject, replaces reasoning with inference. This is enough to show, I take it, that when reading the Treatise or EHU one could come away with the impression that “inference” and “reasoning” just are synonyms for Hume: these passages suggest that at least sometimes Hume is using “reasoning” and “inference” as synonyms.  

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8 I have not yet produced any passages that would suggest that they are distinct. The relationship of inference to reasoning is complicated, and that is just what this section is meant to problematize. I will provide an account of the link between the two starting now and continuing through chapter five. This section is just meant to provide some prima facie evidence that, in some passages, they appear to be used as synonyms.
B. Three Questions Raised by this Seeming Synonymy

How do we explain these passages where Hume seems to treat “reasoning” as synonymous with “inference,” which will be illicit if “inference” covers more transitions of the mind than a faculty of reason produces? Further, it leaves us with a puzzle: what is the connection then between inference and reason? Finally, what are the limits of the extension of inference, if it is wider than those transitions made by ratiocination, that is, the process associated with the faculty of reason that is responsible for demonstrative and intuitive inference? I address these in reverse order.

Just because inference is not linked directly to the conception of reason as the faculty responsible for demonstrative and intuitive linking of ideas does not mean that inference encompasses all transitions of the mind. The ideas transitioned between in an inference must be connected by some relation; if they were not connected, there would be no inference, we would have mere transitioning and no way to distinguish between transitions that accord with some relation and those that do not; we would have no way to distinguish inference from flights of fancy or daydreaming. (Thus we see why the Connon account is in itself incomplete.)

In order, then, to delineate inference from mere transitioning or flights of fancy, we need an account of relations. Hume furnishes us with just such an account of what relations are available to the human mind: the seven philosophical relations (T 1.1.5). Three of the seven relations outstrip reason when that faculty is understood as the faculty that performs intuition and

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9 As long as calling something “reasoning” implies that it has its etiology in a faculty of reason. Rejecting the connection between reason and reasoning is how Owen avoids the dilemma. Resultantly, Owen uses reason and inference interchangeably. Owen gets this part of Hume right—reason and inference are at least sometimes used synonymously—but Owen’s usage is problematic because it does not account for other features of Hume’s view, as I discussed above: Owen’s use is at least consonant with Hume’s, but at the cost of failing to explain Hume’s usage and the connection of demonstrative/intuitive inference to reason.
demonstration. Inference requires a linkage but allows for more than the logical and mathematical linkages associated with intuitive and demonstrative transitions between ideas (e.g., equivalence/non-equivalence, resemblance/non-resemblance, equinumerosity, superiority or inferiority in number, &c.). Inference can thus be non-arbitrarily defined as those transitions made according to the four relations indicative of intuition/demonstration and the other three relations as well.

Hume also gives us associations between ideas (T 1.1.4, EHU 3) as the way that ideas “introduce each other” (EHU 3.2). The relationship between the associations and the relations is difficult to parse; I do not have the time or space to give a full account of how they are related here. What is worth noting, however, is that even though Hume does not give an account of the relations in EHU, he, in talking about reasoning, still talks about relations and not principles of association:

All the objects of human reason or enquiry may naturally be divided into two kinds… Of the first kind… That the square of the hypothenuse is equal to the square of the two sides, is a proposition, which expresses a relation … That three times five is equal to half of thirty, expresses a relation between these numbers (EHU 4.1).

All reasonings concerning matter of fact seem to be founded on the relation of Cause and Effect. By means of that relation alone can we go beyond the evidence of our memory and senses (EHU 4.4).

In both cases here we can see Hume expressing that it is relations that underpin human cognitive activity.

It might be objected that in these quotations Hume may be talking about natural relations (as exposited in T 1.1.4-5), which are another name Hume has for the associations. This reading will not hold, though: reading Hume as talking about the natural relations will not account for the “relations of ideas” talk in EHU 4.1: this distinction cleanly tracks the relations of ideas Hume
talks about in Treatise 1.3.1, which are *philosophical* relations, and not natural relations (associations).

Hume also gives relations pride of place in talking about reasoning in the *Treatise*, though there Hume does give an account of the associations, of which *cause and effect* is one. This shows that, though the associations do indeed play a role in all cognitive activity, insofar as we are concerned with reasoning it is clear that Hume thinks that the philosophical relations play the *dominant* role in those transitions. I do not mean to deny the importance of the associations, and a full account of *how* Hume thinks inference (and especially causal inference) actually works will involve the principles of association, but that is not the task I am involved in here.

The strongest evidence for the tight connection between inference and the relations is passages such as this, in which Hume draws a distinction between arbitrary transitions,¹⁰ and inferences, which depend on some connection:

> Had ideas no more union in the fancy than objects seem to have to the understanding, we cou’d never draw any inference from causes to effects, nor repose belief in any matter of fact. The inference, therefore, depends solely on the union of ideas (T 1.3.6.12).

This passage only makes explicit the connection of “inference” to the associations, but makes the general point that inference has to do with *linkage*. In this case, the content of the linkage found in probable reasoning is the *causation* relation, as it is in all probable reasoning, but, as Hume has discovered through this section, the presumption of that relation is based on the associations:

> Thus tho’ causation be a *philosophical* relation, as implying contiguity, succession, and constant conjunction, yet ‘tis only so far as it is a *natural* relation, and produces an union among our ideas, that we are able to reason upon it, or draw any inference from it. (T 1.3.6.16) ¹⁰

¹⁰ That is, between ideas that are unconnected; e.g., the “irregularities” Hume speaks of in the following paragraph, T 1.3.6.13.
Note here that Hume says that it is the union or association of the ideas that *enables* the inference. One might think that this just means that it is the association that is required for the transition and that the relation is irrelevant. This over-reads the quotation and treats it in unnecessary isolation from the other passages I have produced: what Hume says here is that the association enables the inference by making available certain sorts of connections. It is the tracing of these connections that is the inference itself.

This is the treatment I would give, had I the time: the connections created by the associations provide the underlying linkage that the relation tracks, but only insofar as it is traceable by a relation does it count as reasoning. It is in this way that the natural relations *enable* inference without being the only relationship that matters to inference. For instance, the causation relation, responsible for all causal reasoning, is derivative of the associations. Thus, in discussing *reasoning*, we should talk about the causation relation (even as we have modified it with, e.g., the rules by which to judge of causes and effects), but in talking about the *mechanisms*, we should talk about the associations, as they form the basis for our presumption of the relation in each case.

This matches Hume’s general strategy of divorcing the mechanism of a sort of inference from the account of what it is to be that sort of inference: just as Hume distinguishes the character of demonstration/intuition (discernment of relations of ideas) from its *mechanism* (the “seeing” or the interposition of other ideas, comparison), so too does Hume distinguish the character of probable reasoning (tracing of relations of cause and effect, identity and relations in time and place) from its mechanism (associative transitions of mind resulting from connections in experience). One central, Humean insight is that the characterization of a kind of reasoning need not be the same as the account of its mechanism, this scientific mindset—that we can define
phenomena with respect to our experience of the world or our conceptual base and then investigate what enables or creates those phenomena—is a central hallmark of Hume’s conception of science, and, indeed, fundamental to his practice of the science of human nature.\(^\text{11}\)

So, while the passages cited above only make explicit the connection of inference to the associations in probable reasoning, taken with the preceding quotations, which show the link between reasoning and the relations, my conclusion remains: inference involves connection; in demonstrative reasoning that connection is provided by the qualities of the ideas themselves. As these passages show, in probable reasoning that connection is provided by the order and connection of ideas in experience, which associates those ideas, and gives rise to the presumption of the causation relation, that itself goes on to underwrite the inferences we make in probable reasoning.

These distinctions leads us, finally, to a full account of Hume’s use of “inference”: an inference is the transitioning of the mind from an impression or an idea to a (distinct) idea, in accordance with one (or more) of the seven philosophical relations. The idea that is transitioned to may even be the idea of the relation itself. This transitioning may be done singly, without a medium, and qualify as inference (as in intuition and reflexive probable reasoning). These forms of inference may be iterated, and the entire complex called an inference; in this case the idea or ideas falling between the initial impression or idea and the terminating idea will constitute the medium or mediums of the inference. (These kinds of inference are reflective and chains of probable inference and demonstrative inference.) These iterated inferences can also be called arguments.

\(^{11}\) For more on how Hume’s scientific naturalism influences his approach to the mind, see chapter seven.
This leads to an answer to the second question: what is the connection between inference and reason? The connection is that there are some inferences that are made by reason (as that faculty is traditionally construed) and some that are not. Those made by reason (as traditionally construed) are those accomplished by demonstrative or intuitive reasoning, i.e., reasoning about relations of ideas, that is, according to the philosophical relations that can produce certainty: proportion in quantity or number, resemblance, degree in any quality, and contrariety (T 1.3.1). When reason is construed as the faculty responsible for the transitions associated with demonstration/intuition, it is only this subset of inferences for which it is responsible. But there are more inferences than just these; there are, for instance, probable inferences. That some inferences are conducted by reason does not make being conducted by reason a necessary feature of inference.

This leaves only the first worry, that on my interpretation Hume is illicitly using “reasoning” and “inference” as synonyms. This worry arises because Hume does seem to equate the two and my view entails that they are distinct. One thing the text does make clear is that Hume countenances inferences that do not result from and are not founded on reason, and these inferences are still properly called inferences. Chief among these are the inferences of probable reasoning, which are inferences founded on the relation of cause and effect. (This relation itself does not result from reasoning or anything in the objects, but from the association of ideas in the imagination on the basis of their order and connection in experience.) Despite the fact that there are inferences not from reason, on this view of reason, Hume sometimes seems to use the terms “reasoning” and “inference” interchangeably. My interpretation would seem to entail that there are reasonings that are not conducted by reason.
I can answer this challenge by showing that there are two different senses of “reasoning” (and, related to each of these senses, a distinct sense of “reason”) at work in Hume. One sense corresponds to all inferences and transitions, and one sense corresponds only to a narrower class of transitions. The next chapter, chapter four, begins my defense of this interpretation.
Chapter 4: Garrett’s Challenge to a Dual-Use Theory of “Reason”

My account of “inference” as mere transitioning according to the philosophical relations led to the following consequence: inference, of itself, has no link to a faculty of reason. Despite this, and despite the plausible claim that all reasonings have an etiology in reason, Hume seems to use the terms “inference” and “reasoning” interchangeably. In order to resolve this apparent tension, I will defend the thesis that there are two different senses of “reasoning” and “reason” found in Treatise Bk. I and EHU: the two senses I will posit will explain away this tension.

Before I can explain and defend my view, though, I must address and defeat Don Garrett’s arguments that Hume must only be using “reason” and “reasoning” in one sense. Garrett’s view, as expressed in Cognition and Commitment in Hume’s Philosophy (1997) is a widely respected and popular interpretation that allows that Hume is non-skeptical but still claims Hume’s project has important strands of normative epistemology embedded in it. Garrett’s view is widely cited and has become, in some circles, the de facto standard interpretation of the negative argument and Hume’s views of reasoning, among other interpretive topics.¹ For this reason, any attempt to resolve the issues surrounding Hume’s view of human reasoning will have to deal with Garrett’s view. I have given some reasons in chapter two to think that Garrett is wrong about the relationship of argument to inference, and in this chapter I will show that his critique of other views is substantially misguided as well.

To oppose a challenge like Garrett’s, one can show that the challenge itself is ill-founded or show that some view satisfies it. I pursue both of these strategies: I show, on one hand, that

¹ For instance, through early 2013, Google Scholar lists over 220 unique citations to Cognition and Commitment, outpacing the interpretive works of Beauchamp & Rosenberg (1981), Owen (1999), and Norton (1982).
the interpretation David Owen (1999) presents can satisfy each of the three parts of the challenge. On the other, I show that there is good reason to deny the legitimacy of each of the three parts of the challenge. In light of these responses, I argue, there is nothing to count against adopting a view of Hume as using “reason” in two distinct senses. This removes what Garrett (2001) calls the “one powerful objection” to Owen’s view and opens the door to a panoply of new interpretations, including my own.

I. Univocal vs Dual-Use

There’s strong prima facie reason to think that Hume uses the term “reason” in more than one sense. Norton (1982) produces a catalog of the eight apparently different uses of the term “reason” in the Treatise. Norton’s taxonomy is quite thorough, and, though I will argue later that it makes sense to condense it down to just two uses, Norton’s taxonomy is complete and largely free from interpretive baggage. I explicate it here to show why interpreting Hume as using “reason” in more than one sense seems attractive. From here, I will go on to examine several views that do just that.

These are the eight different principal uses of “reason” Norton identifies:

1. Hume uses “reason” as synonymous with “the understanding.”
2. Norton notes that “reason” is once taken as the discovery of truth and falsehood.

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2 The entire discussion below is drawn from the long footnote, n4, that begins on page 96 and ranges through p.98 in Norton (1982). In the main text, Norton is determining the relationship of reason to the sentiments, so much of what he says in the text and some of what he says in the footnote is irrelevant, but the taxonomy is his attempt to outline which uses of “reason” he will be addressing in the main text; as such, it purports to be complete.

3 In this list, I will cite Norton’s preferred passages from the Treatise as well as more that I think are instructional, both from elsewhere in the Treatise and from EHU.

4 T 1.3.6.12, 1.3.8.10, 1.4.1.5, 2.3.3.1-2, T 1.4.2.4 and 1.4.2.47-49, give us “reason or the imagination,” where it had been previously “the understanding or the imagination” (T 1.3.6.4; T 1.3.8.13) or “thought or imagination” (T 1.2.3.15, appendix 4, 12; T 1.4.6.5).
(3) “Reason” sometimes refers to the faculty responsible for demonstrative reasoning or abstract reasoning. 

(4) “Reason” sometimes refers to the faculty responsible for inferring matters of fact, i.e., probable reasoning.

(5) “Reason” as non-inferential present awareness, though

(6) The use given in (5) is explicitly contradicted.

(7) “Reason” used to describe an instinct: in T 1.3.16.9, Hume describes reason as “nothing but a wonderful and unintelligible instinct in our souls.”

(8) Reason as a calm reflective passion.

As Norton notes, one particularly curious feature of Hume’s uses is that Hume tends to reverse himself and consider as falling within reason certain abilities or functions that he has previously explicitly distinguished from reason. This appears between, e.g., uses (3) and (4) and uses (5) and (6). But while (5) and (6) explicitly exclude each other, it is not clear whether any of the other senses do or if, for instance, the content of (4) is simply not salient when use (3) is the apparent usage. If some of these senses do (or can) refer to just the same faculty, we will need an account of how many distinct senses there are in total. Norton himself claims to be

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5 T 3.1.1.9-16. At EHU 1.14, Hume says that there is a “truth or falsehood, which lie not beyond the compass of human understanding.”

6 T 1.2.4-5; 1.3.1. Also, it seems likely Treatise 1.3.6 and EHU 4 use this sense, though that is in part what is at issue below.

7 T 1.3.1.1; T 1.3.2; T 1.3.7.5n20.

8 T 1.3.2.2; 3.1.1.25-26

9 Immediately at T 1.3.2.2 and later again at T 1.3.6.6.

10 Hume describes reason as “nothing but a wonderful and unintelligible instinct in our souls” (T 1.3.16.9). Similarly, EHU claims “the experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power” (EHU 9.6).

11 T 2.3.8.13. This is a use, coming completely as it does within the work on the sentiments, and being only introduced after Bk. I of the Treatise and not appearing in EHU, will not be of any concern to me. Explicating it would require a more thorough account of the passions than would be germane here.

12 The parallels with my earlier treatment of “proof” should be apparent.
ambivalent about the ambiguities, saying “I am not certain that this ambiguity can be completely eliminated nor even that, once noted, it presents any insurmountable difficulties” (96n4).

Norton’s view becomes clear later when he addresses whether reason can include or subordinate instinct. Norton claims that there are reasonings that are instinctual, irreflective and cannot be denied, interrupted or avoided, yet there are also reasonings that are considered, reflective, able to be interrupted, avoidable and can be denied. Norton argues from this that, if reason is so-called because it produces reasonings, then, because these two uses of “reasoning” exclude each other, it must be the case that “reason” is used in at least two distinct senses as well (228-230).13

Norton’s view, on which Hume uses the term “reason” in two distinct ways and at least one of those uses excludes the other, is an example of what I will term a dual-use view. Dual-use views claim that not every (considered, clear) usage of the term “reason” in Hume can be read as referring to just the same faculty or phenomenon. Dual-use views exist in opposition to univocal-use views. Univocal-use views claim that Hume always and only uses the term “reason” in one sense.14

These two views should exhaust the current literature, and can be thought of like this: the univocal-use view claims that there is just one (considered, clear) usage of the term “reason.”

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13 I am not concerned, here, with Norton’s arguments for this position, or his two sorts of reasoning. For now, Norton’s view merely serves as a useful example of a particular kind of view, and one I will to return to later.

14 The content of that one sense differs, however, depending on which univocal-use view one is examining: many univocal-use views take Hume to be an inductive skeptic, using “reason” in a normative, epistemological sense. This is not a necessary feature of these views, however, as Garrett, whose view I will discuss later, has a univocal-use view that does not.
The dual-use view claims that there are *at least two* uses, at least one of which excludes at least one of the others.\(^{15}\)

### II. Examples of Dual-Use Views

As we saw above, Norton has a dual-use view, and dual-use views are evident in Beauchamp & Rosenberg (1981), Winters (1979), and Owen (1999) as well. Winters’ presentation is an early statement of a dual-use view and, as such, I will use Winters’ argumentation to show what I take to be one compelling strain of dual-use view. Beauchamp & Rosenberg’s view is similar to Winters’ and I will explicate it afterward as a modification of the Winters view.

#### A. Winters (1979)

Winters argues, first, that one chief conclusion of *Treatise* Bk. I is that reason cannot produce beliefs about causal relationships. Later, in Bks. II and III, Hume asserts that reason can produce beliefs about matters of fact. Because beliefs about matters of fact depend directly on (or are just instances of) beliefs about causal relationships, Hume’s use of the term “reason” changes between Bk. I to Bks. II and III (20-23).\(^{16}\)

More interestingly, Winters also argues that there are inconsistencies in Hume’s usage within Bk. I itself. Winters argues that in Bk. I of the *Treatise*, Hume both attributes causal inference to reason and also denies it to reason. That is, Hume uses the terms “inference,” “reason” and “reasoning” often to refer explicitly to instances of reasoning about causes and

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\(^{15}\) I call these “dual-use” views and not “multiple-use” views because each extant non-univocal view posits that there are two (and just two) different (clear, considered) senses of “reason.”

\(^{16}\) Winters also notes that the same shift can be seen between *An Enquiry Concerning Human Understanding* and *An Enquiry Concerning the Principles of Morals.*
effects, yet he also denies that our beliefs in these cases can be the result of reason, i.e., Hume denies that we reach beliefs about matters of fact by reasoning, leading to the conclusion of his famous ‘negative argument’ that we are “not determin’d by reason” in drawing conclusions about unobserved matters of fact:

When the mind, therefore, passes from the idea or impression of one object to the idea or belief of another, it is not determin’d by reason, but by certain principles, which associate together the ideas of these objects, and unite them in the imagination. (T 1.3.6.12)

Despite this denial, later in Bk. I Hume goes on to call the transition between the present impression and the non-present idea an inference. He also later calls it an inference made by reasoning, a reasoning regarding cause and effect, and an instance of reasoning concerning cause and effect. Hume also takes himself to have explicated “the manner, in which we reason beyond our immediate impressions, and conclude that such particular causes must have such particular effects” (T 1.3.14.1). Hume consistently and constantly asserts or implies that

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17 The cognate version of this “negative argument” is given this sobriquet by Hume at EHU 4.17.

18 Winters cites both T 1.3.7.5n20 and the title to T 1.3.6 (Of the inference from the impression to the idea), as well as T 1.3.6.1 (“’TIS easy to observe, that in tracing this relation, the inference we draw from cause to effect…”) and Hume’s claim that because after the discovery of the constant conjunction of any objects, we always draw an inference from one object to another, we shall now examine the nature of that inference, and of the transition from the impression to the idea. Perhaps ’twill appear in the end, that the necessary connexion depends on the inference, instead of the inference’s depending on the necessary connexion. (T 1.3.6.3)

19 T 1.3.8.8: “Here ‘tis evidence, that however that object, which is present to my senses, and that other, whose existence I infer by reasoning, may be thought to influence each other by their particular powers of qualities; yet…” (emphasis added)

20 “’Tis evident, that all reasonings from causes or effects terminate in conclusions, concerning matter of fact” (T 1.3.7.2), and the continuation of the passage from Treatise 1.3.7.3 that I cited earlier: “But as in reasonings from causation, and concerning matters of fact, this absolute necessity cannot take place.” Similarly, though Winters does not adduce it, Hume says “‘Tis merely the force and liveliness… [which] lays the foundation of that reasoning, which we build upon it, when we trace the relation of cause and effect” (T 1.3.5.7).

21 “…and draw together the divided images presented by experience; since ’tis to it we refer the determination of that particular event, upon which we reason” (T 1.3.12.11).
inferences or reasonings regarding causation and matter of fact result from reason (Winters 1979, 24).  

Thus, Winters claims, Hume is using “reason” in two distinct senses in Bk. I, one sense that includes causal inference and one that explicitly excludes it. Since one usage of the term excludes the other, Winters has a dual-use interpretation.

B. Beauchamp & Rosenberg (1981)

A similar argument can be produced for _EHU_ and Beauchamp & Rosenberg (1981) can be productively read as doing so. Beauchamp & Rosenberg explicate a sense of “reason” on which it is the faculty that derives deductively certified conclusions from self-evident _a priori_ premises; this is the sense of “reason,” they claim, used by the Cartesians and by Locke, all of whom, according to Beauchamp & Rosenberg, thought that causal judgements resulted from deductive entailments. Hume, they take it, was attempting to supplant this understanding of the faculty of reason with a Newtonian conception, whereby an inductive method would supply the chief mode of scientific reasoning (42-43). Hume’s discussion of induction in _EHU_ 4 and 5 “restricts ‘reason’ to _a priori_ reason,” which means Hume “stipulatively confines the scope of reason to the discernment of ideas and their relations” but “apart from these special contexts, he … uses the term ‘reason’ in a looser sense approximating our ordinary usage in these contexts today” (43).

The restricted sense of “reason” they claim, is the one at work, for instance, when Hume says: “It seems evident that, if this conclusion were formed by reason, it would be as perfect at first, and upon one instance, as after ever so long a course of experience” (EHU 4.20), or when

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22 As Winters correctly notes, Hume also attributes causal _reasoning_ to animals and attributes _the same_ reason/reasoning to humans in _Treatise_ 1.3.16 (24-5).
Hume later reiterates this conclusion: “nor is it, by any process of reasoning, he is engaged to draw this inference” (EHU 5.4). Outside of this stretch of text concerned with induction, Beauchamp & Rosenberg say Hume uses “reason” to mean causal or experimental inference; presumably they intend to pick out uses like EHU 9’s attribution of reason (in the guise of causal inference) to both humans and non-human animals. Thus there are two senses, one of which excludes the other, meaning that Beauchamp & Rosenberg are operating with a dual-use theory as well.\(^{23}\)

**C. Owen (1999)**

The final dual-use theory I will consider is David Owen’s. Owen does not see Hume as referring to two distinct faculties with his different uses of the term “reason.” Owen thinks this because Owen thinks Hume does not endorse faculties at all.\(^{24}\) Instead, Owen sees Hume as trying out different accounts of that faculty (read: ability) and showing that one of them will not suffice to explain the activities of that faculty (read: what we observe when we take it that ability is being exercised). Owen puts his view like this:

> On my account, Hume is not denying that these transitions of the mind are reasonings or inferences, but he is denying that the details of the transition can be explained by the traditional account of the faculty of reason. And when Hume gives his own account, in terms of the association of ideas, the notion of reason as a faculty, conceived as functioning independently

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\(^{23}\) The specifics of Beauchamp & Rosenberg’s positive account of the restricted sense of the term “reason,” which takes Hume to hold a deductivist conception of arguments, is widely disputed. See chapter two, section three, final footnote for my reasons for rejecting the view, as well as references to the reasons others give.

\(^{24}\) Despite the fact that, as Owen notes, Hume’s aim in his investigation is to “explain the principles and operations of our reasoning faculty” (T intro.5), Owen claims that, for Hume, there really are “only ideas, impressions, and the ways they interact” (1999, 76) and no faculties at all. Owen sees Hume as offering a deflationary story, seeking to explain something—“the principles and operations of our reasoning faculty”—while denying that that thing—the faculty of reason—really exists. Owen thus seeks to deflate the understanding of “reason” in Hume, as it presumptively refers to a faculty, to referring to a mere subset of transitions of the imagination. See my chapter three, section I.
of ‘the imagination, or the vivacity of ideas’ (T 1.4.7.3) drops out. (1999, 133)

Owen takes it that Hume is, in the negative argument (the argument that we are not “determin’d by reason” in inferring matters of fact) and perhaps even before this as well, working with a conception of reason as traditionally construed, treating “reason” as if it referred to a faculty that makes particular kinds of transitions with particular and peculiar powers over our mental life. 25 Later, Owen says:

I am arguing against the view that sees Hume as showing, in this negative argument, that probable reasoning is unreasonable. I interpret him as saying that probable reasoning is not based on reason, that the production of beliefs in the unobserved is not explained by the faculty of reason functioning in the way it is normally thought to be functioning. (137, emphasis added)

Thus here we can see the two different referents of “reason,” on Owen’s interpretation: one is the faculty as traditionally construed, and the other is what the mind actually does, that is, transition between ideas in accordance with the relations and associations. Of this view, Owen says:

This is a new account of how reason, the inferential faculty, produces beliefs. Hence, “we may exert our reason without employing more than two ideas, and without having recourse to a third to serve as a medium betwixt them” (T 1.3.7.5n20). Hume unequivocally uses “reason” to mean “the inferential faculty,” but he has a new account of how that faculty works, at least with respect to probable reasoning. (Owen 2000, 330)

One objection to Owen’s view is that it has the seeming consequence that every time Hume is using the term “reason,” he is using it disingenuously. This would be true both of Hume’s use in the negative argument and elsewhere. On Owen’s view, Hume thinks that there is a better understanding of the faculty of reason. The objector would point out that on the

25 See Winters (1979, 26-29) for a good account of the traditional construal of the faculty of reason as relevant to Hume interpretation.
understanding of the faculty of reason Owen has Hume promulgating, it is not just that the faculty of reason functions differently, concerns different subject matter or is less restricted in the kinds of connections it can draw. Instead, Owen’s Hume takes it that the best way of understanding the faculty of reason is not as a faculty at all. On this view, Hume would want to reject entirely the use of “reason” to refer to a faculty, but he uses the term to refer to a faculty anyway. This is symptomatic of Owen’s entire view: the deflationary account Owen offers takes it that, even in his later uses, whenever Hume refers to a faculty of reason—or any faculty at all—it is disingenuous.

This objection gains more traction when Owen’s treatment of Hume’s use of “reason” is contrasted with the view Owen rejects, which, in the tradition of Kemp Smith (1905), treats Hume’s references to causal reason and reasoning as “mere instances of façon de parler” (Owen 1999, 137). Owen rejects this view, in part, because it takes Hume’s use of “reasoning” to be (something like) disingenuous. But the view that Owen endorses merely moves the bump in the rug—and not very far—as Owen has to treat Hume’s use of “reason” as a faculty term as disingenuous. On Owen’s view Hume does not actually endorse this faculty/these faculties that he is speaking of, and the negative argument shows that “reason” does not produce causal beliefs, but that account of reason was to be supplanted anyway.

But this objection to Owen misses the mark: part of the argument for replacing the traditional account of “reason” with a new account is precisely because the traditional account fails to explain how humans come to have the beliefs that they have. Insofar as that, we can treat the negative argument as an extended hypothetical: Suppose “reason” refers to the faculty as traditionally construed, it follows that humans cannot come to have this class of beliefs on the basis of that faculty. So, (the positive part of the argument begins) it must be on some other
basis. Thus, if the negative argument is interpreted as a hypothetical, Owen can still make sense of Hume’s use of the term “reason” there. Thusly construed, the argument is not equivocal nor in itself disingenuous.26

Owen claims that he can use “reason” unequivocally to refer to “the inferential faculty” throughout, but that it is simply the account of that faculty that changes: at first, we suppose that it can only account for demonstrative or \textit{a priori} causal reasoning, as the traditional interpretation would have it, then, when this will not work, we supplant that interpretation with a new one. Thus, “reason” is never used equivocally: it always refers just to whatever is doing the inferring.27

Garrett, the main proponent of the (non-skeptical) univocal-use view, similarly holds that “reason” is only ever used in one sense, to refer to the inferential faculty. Garrett, however, does not see Hume as offering two different accounts, but rather making a different sort of claim about the role of reason in the negative argument. In the next section I will move on to consider Garrett’s view and arguments.

\section*{III. Garrett’s Account and Garrett’s Challenge}

Garrett can be seen as providing two main threads of argument in support of his univocal-use view. The first is a positive argument in favor of counting just one use in Hume. The second

\footnote{But in part the objection hits its mark precisely: it is still true that Hume would be using his terms disingenuously, though not in the doubly-problematic way the objection initially supposed. This disingenuousness is a cost associated with Owen’s view (and not the Winters or Beauchamp & Rosenberg views, which would have it that Hume uses the term pejoratively, not disingenuously). This is a cost I foreshadowed in chapter three and will return to in chapter six.}

\footnote{Owen insists that his view requires only a single \textit{use} of “reason,” though it requires two \textit{accounts}. Yet I still class it as a dual-use view. I do so because Garrett treats it like the other dual-use views, because it more closely resembles dual-use views than it does Garrett’s view, and because the two accounts make the term differ so vastly in its reference. (See note 34 below.)}
is an argument against a dual- (or multi-) use view. Garrett says “few interpretive remarks about Hume meet with more widespread agreement than the common claim that he uses the term ‘reason’ in several different senses in his writing” (94). Here Garrett cites Winters (1979) as an example. Garrett continues:

If I am right, however, few interpretive claims could be further from the truth. On the contrary, the key to understanding Hume’s treatment of induction is the realization that Hume uses the term ‘reason’ quite univocally to refer to the inferential faculty—a faculty that produces two kinds of arguments, demonstrative and probable. (94)

Garrett is here drawing on his earlier conclusion, that the ‘negative’ argument of Treatise 1.3.6 and EHU 4 is an argument about what causes our beliefs about non-present matters of fact, not what warrants them. Garrett summarizes the import his argument has for our understanding of the term “reason.” “Hence, in just this sense,” inductive inferences/arguments

...are “reasonings” (inferences or arguments) that “reason” (the faculty of making inferences or giving arguments) does not itself “determine” (cause) us to make. ‘Reason’, here as elsewhere for Hume, is neither a normative epistemic term (as proponents of the skeptical interpretation have assumed) nor a term for some narrow aspect or conception of reasoning that Hume intends to denigrate or abuse (as proponents of the nonskeptical interpretation have supposed). Instead, it is simply the name that Hume, as a cognitive psychologist, consistently employs for the general faculty of making inferences of producing arguments. (92)⁵⁸, ⁵⁹

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⁵⁸ Garrett here seems to claim that reason does not cause these inferences. Read in that way, Garrett’s claim appears trivially false: if reason is the “faculty of making inferences and producing arguments” there is a significant sense in which it must be what causes causal inferences because this is simply what it means to be the faculty that produces such things. Garrett’s claim should be understood instead to be that the cause for reason’s making those inferences cannot be any piece of reasoning. We can then allow that reason is causally responsible for the inferences, but that reason is not causally responsible for its causing of them.

⁵⁹ Henry Allison argues that while Garrett claims that Hume’s use of “reason” is entirely univocal, Garrett only needs for Hume’s usage of “reason” to be univocal in Treatise 1.3.6 for his argument to work (Allison 2008, 131). While true of Garrett’s positive account, part of Garrett’s argument against the dual-use view, as we will see presently, depends on the use of the term “reason” elsewhere in the corpus. Thus, Garrett does require the stronger claim that Hume’s use is entirely univocal, if this negative point is to succeed.
Notice here Garrett’s constant equating of argument, inference and reasoning, and the implicit claim that the terms for each are all synonyms for Hume. Garrett’s argument, here, hinges on equating arguments and inferences with reasonings. Thus we have two reasons to reject it already: first, as I elucidated in chapters two and three, taking argument and inference to be the same is not the best interpretation of Hume available. The second reason to reject Garrett’s view at this point is that, as the transition into this chapter should make clear, supposing that either argument or inference or both are synonymous with “reasoning” begs the question: it presupposes that “reasoning” can be used to mean both argument and inference unproblematically, and, as I showed at the end of chapter three, once we dispense with the misconception that argument and inference are the same, this is no longer unproblematic.

The quotation above shows Garrett’s argumentative strategy. First, he tries to show that his view is superior to skeptical interpretations and then, second, tries to show that it is superior to the extant non-skeptical readings.\(^{30}\)


Garrett puts the first formulation of the challenge this way:

> The four non-skeptical readings surveyed thus entail that Hume uncharacteristically equivocates on the key term ‘reason’, substituting

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\(^{30}\) I am not concerned with Garrett’s response to the skeptical interpretations as it does not bear on the dual-/univocal-use question: Garrett and the skeptical interpretations agree that Hume’s use is univocal.
with absolutely no warning or comment a sense of that term radically different from the sense employed everywhere else in the *Treatise* and his other works. (1997, 85)

Garrett puts a later formulation, revised to encompass Owen’s dual-use view like this:

Thus, if Owen’s interpretation is correct, it seems we must conclude that Hume, in an argument that he regarded as crucial to the understanding of the nature of reason, chose to use the term “reason” not in his own sense but rather in a restricted sense in which he never used it before and never used it again. (Garrett 2000, 298)

An even later formulation, in response to Owen’s criticisms of *Cognition and Commitment*, gets framed like this:

But as Owen acknowledges, his own interpretation remains subject to at least one powerful objection: namely, that it must still interpret Hume as equivocating—without any hint or warning—in his use of the term “reason” in his famous conclusion. (Garrett 2001, 206)

*Garrett’s challenge* thus claims that any dual-use theory of “reason” requires three implausibilities:

1. On any dual-use view, Hume uncharacteristically (and without warning) changes the sense of a key term, “reason,” and/or equivocates in his usage of that term.
2. The sense of “reason” introduced by any dual-use view is introduced just for the negative argument; it is never used before and never used again.
3. All dual-use views evince fewer virtues of textual interpretation than does Garrett’s own view.\(^{31}\)

I will argue that each one of these three points is mistaken: Hume’s use of terms often changes suddenly, without warning and at least borders on equivocation; the two senses of “reason,” as I will define them, are found *all over* Hume’s texts; and the view I will advance is

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\(^{31}\) I have stated the third of these implausibilities rather vaguely, here, but it consists mainly in Garrett’s assertion that no dual-use interpretation can adequately account for the structure and conclusions of the negative argument, and, more generally, Hume’s view of the mechanisms of human reasoning.
entirely consistent with a reading of the negative argument that is just as–if not more–compelling than Garrett’s, and, further, better explains Hume’s use of terms.32

A. Response to part (1) of the Challenge

(1) On any dual-use view, Hume uncharacteristically (and without warning) changes the sense of a key term, “reason,” and/or equivocates in his usage of that term.

Garrett challenges the dual use view by claiming that Hume commonly warns his readers when he is using a term in two different senses. In the case of “reason,” all parties agree, Hume does not. “By way of contrast,” Garrett says,

Consider Hume’s procedure when he narrows his sense of the term ‘probability’ at Treatise 1.3.11 (“Of the probability of chances”). For the purposes of the sections following Treatise 1.3.11, Hume distinguishes “probability”–in the broad sense he has previous used–into “proofs” … and “probability” in the narrower sense… Not only does he give explicit warning that he is doing so, he devotes an entire page to explaining and justifying his decision. (85)

This, Garrett goes on to say, is likely because Hume was following Locke’s usage, and so made note of how and why he was making a break with that Lockean usage. Similarly with “reason,” Hume has, on Garrett’s view, been deploying the Lockean usage; “reason” means “simply the inferential or argumentative faculty of the mind” (85).

32 Garrett describes his overall critique of the non-skeptical readings as consisting in three parts as well (90-1). He claims that (i) they are inconsistent with Hume’s use of “reason,” they (ii) cannot account for Hume’s later paraphrases of the conclusion of the negative argument, and (iii) cannot account for the structure of the argument. (This is basically the same way that Millican (1998) breaks down Garrett’s three points.)

What I call Garrett’s Challenge falls largely under the head of his (i), as it concerns what must be true of interpretations of that term in particular–though this does bear on (ii) as well, particularly point (2) of the challenge. Further, points (ii) and (iii) contribute to the tenability of part (3) of the challenge. I think that Garrett’s main critique of dual-use views qua dual-use view (and not, e.g., qua non-skeptical reading) is his point (i) and, in part, point (ii). These comprise the meat of the Challenge.
(i) Distinguishing the Two Arguments of Part (1)

There are two distinct threads of argumentation here, and each deserves to be pulled out and examined. As I see it, Garrett offers two distinct but related arguments for similar but distinct points:

(a) Hume’s regular procedure is to highlight for his readers and justify his choice any time he deploys a different sense of a term than the one he had previously used; he does not do that in the case of “reason,” therefore we should not believe that he deploys two different senses of “reason.”

(b) Hume also generally provides a justification when he uses a term not in its Lockean sense, and he does not ever provide such a justification with “reason”; therefore the use of “reason” is only in the Lockean sense.

In order to retain its plausibility, a dual-use view will thus have to make plausible either that Hume sometimes switches senses of terms without justifying his choice and warning his reader or that this is not what is occurring in this case. It will also have to make plausible either that the sense of “reason” used in the negative argument is the Lockean sense or that Hume does not (always, closely) follow the Lockean usage of “reason” or more generally. I take these points in this order.

(ii) Answering Argument (a)

First, Hume’s use of terms is not as tidy as Garrett claims. As I showed in chapter one, Hume uses different senses of different terms at different points in the text, often without warning, or, indeed, any appearance on Hume’s part that he knows that this is happening. It is fitting for my purposes that Garrett’s prime example of Hume sign-posting his use of terms for his reader is Hume’s definition of “proof,” as I showed in chapter one that Hume uses “proof” in three distinct ways, though he only ever defines one sense and never distinguishes it from any others.
Similarly for Hume’s use of the faculty term “imagination.” While Hume does explicitly distinguish the two senses, Hume does not consistently use one or the other after this distinction, and does not explicitly note for his reader which sense he is using in any particular passage.

Finally, my examination of “certainty” from chapter one should show that Hume’s inconsistent usage may not always be apparent to Hume himself and that he often substitutes two senses of words without noting that he is doing so or even acknowledging that the term has two senses. “Certainty” has two senses in English, a psychological sense regarding the strength of belief and a metaphysical sense regarding the unavoidability or unchangeability of some fact or state of affairs. Some of Hume’s claims can only be interpreted consistently by drawing on this polysemy, but Hume never acknowledges it. This shows that Hume often substitutes two senses of a term without noting that he is doing so or even acknowledging that the term has two senses. The claim made by the first part of the Challenge, then, is false: Hume’s use of terms does in fact change senses, frequently, without warning and, sometimes at least, seems to border on equivocation.

Conversely, Owen takes the route of declaring that it is not the sense of the term “reason” that changes, but rather the underlying account of what reason is that changes: “reason” always refers to the inferential faculty, Owen says, but the account of what reason is changes (c.f., the previously cited Owen (2000, 330)). This technically sidesteps Garrett’s challenge on the point regarding justification or explanation of switching senses, but requires more finesse with respect to the point about Lockean usage.
(iii) Answering Argument (b)

Regarding that second point, in accordance with his denial that there is a shift in the term “reason” itself and his assertion that the change is only in the account of reason, Owen claims that it is the Lockean sense of “reason” that Hume is deploying. It is the same ‘Lockean sense’ of “reason”–meaning just “the inferential faculty”–that Garrett claims the dual-use theorist must deny Hume is using in the negative argument. What Owen denies is that Hume’s understanding of the Lockean usage of “reason” tracks the definition that Garrett provides from *An Essay Concerning Human Understanding* IV.xviii.2. The full quotation for this definition appears here:

Reason therefore here, as contradistinguished to Faith, I take to be the discovery of the Certainty or Probability of such Propositions or Truths, which the Mind arrives at by Deductions made from such Ideas, which it has got by the use of its natural Faculties, viz. by Sensation or Reflection.

(Essay, IV.xviii.2)

Several things are of note about this definition. (1) It makes use of the achievement sense of “reason” that, as Norton noted above, is distinct from the activity sense Hume often deploys. This is yet more evidence that, even by Garrett’s lights, there is more than one sense of “reason” and that Locke and Hume disagree on just what account is appropriate. (2) This definition comes from Locke’s section designed to illustrate the differences and similarities of “Reason” in comparison to “Faith,” and, as such, follows a different paradigm than other definitions Locke gives of “reason.” (3) If we had taken another of Locke’s descriptions as paramount, we would have come to the conclusion that Hume quite clearly and radically disagrees with the Lockean conception, c.f., from the chapter titled “Of Reason”:

But the Consideration I shall have of it here, [i.e., of “Reason,”] is in a Signification different from all these; and that is, as it stands for a Faculty in Man, That Faculty, whereby Man is supposed to be distinguished from
Beasts, and wherein it is evident he much surpasses them. (Essay, IV.xvii.1)\(^{33}\)

That Locke thinks that reason can be defined by its presence/extent in humans and absence from animals shows that Hume and Locke radically disagree not just about the extension of reason, but about what reason consists in.

These points, taken together, suggest that, while Garrett and Owen both claim that the usage they ascribe to Hume is *the* Lockean usage, it is not clear that the Lockean usage that they are talking about is the same, nor that Hume had a considered opinion on just what single usage it was appropriate to ascribe to Locke (or that, even if he did, it would be recoverable from the texts themselves alone). Finally, it is also not clear that there is a unique Lockean usage, one that could count for or against the attributions they make regarding Locke’s sense of the term that they make to Hume.

Thus, regarding Garrett’s second argument in favor of this point, I take it that Owen is well-positioned to deny Garrett’s claim that a dual-use theory must ascribe a non-Lockean usage to Hume in the negative argument. Owen’s view of the Humean sense of the Lockean usage is wide enough (it is simply “the inferential faculty”) to encompass the different accounts that Owen has Hume offering. Thus, though it may not be a Lockean *account*, it is plausible that Hume’s view of Locke is such that Hume would not have thought to sign-post his *use of the term* as being different from Locke’s, and the difference in account is already clear enough.

Garrett’s interpretation itself makes use of a similar ambiguity in the account/term distinction: Garrett acknowledges in an endnote to the relevant section that “although the scope of Hume’s sense of ‘reason’ corresponds closely to Locke’s, his *account of the mechanism of*

\(^{33}\) Hume disagrees insofar as Hume thinks that humans and animals share the basic faculties of inference, and that human inference is not superior in *kind* to animal inference, or that it arises from a separate faculty.
Garrett goes on to relate some of the features of the Humean system that differ from Locke’s, features that I explicated above, e.g., that there is no need for a medium in probable reasoning, &c. Given that Garrett acknowledges that parts of the account differ entirely, i.e., that the use of the term may be the same even if the account that underlies it is not, his point that Owen must claim Hume uses the term in two different ways is incorrect. If we allow that accounts can differ in this way while the term remains the same, then this point of the challenge does not count against Owen’s view.34

There is a different tack available to respond to this point about Lockean usage. It would seem that there is insufficient evidence to claim that Hume (always, closely) follows the Lockean usage. The weight of Garrett’s second line of argument stems from the assumption that whenever Hume uses a term, it is in the Lockean sense, unless otherwise noted. But this is not Garrett’s claim; Garrett’s claim is not that strong. Garrett’s claim, on the basis of Hume’s distinction between proof and probability, is that, whenever Hume uses a term in the Lockean sense, he always signposts a later departure from that sense. Thus, we must first establish that Hume is using “reason” in the Lockean sense at all in order to show that he is departing from that Lockean sense in a way that (for internal rhetorical consistency) requires signposting.

There are two ways one could go about establishing this point: first, one could show that Hume, as a default, uses terms in the Lockean sense. The other way to do it would be to show that Hume’s use of “reason” in particular is Lockean in character. Garrett provides some argumentation for the latter point.

34 I do not know if we can or should allow that terms and accounts can differ in this way, but both parties to this dispute seem to think they can and should. Millican (1998) assaults this part of the Challenge by arguing that the accounts of probable reasoning differ so vastly between Locke and Hume as to make the term have a different reference. I think Millican is right in this challenge, but spelling this out requires more argumentation regarding how accounts are tied to terms. (See also note 27 above.)
Regarding the first point, it is reasonable to assume, given Hume’s intellectual debts to Locke, that Hume’s use of terms is influenced by Locke’s usage. Locke is cited by Hume as influencing his views in the Treatise introduction (T intro.7n1). But Hume’s debt to Locke, acknowledged in the Treatise introduction, is merely as first among others (“Mr. Locke, my Lord Shaftesbury, Dr. Mandeville, Mr. Hutcheson, Dr. Butler, &c.”) and Locke is given credit (among these others) merely for having contributed to the introduction of the experimental method into moral philosophy. Surely Hume’s debt to Locke outstrips this simple acknowledgment, but it seems important to keep Hume’s debt to Locke in the context of Hume’s reading of and engagement with other figures as well.

The most compelling argument that Garrett makes to take Hume as using “reason” in a Lockean sense is that Hume later goes on to make some of the same distinctions about the characteristics and constituents of reason that Locke does. This would seem to count in favor of seeing them as deploying the same conception. But Hume also very frequently disagrees with Locke’s way of parsing the terrain and, further, not every disagreement with Locke is signposted. For instance, the very real disagreement about the difference in the breadth of application of the term “reason” (whether it can be characterized as a faculty distinct to humans) that we saw above is not explicitly mentioned, yet it surely is a real and significant difference. Further, as Garrett acknowledges, Hume’s account of reason differs significantly from Locke’s, both in what causal processes/mechanisms it takes probable reasoning to consist in, but also what it takes the phenomenon under discussion to be. See also Hume’s distinction between chance and cause at Treatise 1.3.11-12, where the difference with Locke is cited with respect to distinguishing proof from probability but not probabilities from chance and from causes.
This of course is not proof that Hume does not use “reason” in the or a Lockean sense. But rather it should show that the burden of proof falls on the interpreter who asserts a lineage for a particular usage, not one who does not. My interpretation of the terms stems entirely from Hume’s use of them in the texts themselves; it does not depend on interpreting Hume’s interpretation of Locke, as Garrett’s view requires. (And as Owen’s view requires by way of the response I gave to Garrett on its behalf.) There may be a compelling argument available to show that Hume’s usage of the term “reason” early in the *Treatise* and in *EHU* is the/a Lockean usage, so I may yet be proven wrong. But given the dispute in which we are currently involved—i.e., trying to determine what the sense of “reason” is (or senses of “reason” are) at all—I do not foresee determining Hume’s usage to be a Lockean one as a fruitful line of enquiry. As it stands, until an argument of this nature is produced, I take the point to count in favor of neither interpretation.

Part (1) of *Garrett’s Challenge* claimed use of “reason” in two distinct senses and without warning would be out of character for Hume, and, further, that it would go against his general habit of distinguishing his usage from the Lockean usage of any term. Both Owen and I have strong—but importantly different—ways of responding to the challenge. Owen can accept that this part of the challenge is legitimate and show that his view does not run afoul of it. I think that one can undermine this part of the challenge itself, though: Hume’s use of terms is sufficiently inexact in sufficiently many places that it would not be surprising if “reason” were used in multiple senses (and used in these multiple senses without warning).

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35 A wise man said that it is hubris to believe that just because one cannot fathom an argument that such an argument does not exist (*EHU* 4.22).
B. Response to Part (2) of the Challenge

(2) The sense of “reason” introduced by any dual-use view is introduced just for the negative argument; it is never used before and never used again.

Dual-use views largely cite Hume’s claims in the negative argument as instigating their search for a second sense of “reason” and as justification for the character they ascribe to that second sense. The second part of Garrett’s Challenge claims that dual-use views must subscribe to the implausible claim that this second use is never deployed prior to the negative argument or again after the negative argument. This part of the Challenge relies on the way of thinking expressed in the first part of the Challenge: on this way of thinking, because Hume’s use is usually regular and tidy, each ascription of a second usage would require substantial explanation and motivation, thus we should presume that the second sense of “reason” is unique to a small swath of text. This part of the challenge can be seen as dilemmatic, claiming that a dual-use view requires us to accept either that the usage is unique to the negative argument, in which case the specter of the ad hoc arises for the dual-use interpretation, or that the sense is used elsewhere and never distinguished, which worsens the problem raised by the first part of the challenge.

After the discussion of Hume’s use of terms I gave earlier, the second horn of the dilemma is no horn at all. If I am correct that Hume frequently and often without warning switches between two (either defined/distinguished or never defined/distinguished) senses of several different key terms, then the challenge’s claim that, on a dual-use view, the sense of “reason” in the negative argument must be unique will be less plausible. It is open to me to hold that Hume’s uses of “reason” are, in most cases, ambiguous between two senses. One can claim without any implausibility whatsoever that there is a sense that appears distinctly in the negative
argument and another sense that is clearly used elsewhere, but also that most uses of the term are ambiguous between the two usages.\textsuperscript{36}

It is precisely because there is ambiguity in Hume’s usage that \textit{Garrett’s Challenge} has some initial plausibility: many or even most instances of “reason” can be read intelligibly in either of the two senses. But ultimately the ambiguity between the two senses undercuts the challenge as well. The ambiguity, in this case, is between a narrower sense and a wider sense: each of the dual-use interpretations given above allows that the sense used in the negative argument is narrower than (i.e., included in, that is, picks out a subset of instances of) the sense used elsewhere. Most of Hume’s uses of the term “reason,” though, will not be clear enough to definitively fall into either category. This ambiguity allows that, with the exception of a very few uses, we can plausibly assign most instances of “reason” to the broader class because what Hume says is sufficiently inspecific to \textit{determine} the usage to the narrower class. But it does not follow from this that each of these uses must be in the wider sense. Indeed, once we accept that there are multiple senses, some of them can be fruitfully read as being in the narrower sense.\textsuperscript{37} This mirrors Hume’s use of “proof”: there are several senses that could be made to be entirely consistent by claiming that Hume only deploys the broadest sense of “proof” (whereby it just means evidence). To do this however we would lose the particular character of the cases where Hume is using “proof” as defined, papering over important philosophical points that depend on the character of his definition.

\textsuperscript{36} I will claim that there is one sense that appears in the negative argument (and elsewhere) that excludes reflexive probable reasoning, and another sense (also used elsewhere) that explicitly includes reflexive probable reasoning, but it is open to me, still, to claim that most uses are ambiguous between these two senses. The next chapter (chapter five) has the full account of and motivation for thinking these are the senses of “reason” in Hume’s works.

\textsuperscript{37} This is particularly true of the uses of “reason” and cognate terms in the problematic “or”-constructions from the \textit{EHU} version of the negative argument that I showcased in chapter one.
Thus, in one way, this part of *Garrett’s Challenge* promotes complete consistency over other interesting virtues of textual interpretation. To assume that the widest possible use covers all the indeterminate usages—and so the usage is univocal—is begging the question: why should we immediately suppose only one use and then subsequently demand that all the instances of the term fall under this usage, despite countervailing evidence? Whether we should do that or suppose two uses in light of that countervailing evidence is exactly what is at issue. The former is not unquestionably better: we procure other interpretational desiderata like variety and philosophical texture in our reading of some passages by supposing two uses.

The motivation for the assumption-of-univocality perspective seems to stem from the principle of charity: Hume’s usage is inconsistent if we do not begin by assuming its consistency, thus, because consistency is better than inconsistency, we should be charitable and assume the single use because it requires consistency. But that has it backwards. First, there need not be inconsistency if each of the uses is able to be defined as sufficiently distinct from the others, that is, if they are distinct terms that happen to share a lexical form. Second, consistency counts in favor of single-use views, and not, as this line of thinking would have it, the other way ’round.

To further see that this part of the challenge unreasonably favors consistency at the cost of other interpretational virtues, notice that the challenge presupposes that using a restricted and specific sense of the term that does not recur elsewhere is *of itself* a cost to a textual interpretation. This is too quick though. Owen, for instance, has an interpretation on which this is exactly what we would expect of Hume in this section. Owen (like Winters before him) interprets Hume as wanting to undermine a specific conception of reason as possibly efficacious of our beliefs about unobserved matters of fact. (Unlike Winters before him) Owen has a story

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38 As we saw with “proof” in chapter one.
whereby Hume is entertaining different accounts of a ‘reasoning’ faculty in order to determine which account best matches our evidence, both introspective and observational. Thus, Owen ought not accept that it would be bad if the sense of “reason” he claims is found in the negative argument is unique to the negative argument. Before the negative argument, the sense of “reason” is inspecific, Owen could claim; during the negative argument, the sense of “reason” corresponds to the account Hume is endeavoring to undermine; after the negative argument we find the new account that Hume is seeking to install. Thus, it does not have to be bad, of itself, qua textual interpretation that the sense of “reason” found in the negative argument is unique to it. Owen’s view can thus satisfy the second part the challenge by accepting the consequence, transmuting it into a feature of his interpretation, not a bug in it.

Once I undermined the notion that Hume’s usage must always be either entirely univocal or explicitly not, the motivation for maintaining the consistency-at-all-costs perspective of the second part of the challenge is also undermined. There is a way to allow that multiple senses are used without having to claim that the sense used in the negative argument is unique to it. Further, the challenge itself is misguided on this point; it is a desideratum of an interpretation (and the author that it interprets) that it be able to fulfill consistency, not a requirement.

C. Response to Part (3) of Garrett’s Challenge

(3) All dual-use views evince fewer virtues of textual interpretation than does Garrett’s own view.

Much of Garrett’s Challenge relies on its third part, which weighs the costs and benefits of the other views against Garrett’s own. The third blanket criticism issued by Garrett’s Challenge is that dual-use views are inferior to Garrett’s own view as pieces of textual interpretation. Garrett provides arguments that there are significant interpretational costs
associated with any of the other four non-skeptical readings he addresses. These costs are largely concerned with how each of the non-skeptical interpretations treats the modes of reasoning found in Hume.

More specifically, Garrett claims that none of the four interpretations addressed in *Cognition and Commitment* can explain the structure of the negative argument because they have garbled the relationship between deduction, certainty, knowledge, probability and demonstration. Beauchamp & Rosenberg, for instance, are criticized because their reading is insufficiently attentive to the nature of demonstration and the difference between it and deduction, as well as its relationship to probability (87). Arnold is criticized for claiming that inductive conclusions cannot be made certain because this would require the uniformity principle; Arnold’s argument, Garrett claims, relies on a similar ‘deductivist’ assumption about justification (89). Broughton and Baier are criticized for similar reasons.

Garrett interprets the conclusion of the negative argument as a claim that there is no demonstrative argument, nor any probable argument, that licenses us to engage in inference about unobserved matters of fact; Hume thinks that these are the only two forms of argument, so if they cannot provide a reason to engage in probable inference then we can give no reason for engaging in it (though it is still reasoning). To put it another way, Garrett views Hume as arguing, sequentially, that demonstration cannot provide the required linkages to make drawing inferences about unobserved matters of fact rational and, then, that probable reasoning cannot do so either.

Garrett says that this makes sense of the structure of Hume’s negative argument because the structure of the argument is clearly two-fold. Garrett reasons that each of the non-skeptical interpretations surveyed cannot adequately account for the second half of the argument because they each claim Hume only acknowledges one sort of linkage—the equivalent of our
contemporary deductive implication—as available to Hume. Because of this, Garrett concludes that his view is superior to the dual-use interpretations.

This argument is, at bottom, an argument by elimination: first Garrett argues against the popular extant dual-use views.\textsuperscript{39} Then, as each dual-use view has been eliminated, he concludes that his univocal-use view is superior. The principle at work is this: if each of the dual-use views cannot account for something that a univocal-use view can account for, the dual-use views, as a whole, must be rejected in favor of the univocal-use view.

Garrett’s individual arguments against the dual-use views that he surveys are compelling but because it is, overall, an argument by elimination, any unsurveyed alternative that succeeds against those arguments will not be eliminated. This is to say, any dual-use view that is able to capture the structure of the negative argument without, e.g., taking on the deductivist assumption or some similarly objectionable principle, will not be eliminated. Thus Garrett’s view will not stand alone, and the argument by elimination will fail.

Owen’s interpretation succeeds in just this way, and showing why will illustrate a more general solution to the third part of the challenge. Owen’s view escapes the third part of the challenge because Owen is telling a causal story similar to the one that Garrett gives: he thus has no need of the deductivist (or similar) assumptions, because he too sees that Hume is not worried about justification.

The stories Owen and Garrett give are subtly but significantly different, though. Whereas Garrett sees Hume as wanting to find that mental item that, when had, causes humans to engage in probable reasoning, Owen sees Hume as seeking to explain the mental mechanism that

\textsuperscript{39} Garrett, notably, does not address Norton’s dual-use interpretation.
eventuates in human causal reasonings.\(^4\) Garrett has Hume rejecting the traditional view of reason as *insufficiently justificatory* to allow humans to continue to engage in causal reasoning (thus something else must step in to provide such a push to continue to engage in causal reasoning). On the Owen view, the traditional account of reason is rejected because it is *insufficiently explanatory* (thus we must find some other explanation for this behavior, i.e., a different account).

Owen’s view escapes this challenge because Owen is telling a causal story similar to the one that Garrett gives. The stories are significantly (but subtly different), though. Whereas Garrett sees Hume as wanting to *find that mental item* that, when had *causes humans to engage in probable reasoning*, Owen sees Hume as seeking to *explain the mental mechanism* that eventuates in human causal reasonings. Garrett has Hume rejecting the traditional view of reason as *insufficiently justificatory* to allow humans to continue to engage in causal reasoning (thus something else must step in to provide such a push to continue to engage in causal reasoning). On the Owen view, the traditional account of reason is rejected because it is *insufficiently explanatory* (thus we must find some other explanation for this behavior, i.e., a different account).

Both views are, however, *contra* the claim made by *Garrett’s Challenge* against Owen’s view, able to explain the structure of Hume’s argument. According to Owen, there are two different mechanisms Hume has posited to allow transitioning between ideas: demonstrative and

\(^4\) Owen takes Hume’s enquiry into the nature and etiology of our causal reasoning to be a straightforward question: Hume seeks, simply, “the explanation of how we make inferences and form beliefs.” Garrett interprets Hume’s concern with the etiology of our beliefs as seeking an explanation for why humans persist in making the transition between ideas in cases of causal reasoning, despite the fact that this transition cannot be supported by some higher-level piece of reasoning. (91-2). As such, it is a question about the etiology of belief in so far as it is a question about why we are compelled into these beliefs despite reasoning’s silence on the availability of a principle to underwrite them. For a quick treatment of this disagreement see Owen (2001, 191-196).
probable inference. Accordingly, when neither of these sorts of inference are sufficient of themselves to explain one species of inference, i.e., inference about unobserved matters of fact, Hume expands the scope of his enquiry to mechanisms that were previously not considered to fall under the heading of “reason,” namely, custom and habit. It is here that Hume finds fertile ground for a theory and presents a new account of the mechanism that enables humans to transition to and idea whose correspondent impression is not present. These transitions fall under the head of “probable reasoning,” and the account of probable reasoning must be expanded to include the mechanisms newly found to be responsible for them. Owen manages to have a dual-use theory that avoids the problems Garrett cites with non-skeptical dual-use interpretations because he treats the negative argument as being about the cause for our beliefs in unobserved matters of fact, not their justification.41

Indeed, this shows Owen’s major advantage over Garrett’s view: Garrett must treat the negative argument as a pseudo-causal argument, because it is still at least partially about justification or warrant on Garrett’s view. Owen’s view, by contrast, is able to treat the negative argument as being a completely causal argument. Owen’s view is far more straightforward and more plausible on this point, and this more than counterbalances any debt accrued by positing a second account of reason.

So, while Owen’s view can satisfy all three parts of the challenge, what of a view that seeks to reject the challenge rather than satisfy it? In the dual-use views he surveys, the feature Garrett objects to is their incorrect account of the sorts of inference Hume has going. It is this feature of those views that leads to the unsatisfactory interpretations of the negative argument.

41 And, indeed, we can observe this in Garrett’s reformulations (2000, 2001) of his challenge: when addressing Owen’s view specifically, the first two parts of the Challenge play a much greater role and the third part drops nearly completely out.
Garrett seems to assume that there is something inherent in proposing two senses of “reason” that will lead to the bad interpretations, through the deductivist claim (or similarly *otiose* assumptions).

But there does not appear to be any reason to think that a dual-use view must have this feature, other than the fact that the dual-use views Garrett surveys actually did have it.⁴² Nothing about, for instance, changing Owen’s interpretation from promoting two accounts of the faculty of reason (as it does now) to claiming two senses of the faculty term “reason” would alter its status with respect to the third part of the challenge.

As long as an interpretation has the correct account of Hume’s *sorts* of reasoning, it can explain the structure of the negative argument. Whether it posits two senses for the faculty term “reason” is a separate (though related) issue that depends as much on what happens outside the negative argument as what happens inside of it. Once the first two parts of Garrett’s challenge have been rejected, the third part is easily surmounted by any view with the correct account of demonstrative and probable reasoning.

**IV. Conclusion and Plan of Action**

*Garrett’s Challenge* is initially plausible. Hume is a mellifluous and compelling writer and a sharp thinker, so it seems reasonable, initially, that he paid careful attention to his terms. This would militate against interpretations that take him to use any term in more than one (not distinguished) sense. But this does not seem to be the case: looking at terms like “proof” and “certainty” shows that Hume is not nearly as careful with terms related to human reasoning as he might initially appear to be. Once we see that using terms in multiple senses is a pervasive

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⁴² At the very least, some argumentation would have to be provided to think that this *must* be true of dual-use views.
feature of Hume’s writing and that Hume only sometimes draws the reader’s attention to these multiple uses, the implausibilities Garrett points to in dual-use views melt away. Garrett’s Challenge to dual-use interpretations can be satisfied by Owen’s view, and can be entirely rejected by similar dual-use views as long as they capitalize on the insights that Garrett and Owen give us about Hume’s view of the mechanics of reasoning.

Owen’s view can satisfy the challenge, thus the motivation for accepting Garrett’s univocal-use view is already undermined. But rejecting Garrett’s Challenge altogether—as I think I have given good reason to do—throws open the doors to new dual-use interpretations. Views that interpret Hume’s multifarious use of “reason” in ways differently than Owen does are now viable, too. Garrett argued convincingly against the old dual-use views but now there is room for new ones. A new view could pick up on, for instance, Norton’s two uses of “reason” and claim that Hume’s two senses of “reason” are distinguished by whether they include immediate, reflexive inference or not. That view is, in light of the rejection of the Challenge, plausible again, alongside many others.

The view I propose in the next chapter runs largely along these lines. Given that this is my approach, the response I gave on Owen’s behalf to the final part of the challenge is not open to me: I am not free to say that there is just one use of the term ‘reason’ and two different accounts. I have done my best to blunt the force of the objection to this point, but it remains to be seen that I can show that the account I favor evinces as many interpretational virtues as (or more interpretational virtues than) the Garrett account, though I have suggested that as long as it is consonant with the view of inference and argument I developed in chapters two and three, that it should succeed on the third part of the challenge.
I shall show that my account has interpretational virtues that Garrett’s lacks and is superior to Owen’s because it (1) does not require that Hume is using faculty psychology language disingenuously, and (2) explains the usage of the related reasoning terms, as Owen’s does not.⁴³

⁴³ As promised in chapter two. The extent to which my overall interpretation differs from Owen’s (i.e., drastically) will be fully examined in chapter six’s discussion of the nature and denizens of Hume’s faculty psychology.
Chapter 5: The Two Senses of “Reasoning” and “Reason”

In this chapter I explicate my interpretation of Hume on the nature of reason and the terms “reason” and “reasoning.” This interpretation is the culmination of the interpretive groundwork from chapter one, the work on the key terms in chapters two and three, and the ground clearing in chapter four. Owen’s interpretation is the view mine is closest to, but this chapter and chapter six should show that my view improves upon Owen’s along several interpretive dimensions.

Chapter four began with an accounting of the different senses of “reason” that Norton found in the text, but it was not clear whether any of these senses were compatible or incompatible with each other. The account I propose takes it that Hume uses “reasoning” in exactly two different ways. The first is to denote just the activity of mental transitioning that takes place according to some medium, i.e., to denote making arguments. The second is to denote the activity of making any transition between ideas conducted in accordance with the philosophical relations, i.e., making any (kind of) inference. We will see that there is a corresponding sense of “reason” for each of these senses of “reasoning” because, as I explain, faculties are posited in response to a kind of mental activity. Further, I will show that seven of the eight senses that Norton gives can be mapped on to one or the other of the two senses I have defined.¹

In order to show that there are two senses of “reason,” I begin with one assumption: that Hume’s use of the term “reasoning” is related directly to his use of the term “reason,” that is, that the word “reasoning” is not used as mere façon de parler for mental activity wholly unrelated to

¹ I exclude only the sense of “reason” as a “calm passion,” not because I think that my view cannot account for it, but because to do so would require more exposition of Hume’s view of the passions than is appropriate here.
reason, but rather only when Hume means to indicate that the inference or activity he is
discussing bears some relationship to the faculty of reason. Basically, I posit that Hume’s use of
the term “reasoning” is genuine, i.e., not obfuscatory or disingenuous. This assumption allows
me to show that there are two senses of “reason” by showing that there are two senses of
“reasoning” and also allows me to make sense of some interpretatively difficult parts of Hume’s
texts.

I. “Reasoning” and “Sensation” in the Treatise

Hume uses the word “reasoning” in two distinct senses. The easiest way to see this is to
look at how Hume distinguishes what is properly called “reasoning” from “sensation.”

A. Initial Attempt to Relate Reasoning and Sensation

Hume says that reasoning has to do with relations between objects:

All kinds of reasoning consist in nothing but a comparison, and a
discovery of those relations, either constant or inconstant, which two or
more objects bear to each other. (T 1.3.2.2)

Hume allows that there are seven different types of relations that can be discovered to
hold between objects; these are the philosophical relations laid out in Treatise 1.1.5. These
philosophical relations come in two kinds; one kind traces relationships that are intrinsic to the
ideas and the other relations that are extrinsic. In Treatise 1.3.1 Hume discusses reasoning

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2 It might seem that I have just begged the question against Owen; I claimed that Owen’s view failed to
explain the connection between “inference” and “reasoning” because of the complicated relationship
“reasoning” bears to “reason” on Owen’s view. I have here, it would seem, merely asserted that there is
such a connection. I have not begged the question because what I go on to do with this assumption
justifies making it; i.e., I am offering some species of abductive argument. I propose here that there is
such a relationship between “reasoning” and “reason” and I think that the sense I am able to make of the
text on that basis vindicates that assumption: given all the clarifications and sentence- and argument-
level explanatory gains that can be made with that assumption, the best conclusion to draw is that the
assumption is true. Thus I just now began with that assumption, and will go on to show that it is
warranted.
related to the connection of ideas by intrinsic qualities, and in 1.3.2 reasoning related to the connection of ideas by qualities extrinsic to the ideas themselves. In both sections, Hume distinguishes reasoning from sensation by how many of the objects being compared are present to the senses:

When both objects are present to the senses along with the relation, we call this perception rather than reasoning; nor is there in this case any exercise of the thought, or any action, properly speaking, but a mere passive admission of the impressions thro’ the organs of sensation. (T 1.3.2.2)

Going on to say

According to this way of thinking, we ought not to receive as reasoning any of the observations we may make concerning identity, and the relations of time and place; since in none of them my mind can go beyond what is immediately present to the senses. (T 1.3.2.2)

Here Hume claims that reasoning requires moving from a present impression or idea to an idea of something that was not initially present; because when I judge the cat to be on the mat, the cat, the mat and the on-ness are all present at the same time, this does not count as an instance of reasoning. Note that Hume’s claims about perception are that it consists in the observations of relations (not discovery, as in reasoning), and that each of the objects, along with the relation, is present to the senses (not just to the mind).

Hume makes a similar claim about intuitive reasoning in Treatise 1.3.1, claiming that when we make intuitive judgements of resemblance/non-resemblance, &c., “this decision we always pronounce at first sight, without any enquiry or reasoning” (T 1.3.1.2). Because both objects (the ideas) and their relation are all present (to the mind) at the same time, this is similar to sensation or perception, and not a paradigmatic case of reasoning. Hume seems to be

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3 Hume goes on claim that judgements of identity and relations of time and place, when they are executed in such a way as both objects are not present at the same time—i.e., when we judge an object to be self-identical on different occasions after disjoint perceptual episodes—are actually instances of causal judgements, such that some of these actually are instances of reasoning, tracking a different relation.
indicating that immediate perception, that is, coming to have some belief as a result of seeing a
relation between two objects when they are both present (either to the mind itself or to the mind
via sensation), does not count as reasoning.

Hume’s thinking might go like this: were the relation not present, the mental event would
not even possibly count as an instance of reasoning; thus, when both objects are present, if there
is a discovery of a relation, then both objects must be present to the mind along with the relation.
But if both objects and the relation are present to the mind, this is like the paradigmatic case of
sensation where all three were present to the senses. (What it is for an idea to be present to the
mind is for it to be being perceived by the mind (T 1.1.1.1).) This line of thinking suggests that
there cannot be any reasoning when both objects are present to the mind, regardless of whether
the relation is perceived via the senses or discovered.

Hume later returns to a similar point. Considering the conditions for calling an instance
of mental transition regarding extrinsic relations reasoning, he says, first, that there must be an
impression, in this case, because otherwise the conclusion, which is supposed to regard matter of
fact, “wou’d be entirely chimerical” (T 1.3.6.6). He goes on to say that

were there no mixture of ideas, the action of the mind, in observing the
relation, wou’d, properly speaking, be sensation, not reasoning. (T 1.3.6.6)

In addition to an impression being required, then, it is also required that there be an idea,
i.e., that the mind must transition to the idea of an object that is not present: if both objects were
present as impressions, Hume says, (i.e., were there no “mixture of ideas,”) then this would,
“properly speaking,” be an instance of sensation, not reasoning.

Taking this with the previous line of thinking concerning instances when both objects are
present to the mind, we might suppose that reasoning would only be when the mind moves from
what is present to it to something that was not initially present to it, i.e., when the relation obtains
between some impression or idea that is initially present and an idea that is not initially present; this would guarantee that the relation is not perceived, but inferred. We could guarantee that this would be the case by requiring that there be a medium involved in reasoning; it would secure the movement of the mind to a new idea. This seems to be what Hume is claiming: immediate connection is perception or sensation; mediated connection is reasoning.

B. A Seeming Contradiction

This claim that reasoning consists in mediate connection is contradicted elsewhere, though; in giving his initial account of reasoning, he claims that reasoning is comparison and discovery of a relation and that

This comparison we make, either when both the objects are present to the senses, or when neither of them is present, or when only one. (T 1.3.2.2)

Hume claimed that all reasoning is the comparison of ideas and discovery of a relation, and he goes on to say that this comparison—that is, reasoning—can be made when both objects are present to the senses, or neither object is present, or only one object is present. Hume goes on to tell us immediately in T 1.3.2.2 that there are related cases that are not instances of reasoning, and what makes them to be not instances of reasoning is the additional presence of the relation—and its presence to the senses, at that—not the presence of both objects. There is no other possible referent for “this comparison” here other than “reasoning,” so Hume’s statement that this comparison—i.e., reasoning—can be made when both, one or none of the objects involved are present to the mind is unequivocal: there are cases of reasoning where both objects are presently perceived. ⁴

⁴ There is another way available to read this passage: one could take it that the “this comparison” applies to all comparisons. So, the reading would go, Hume picks out one type of comparison—reasoning—as a species, and then says, of the genus—comparison—that it can be accomplished with all, one or none of the
But this would seemingly contradict Hume’s other claim that if both objects are present, then there is no reasoning. It would do so for reasons similar to those we saw above: because both objects cannot be present without the relation also being present, if it is to be an instance of reasoning. Thus, if there is reasoning with both objects present, then there is reasoning with both objects and the relation present, thus generating the contradiction with Hume’s earlier claim that this is not reasoning.

Further, Hume also says

We may exert our reason without employing more than two ideas, and without having recourse to a third to serve as a medium betwixt them. We infer a cause immediately from its effect; and this inference is not only a true species of reasoning, but the strongest of all others, and more convincing than when we interpose another idea to connect the two extremes. (T 1.3.7.5n20)

This contradicts the earlier supposition that it is the medium that saves reasonings from being mere sensation or perception because here there is a case where Hume calls non-mediated inference reasoning, and a “true species of reasoning” and “the strongest of all others” at that. If a medium were required to secure the motion of the mind, then this mental transitioning would not count as reasoning; but yet it does; indeed, it is the strongest species of reasoning. Thus, Hume must think that there is mental transitioning that requires a medium, in order that it count as reasoning and also that there is mental transitioning that counts as reasoning that requires no medium.

I think that this way of reading the passage is a bit tortured; Hume uses “this comparison” to seemingly refer to reasoning in particular; that seems to be doing the work that the “this” is doing. Further, my reading can make sense of why Hume goes on to reference objects instead of ideas and the senses instead of perceptions.
C. Resolving the Contradiction

So, in order to obviate the contradiction that seems evident here, we must allow that Hume is using the term “reasoning” in two different senses. One sense is restricted to those inferences that have a medium or middle step, that is, it is restricted to arguments. The other sense includes even those inferences that do not have a medium, i.e., reflexive probable reasoning and intuitive reasoning.⁵

This understanding of what Hume means by “reasoning” can make sense of Hume’s claim that “all probable reasoning is nothing but a species of sensation” (T 1.3.8.12). This is because in probable reasoning, one has an idea of the matter of fact being believed, but in order to cause it to rise to the level of belief there must be an impression present to transfer the required liveliness to that idea, and the relationship between the two is present to the mind as well: one causes the other to rise to the level of belief. Thus, the two objects and the relation are all present; thus it is sensation and not, as it would seem from Hume’s calling it “reasoning,” reasoning.

So, if these instances of probable reasoning are not reasoning but, instead, sensation, this would have the consequence that some reasonings are not instances of reasoning. Either Hume is using the term “reasoning” here disingenuously, claiming that probable ‘reasoning’ is not really reasoning, but (really, only) sensation, or Hume has a view whereby mental transition can be both reasoning and sensation, i.e., where something’s being sensation does not exclude it from also being reasoning. The first of these two possibilities is disallowed by the direct statement that transitioning sans medium in the case of cause and effect (the paradigmatic relation of probable

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⁵ See chapter two, sections IV and V for an accounting of the taxonomy of inference.
reasoning) not only counts as reasoning, but is the strongest form of reasoning. So reading Hume as disingenuous is not feasible.

This means that Hume’s view is such that there is a sense of the term “reasoning” that does not exclude sensation. But this leaves obscure why Hume distinguishes “reasoning” and “sensation” at all, and claims that there are instances of inference or reasoning that are more properly classed as sensation,\(^6\) or that are not reasoning,\(^7\) despite being the discovery of one of these relations.

The explanation for this is that there is another sense of “reasoning,” one that excludes these sensitive-reasonings. This sense of “reasoning” matches the typical understanding of “reasoning” as the movement of the mind according to principles or maxims. These principles or maxims provide different kinds of linkages between the precipitating impression or idea and the disparate concluding idea. The movement of the mind that they enable can take place either according to relations intrinsic to the ideas/principles involved (as in demonstration), or extrinsic to them (as in mediated probable inference).

These two types of inference are classed together as one referent of “reasoning.” *Treatise* 1.3.6 betrays that Hume parses the concept in this way. The famous arguments that neither demonstrative reasoning nor reflective probable reasoning\(^8\) can account for our beliefs in

\(^6\) “We call *this* perception rather than reasoning” T 1.3.2.2; “in observing the relation, wou’d, properly speaking, be sensation, not reasoning.” (T 1.3.6.6)

\(^7\) “This decision we always pronounce at first sight, without any enquiry or reasoning” (T 1.3.1.2); “we ought not to receive as reasoning any of the observations we may make concerning *identity*, and the relations of time and place; since in none of them my mind can go beyond what is immediately present to the senses” (T 1.3.2.2).

\(^8\) That is, probable reasoning that traces connections between impressions and ideas by using a principle or maxim as a medium. The other form of probable reasoning is reflexive probable reasoning, which moves immediately from the precipitating idea to the concluding idea. There are two sorts of mediated probable reasoning, one that uses principles or maxims to generate the linking between the disparate ideas; the latter is the form of probable reasoning being discussed here. See chapter two, section V for a full accounting.
unobserved matters of fact hinge on the nature (and etiology) of the principle that would link the current impression with the inferred idea. The principle in question is the maxim that “those instances, of which we have had no experience, resemble those, of which we have had experience” (T 1.3.6.5, or the suitably similar formulations at T 1.3.6.4 and 1.3.6.7). It is because this principle cannot be generated by demonstration (because it does not concern the connection of ideas by intrinsic qualities) nor reflective probable reasoning (because reflective probable reasoning presupposes it) that it cannot be the medium for certain sorts of inferences.9

“Reasoning,” in this more traditional sense deployed in this argument, is the transitioning of the mind according to some medium, and in this case, by making use of some maxim or principle as the medium.10 This is the sense of “reasoning” in which our basic causal reasonings are not “reasoning.”

So, in Treatise 1.3.6 Hume argues that reasoning (in this restricted sense) cannot account for the medium that would be used if inferences about unobserved matters of fact took place by way of (those sorts of) reasoning. But Hume does allow that there is a sense of “reasoning” in which what happens in the inference from the impression to the idea counts as reasoning. This

9 That is, our basic causal inference. Because it is the only possible medium for these inferences, it must be the case that there is no medium. (Hume has already ruled out that the connection is intuitive: 1.3.3; 1.3.6.1.) Thus, reflexive probable reasoning—which is still a species of reasoning—must be the mechanism for the transition. This is the positive answer that Hume advances (T 1.3.6.12-1.3.8).

10 That Hume takes this as the traditional sense of “reason” is made clear by Hume’s claims—which I will return to shortly—in T 1.3.7.5n20, wherein he gives the definition of “reason” that the “schools” give, saying they take it to be “the separating or uniting of different ideas by the interposition of others, which show the relation they bear to each other” (emphasis added).

Also, note that Hume need not believe that every instance of mediated transition be a case of mediated-transition-according-to-a-maxim. Some demonstrative reasoning may not make use of a maxim, and those reflective probable reasonings that take an inferred effect as a further cause do not make use of a maxim. But showing that there are instances of “reasoning,” used to exclude immediate transitioning, that are according to a maxim suffices to show that there are instances of “reasoning” used to exclude immediate transitioning that do include mediated transitioning, and suggests that this is, itself, the distinction between the two uses of “reasoning,” not the use of a maxim per se.
sense is just inference: there is something that is present to the mind, then the mind moves, by way of (a connection that is at least isomorphic with) a philosophical relation, to an idea distinct from the precipitating impression or idea. Hume has a further positive story to be told about how this inference occurs: it occurs by way of custom or habit, but it is no less inference (and so, no less reasoning in the sense of “reasoning” that just means inference) for the fact that it arises from custom or habit.

And this is Hume’s key innovation: allowing that there is a way in which—even if it is not by making use of intermediate ideas, even if it is not by operating on principles that show logical or mathematical connection, even if it is out of habit, custom or instinct, rather than from some faculty that treats abstract or non-empirical ideas—this is reasoning. Hume is doing nothing less than attempting to overturn the dominant paradigm of reasoning by giving a cognitive-psychological account of how it is supposed to work.

In this account there are two mechanisms, one more general and one more specific. There is a sense of “reasoning” that just means inference: reasoning is cognitive transitioning of mind. There is another sense of “reasoning,” whereby it means something more specific: transitions of mind that involve principles, maxims or other media that appear between the first and final items in the chain. This will, given Hume’s taxonomy of inference, pick out demonstrative (but not intuitive) inference and mediated probable inference. The second usage of “reasoning” is more specific insofar as it canvasses a narrower range of transitions. All the transitions covered by the first use are covered by the second. This is just the same as it was when we used the terms that are, respectively, co-extensive with the wider and narrower senses of “reasoning”: inference and argument.
More interestingly, the second more specific usage also defines its inferences as having a particular kind of relationship to sensation. In particular it supposes that there is something more to them—at least one extra step—that means that they are not possibly confused with sensation. The wider usage encompasses transitions that can be classed under sensation because the mental happenings that produce those reasonings match so closely with our experience of sensation. (It is no accident that intuition and demonstration are explained in terms of different ways of “seeing” the connection between ideas.)

The narrower class, though, is not often confused with sensation. Part of Hume’s goal is to show that the two classes both count as reasonings because, despite their differences, they rely on the same fundamental mental mechanisms. In this way, Hume claims that all inferences depend on our characters as sensate beings, but allows that some of them depend on something more: the ability to iterate these kinds of transitions, or make transitions that use principles or maxims. This picks out a smaller—and perhaps more interesting—subset of the class of inferences.

“Reasoning” in Hume’s second sense is much more like the traditional conception of reasoning. This is because that conception is one along which reason was responsible for discovering a narrow range of transitions: those transitions wherein—because one’s rational faculties are able to discern non-obvious relationships among one’s ideas—one has essential insight into the structure of the world. “Reasoning,” on this view, refers to a significantly narrower class of transitions than on Hume’s wide, all-inference sense of “reasoning.” The class of transitions picked out by “reasoning” in the narrower and the wider sense are robustly different along important historical dimensions, but not, on Hume’s considered view, key mechanical or cognitive dimensions.
We can see the distinction between the two senses of “reasoning” at work when Hume shows that all the acts of the understanding can be reduced to conception (T 1.3.7.5n20). In the beginning of this note, he gives the traditional definition of “reasoning” as “the separating or uniting of different ideas by the interposition of others, which show the relation they bear to each other.” Hume, later in this note, goes on to refine this account of reasoning, excluding the caveat that there must be a medium: this is the place where he states (as I have cited before) that “we may exert our reason without employing more than two ideas, and without having recourse to a third to serve as a medium betwixt them” (T 1.3.7.5n20). Here we can see the two senses of “reasoning” writ large: the first is the traditional account, the kind of account Hume wants to supplant—but that will still qualify as reasoning on his new account—and the new account he gives that canvases a wider range of inferences. Here we see Hume explicitly distinguish what he had been previously implicitly distinguishing: two ways in which the term “reasoning” might be used; one sense that is more narrow and traditional and a wider, non-traditional sense that refers to all inference.

D. This Interpretation Ratified by T 1.3.16

This reading is underscored by Hume’s writings on the reasoning of animals. In Treatise 1.3.16 and Enquiry 9, Hume develops an account “Of the reason of animals.”11 To begin the Treatise discussion, Hume asserts “that beasts are endow’d with thought and reason as well as men. The arguments in this case are so obvious that they never escape the most stupid and ignorant” (T 1.3.16.1). He then goes on to lay out a class of animal actions, such as are evinced by a dog who has learned to avoid “fire and precipices, that shuns strangers, and caresses his master” (T 1.3.16.5). These are instances, Hume thinks, of learning from experience, that is,

11 This is the section title to both of these sections.
instances in which a non-human animal has some sensory experience, then, on the basis of that, evinces some behavior that indicates that the animal has inferred that some object that is usually conjoined with that first one, may be or is likely incipient. About these instances of inference, Hume says “I assert they proceed from a reasoning, that is not in itself different, nor founded on different principles, from that which appears in human nature” (T 1.3.16.6). Hume then shows how the same mechanisms of custom or habit that he has explicated regarding human reasoning must account for the reasoning of animals (T 1.3.16.7-8), concluding “‘Tis therefore by means of custom alone, that experience operates on them,” i.e., on non-human animals, to bring about these inferences (T 1.3.16.8). But though they derive from custom and experience, they are species of reasoning, and properly considered as such. “To consider the matter aright,” Hume goes on to say, “reason is nothing but a wonderful and unintelligible instinct in our souls” (T 1.3.16.9). Reason need not be anything special, and, indeed, the reason of “children, and the common people of our own species” (T 1.3.16.3) is not distinct from the reasoning that animals evince.12

12 I take it that Hume thinks that the reasoning capacities of children are similar to those of animals insofar as they work by the same mechanisms, toward the same end, using similar ideas; this is to say, I think that Hume thinks that children, insofar as they do not have the advanced reflective capacities or attention to chains of reasoning that adults have, are, in their reasoning lives, just as beasts are, which is to say, they have no reasoning abilities that animals do not. They may have more facility to marshal particulars with which to reason, as children over time develop an ability to class particulars under general terms, but their reasoning capacities and the mechanisms by which they reason should be identical for Hume.

As children develop the capacities required for the more advanced sorts of reasoning and are more adept at using terms, they should move slowly and consistently away from reasoning only as beasts do and incorporate some elements of the full corpus of human reasoning, depending on how apt they are for such things. (Hume does not think that all humans share just the same capacities to just the same extent, c.f. EHU 9n.) Because use of terms does not enable any additional sorts of reasoning for Hume—as it does for, e.g., Locke and Hobbes—there is no reason to think that Hume would claim that (inasmuch as beasts cannot use terms) a child’s ability to use terms would grant the child any further reasoning powers beyond those of beasts.

For further discussion of Hume’s view of human and animal reasoning, see my chapter seven, section V.
Here Hume uses “reason” and “reasoning” in the wider sense, the sense that indicates just that there is inference occurring. This is evident from the structure of Hume’s argument: Hume argues from animal learning and animal inference to the conclusion that animals must reason. Here Hume has already established which class of inferences he is going to be examining; those inferences in which an animal starts with “some impression immediately present to their memory or senses” (T 1.3.16.6) from which the animal’s mind moves to some other non-present idea and expects it. This expectation betrays that there is reasoning going on, and it is reasoning that concerns matters of fact and real existence.\(^{13}\)

Hume goes on to produce an argument that there is no mechanism besides the “influence of custom on the imagination,” that is, habituation by experience as goes on in human causal reasoning, that could produce this inference. Thus Hume is discussing reasoning in the sense wide enough to encompass those immediate inferences, as he attributes to animals what he attributed to humans in those passages that led us to discover that there was such a sense. So, there is such a sense of the term “reasoning” in Hume; it is not \textit{façon de parler} for some non-\(^{13}\)

\(^{13}\) It is not clear whether and to what extent Hume thinks that animal reasoning is propositional. Hume’s general move is to deny dissimilarities between humans and animals where possible. So, since Hume attributes to animals the related characteristics of having ideas, being capable of (reflexive probable) reasoning, and having beliefs (EHU 9), if human reasoning is propositional, Hume will likely take it that animal reasoning is propositional to a similar extent. Unless, that is, there is something about the ability to use terms that somehow introduces propositionality. It seems unlikely that language introduces propositionality, however. Hume gives something like a propositional attitude account of belief, but never mentions the use of terms as a necessary condition for belief. Hume does, however, say both that animals have beliefs and that they do not use terms. On a propositional attitude account of belief, all beliefs would be propositional. This suggests that language is not essential to have propositional attitudes and that animal reasoning relates to propositions by generating an attitude toward them, at the very least.

One reasonable conclusion to be drawn from this discussion would be that language is not required for reasoning to produce or make use of propositions, but it does not seem that Hume is committed to this further claim by anything that I have endorsed above. (One might think that animals can \textit{relate} to propositions, but that their reasoning cannot \textit{generate} those propositions.) Whether this is the correct interpretation of Hume requires more attention than I can provide here. (In part because this all depends on taking Hume’s account of belief to be a propositional attitude account. It might be that Hume has an \textit{attitude} account of belief without having a \textit{propositional} attitude account.)
reasoning transitioning: it is genuinely reasoning on Hume’s view, though it would not count as reasoning on the traditional account.

The interpretation I have given in this section makes sense of Hume’s use of the term in the sections on animal reasoning and explains why Hume only needs to show that animals make inferences about matters of fact to show that they reason.

II. “Reasoning” and “reason” in the first Enquiry

Thus far, the main textual evidence I have adduced has been from the Treatise. One might be concerned that (1) there is not such evidence in EHU, or there is countervailing evidence, and (2) that this will undermine my earlier claim that the meanings of the terms are fixed across the Humean corpus and that one can do interpretive work that holds them steady. In this section I will adduce textual evidence from EHU to make plausible the same interpretation that I gave on the basis of the Treatise above, showing that these concerns are unfounded.

A. “Reasoning” in EHU 9

The first argument I wish to advance is a parallel argument to the one given from Treatise 1.3.16 (“Of the reason of animals”) above. The parallel section in EHU (Section 9, “Of the reason of animals”) follows a similar structure, with Hume first showing, on the basis of animal behavior, that animals must reason, then showing, on that basis, that the reasoning of these non-human animals must result from similar mechanisms to human reasoning. Throughout, Hume’s discussion focuses on reasoning about matters of fact, that is, probable reasoning. (EHU, as it should be clear from the discussion above, recreates the distinction between probable and demonstrative reasoning that I have previously explicated.) And though “the experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of
life depends, is nothing but a species of instinct or mechanical power” and it “is not directed by any such relations or comparisons of ideas as are the proper objects of our intellectual faculties” (EHU 9.6), it is still the case that they are *reasonings*: Hume has used that term in stating his conclusion, but also in introducing these inferences in the section.⁴

Despite this, throughout the section, Hume, while referring to them as inferences, also claims that they are not “founded on any process of argument or reasoning” and that “Animals, therefore, are not guided in these inferences by reasoning,” and that “nor can an operation of such immense consequence in life, as that of inferring effects from causes, be trusted to the uncertain process of reasoning and argumentation.”

We see Hume recreating here two ways of speaking that turn up elsewhere. First, we see that Hume here shows us that he means to be speaking about *argumentative* reasoning as unable or not trustworthy to generate the beliefs in matter of fact necessary to successfully cope with the world.⁵ Nothing in this section claims that non-argumentative reasoning cannot be trusted to generate these beliefs: and that is because it is non-argumentative reasoning that does in fact generate these beliefs, as is evidenced by Hume’s claims at the beginning and the end of the section.⁶

The other thing Hume does here is recreate the distinction (first evinced in *EHU* 4) between some inference’s *being reasoning* (in whichever sense) and some inference’s *being founded on* reasoning. This is a crucial distinction, and one should not think that an inference’s being an instance of reasoning is the same as an inference’s being founded on reason or

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⁴ “All our reasonings concerning matter of fact are founded on a species of analogy…” (EHU 9.1)

⁵ By “argumentative reasoning” I just mean reasoning that executes its inferences via arguments (in Hume’s sense of that term). Conversely, non-argumentative reasoning does not take place via argument: thus it is the class of immediate inferences, for Hume.

⁶ I take it that Hume thinks that argumentative reason is less reliable than non-argumentative reason because it requires more mental attention and effort to see the connections that are not readily available.
reasoning. In order to bring this and the previous point out more clearly, I will here show how these points appear in *EHU 4* and provide compelling support for the reading that I am advancing.

**B. Two Senses found in EHU 4**

In *EHU 4*, Hume does not deny that inferences regarding matter of fact are reasonings. Hume claims that they are; “all our reasonings concerning fact are of the same nature. And here it is constantly supposed that there is a connexion between the present fact and that which is inferred from it,” and that “if we anatomize all other reasonings of this nature, we shall find, that they are founded on the relation of cause and effect” (*EHU 4.4*). Similarly, we find that Hume does not think these inferences are defective; rather, when we infer heat and light from fire, we do so “justly” (*EHU 4.4*).

So if Hume accepts that these inferences are reasonings, what is he denying in this section? Hume denies that these inferences can be made without experiential evidence: “knowledge of this relation is not, in any instance, attained by reasonings à priori; but arises entirely from experience” (*EHU 4.6*). Hume claims that experience is a crucial part of the process of drawing these inferences, *not* that reasoning is *not* a crucial part: “nor can our reason, unassisted by experience, ever draw any inference concerning real existence and matter of fact” (*EHU 4.6*, emphasis added).^17

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^17 I take it that by “experience” here, Hume just means evidence acquired on the basis of experience, which is to say, Hume is claiming that one cannot make inferences regarding unobserved matters of fact if one has not had certain courses of impressions that result from interacting with the world. This is why the Adam of this paragraph cannot draw conclusions about matters of fact: the objects in question are “entirely new to him” (*EHU 4.6*). Thus, experience, here, is to be read as nothing over and above simple interaction with the world, the creation and storing up of impressions and ideas and memory of their contiguousness with and succession of one another. See the related passage at T 1.3.6.2, where Hume spells out more clearly what he means by “experience.”
But then Hume immediately shifts and, seemingly restating his conclusion from the previous sentence, says “This proposition, *that causes and effects are discoverable, not by reason, but by experience*, will be readily admitted…” (EHU 4.7). Hume shifts from allowing reason some role in inference concerning matter of fact to seemingly denying it entirely: in *EHU 4.6 unaided* reason cannot play the required role to saying that reason *simpliciter* does not play a role. What can account for this shift? The most straightforward explanation of Hume’s shift is that Hume is not merely restating his conclusion from the previous sentence, and instead is giving a corollary. In giving that corollary, he makes use of a second sense of “reason.”

Hume goes from claiming that reason requires experience to execute these reasonings to claiming that there is no involvement of reason. The two instances of “reason” here line up with the two uses I found in the *Treatise*. The first way is general: all inference is reasoning in this sense; because we have inferences, we have reasoning: it is just that experience is required as a background condition. The second way is more specific: reasoning unaided by experience, or *a priori* reasoning: this lines up with the sense of “reason” as more traditionally construed, as the faculty that can link together its ideas in chains without any assistance from the world.¹⁸

Hume soon returns to language that shows clearly his commitments, claiming “We are apt to imagine that we could discover these effects by the mere operation of our reason, without experience.” (EHU 4.8) In making a claim about the *mere* operation of reason, and clearly denoting that he means reasoning *not on the basis of experience*, he makes it clear what he meant in the previous paragraph when he claimed that “reason” was not involved: *reason sans experience* is not involved. This leaves it perfectly open that there is still reasoning here, it is just

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¹⁸ This whole argument should strike one as similar to Hume’s *Treatise* denial that principles or maxims can serve as the argumentative linkage for inferences about unobserved matters of fact; these argumentative principles would serve as the basis for *a priori* reasonings regarding matters of fact, and so the denial here, though different, shares much in common with the *Treatise*.
the case that the narrow usage of “reasoning,” dependent as it is in this case on principles or maxims (which cannot be secured in experience), is insufficient to the task.

The foregoing is simply a summary of Hume’s usage of the terms “reasoning” and “reason” in *EHU* 4 part 1, and I do not claim it to have been a full exegesis of the arguments that Hume produces there. It is, however, a summary of Hume’s conclusions and that should be sufficient to show that there are two different usages of “reasoning” in that part. Part 2 demonstrates Hume’s double-usage even more clearly.

In part 2, Hume opens with a summary of the results of part 1:

> When it is asked, *What is the nature of all our reasonings concerning matter of fact?* the proper answer seems to be, that they are founded on the relation of cause and effect. When again it is asked, *What is the foundation of all our reasonings and conclusions concerning that relation?* it may be replied in one word, Experience. (EHU 4.14)

Here again we see that Hume refers to our *reasonings* concerning matters of fact, even after he has showed that they rest partly on experience; this should vitiate any argument that Hume used the term “reasoning” as a placeholder and that Hume’s discoveries in part 1 would lead him to reject the use of that term as applied to our inferences regarding matters of fact.

Note also that Hume’s two questions are distinct: Hume does not ask about the *nature* of both sets, or the *foundation* of both sets, but rather, he asks after the *nature* of the inference of matter of fact, and the *foundation* for the inferences “concerning” that relation that was found to underlie those inferences. This is important, because Hume goes on to ask another question, this time again addressing the *foundation* of that which was supposed to serve as the foundation:

> But if we still carry on our sifting humour, and ask, *What is the foundation of all conclusions from experience?* this implies a new question, which may be of more difficult solution and explication. (EHU 4.14)

Here Hume gives only what he calls “a negative answer” and says that “our conclusions from that experience are *not* founded on reasoning, or any process of the understanding” (EHU 4.15).
Hume denies that the conclusions drawn from experience are founded on reasoning. Hume gives the first version of the “negative argument”\(^\text{19}\) to this conclusion:

But if you insist, that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connexion between these propositions is not intuitive. There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument. What that medium is, I must confess, passes my comprehension. (EHU 4.16)

This should sound similar to the explication I gave earlier of the Treatise argument:

Hume denies that a chain of reasoning could account for the transitions of mind involved in inferences regarding unobserved matters of fact (as in Treatise 1.3.6.8); a chain would be needed because the connection between the propositions is not intuitive (as in Treatise 1.3.3, 1.3.6.1).

Hume claims that no chain could account for these reasonings because there is no medium that could connect the two objects such that the mind could transition from one to the other (as in Treatise 1.3.6.4-7). But this second instance of “reasoning” in this passage is, much like in the Treatise (1.3.6.6), an instance of the narrow scope of reasoning. Just as the context made clear that Hume was discussing demonstrative reasoning when he used the term “reasoning” without a modifier in Treatise 1.3.1, and similarly for probable reasoning in 1.3.2, here context makes clear that Hume is not talking about reasoning simpliciter or tout court, but rather about chains of reasoning, that is, demonstrative reasoning and mediated probable reasoning.\(^\text{20}\) That is why Hume appends the “and argument” to “reasoning” in this quotation: because it is philosophically

\(^{19}\) So described at EHU 4.17

\(^{20}\) In T 1.3.1, Hume discusses demonstrative reasoning. He sometimes does not refer to it as such, though, calling it sometimes “abstract” reasoning or “artificial” or sometimes just “reasoning.” The context makes clear, though, that the discussion is of demonstrative reasoning throughout, not reasoning simpliciter (or some other kind of reasoning). This is evidence that Hume sometimes allows context to determine how we ought to interpret an instance of the word “reasoning” and that, just because it does not show up with a qualifier like “demonstrative” out in front of it, it does not mean that Hume is discussing reasoning simpliciter. Hume simply allows context to function to restrict the scope. There is a similar use of context to restrict the scope of discussion to probable reasoning in some of Hume’s uses of “reasoning” in T 1.3.2.
(and not merely *rhetorically*) very important that Hume means reasoning that makes use of a medium (i.e., arguments) here, and not reasoning *simpliciter*. Hume’s argument only cuts against these inferences being made by *argumentative* reason. \(^{21}\)

Starting in *EHU* 4.18, Hume gives a more thorough recapitulation of this very same argument, and we find just the same two senses of reason required to interpret it as well. Hume begins by recapitulating the distinction between demonstrative and probable reasoning.

All reasonings may be divided into two kinds, namely demonstrative reasoning, or that concerning relations of ideas, and moral reasoning, or that concerning matter of fact and existence. (*EHU* 4.18)

Here, significantly, he cites the *reasonings* being divided into two kinds. \(^{22}\) From this distinction, Hume argues

That there are no demonstrative arguments in the case, seems evident; since it implies no contradiction… (*EHU* 4.18)

and, having dispensed with demonstrative arguments, goes on to dismiss probable arguments as the source of our reasonings concerning unobserved matters of fact:

If we be, therefore, engaged by arguments to put trust in past experience, and make it the standard of our future judgment, these arguments must be probable only, or such as regard matter of fact and real existence, according to the division above mentioned. But that there is no argument of this kind, must appear, if our explication of that species of reasoning be admitted as solid and satisfactory. (*EHU* 4.19)

Hume has here denied that demonstrative *arguments* and probable *arguments* can be responsible for judgements from experience. He explicitly notes this when he says that “If we be, therefore, engaged by *arguments* to put trust in past experience…” (emphasis added). Hume is, just as in

\(^{21}\) This clarification alone should make my pedantry in chapter two about the meaning of “argument” worthwhile.

\(^{22}\) Earlier, Hume had claimed that it was the *objects* of human reason that were divided (EHU 4.1). But Hume then introduces two distinct kinds of reasoning, one of which aligns with each of the kinds of objects (EHU 4.1-2), so there is no contradiction or change, but it is significant that Hume explicitly says here that there are two kinds of reasonings.
the *Treatise*, denying that arguments can lead to the kinds of reasonings being investigated. But this does not cause him to reject that these inferences themselves qualify as instances of reasoning.

Hume goes on to say

> If you assert, therefore, that the understanding of the child is led into this conclusion by any process of argument or ratiocination, I may justly require you to produce that argument (EHU 4.23)

and concludes that

> It is not reasoning which engages us to suppose the past resembling the future, and to expect similar effects from causes, which are, to appearance, similar. (EHU 4.23)

The sense of “reasoning” in which we are not engaged by reasoning is the *argumentative* sense of reasoning: there is no argument in this case, whether demonstrative or probable.

I am attempting to avoid interpreting this argument, and attempting to avoid giving an explanation of just what the content of Hume’s claims are.²³ I merely wish to show that given the way that Hume uses the terms “reasoning” and “reason” throughout this argument, that it must be the case that the term “reasoning” is used in such a way as to include probable reflexive reasoning, that is, the kind of reasoning we engage in when making inferences about unobserved matters of fact—the kind of inferential capacity Hume claims that humans share with other animals—and that there is another sense of “reasoning” that refers only to *argumentative* reasoning, that is, reasoning that involves some medium. Every instance of this *argumentative reasoning* sense of “reasoning” will be included in each instance of *reasoning simpliciter* as the latter is simply inference (as defined in chapter two) and the first is simply argument (as defined in chapter two).

²³ Though I suspect they relate intimately to the connection of reasoning and the causation relation to the associations, which I mentioned but abjured discussing in chapter three.
This is my account of Hume’s use of the term “reasoning.” There are two senses, one that captures all inference and one that captures only arguments. In the previous two sections I have given reasons derived from Hume’s use of the term in the negative argument, as presented both in the Treatise and in the first Enquiry, as well as reasons derived from the sections on animal reasoning in both of these works, to show that Hume does in fact use “reasoning” in two senses and that these are the two senses.

III. My Dual-Use Account of “Reason” and its Virtues

With this account of “reasoning,” and the supposition of its relationship to “reason” as that term refers to a faculty, I am now in a position to resolve the dispute regarding the number of senses of “reason” and their character. This resolution is made more difficult by the fact that there is no account in Hume of what a mental faculty is. Our best reason for supposing that Hume endorses faculties is his pervasive use of the faculty terms (“reason,” “imagination,” “memory,” &c.). He uses these terms in ways that suggest that the activity being carried out (e.g., remembering for the faculty of memory) is paramount; it is what is investigable, and the faculty, such as it is, is whatever set of mental traits or structures that bring about that characteristic mental activity. Thus, it is nothing more, for Hume, to be the imagination than it is to do the thing that the imagination does; it is nothing more to be the memory than to do the things that the memory does, and so on for each of the faculties.

The faculties themselves, then, are inductive posits based on our experience: insofar as there is a unique and characteristic activity of the mind, i.e., remembering, there must be a trait or set of traits that bring the activity of remembering about, i.e., the faculty of memory. This way of viewing faculties explains three things that I will explore below: (1) why Hume never investigates the faculty itself, always the activity; (2) why the faculties correspond directly to the
activities—no faculty has more than one characteristic activity that it carries out (each activity has one and only one faculty associated with it), and (3) why, in reading Hume’s texts, it is so hard to distinguish “reasoning” from other ways of coming to conceive.

First, this view of what faculties are explains why Hume is always investigating the activity and not the faculty. On this view, the introspectively accessible data comes from inner reflection (as all our ideas must come from either sensation or reflection (T 1.1.2)). In inner reflection, Hume believes, we see no more than the shifting from one idea to another, never any real connection or process (T 1.4.6). The reason, then, that Hume investigates the activity and not the faculty is that the faculty is (conceptually and introspectively) blocked off from us. The way the mind works is such that we see what it outputs, not its workings. If we directly saw its workings, the science of human nature that Hume is undertaking would be trivially easy: it would be no harder than describing the workings of a clock in a transparent case: we would see all the gears, all the mechanisms, and would only have to describe them. Instead, our clock—as it were—is encased in an opaque shell; all we can see are the hands, all we can hear are the chimes, and, occasionally, a whirring sound from inside. From this, we must infer the structure of the mechanisms of the clock. With careful observation and good reasoning, we may eventually be able to infer much about the inner workings of the clock. This is Hume’s approach to the mind: just as we are able to tell that there must be some internal mechanism that causes the chimes to strike at midnight and at noon because the chimes reliably sound at those hours, we are able to infer that there must be some internal mechanism that results in remembering, because we do in fact remember. Thus, Hume never uses constraints on the faculty to explain the activity: the direction of explanation is always the other way around.
Second, it explains why the faculties are structured in the way they are. (I will delve more deeply into the faculties themselves in chapter six.) But suffice it to say here that seeing Hume as structuring his view of the faculties this way explains why each faculty is able to be explicated in a simple sentence describing its characteristic activity. Because the clock strikes its chimes at noon and midnight and the hands are perfectly aligned at those times does not mean the same underlying mechanism is responsible for both. Indeed, we have countervailing evidence to this: there are times (just after 1:05, for instance) when the hands align perfectly but yet there are no chimes. Similarly, there is no reason to suppose that remembering and, for instance, reasoning, result from the same mechanism because the activities themselves are quite different. The faculty of memory is posited as a device by which to account for the particular activity of remembering. Lumping it in with other activities is not fruitful or defensible on this way of investigating faculties.

But this is not to say that there are not activities that, while distinct, can be fruitfully classed together; demonstrative and probable reasoning by way of a medium, for instance. While they take different objects, because there is much similarity in the task that is being done (each involve inference, either with or without media) Hume’s method allows for us to posit a faculty that encompasses both of these activities. We would also be perfectly well able to posit a faculty that just accomplished one or the other of these kinds of reasoning: insofar as they are different (they have different objects, make use of different principles, &c.) there must be different mechanisms at work. We could also posit a faculty that included the activity of reasoning according to a medium as a part: a faculty that included all inference would have all mental
activity that counted as inference as its characteristic activity, and a portion of that would be demonstrative or probable inference according to a medium.\footnote{One might ask, in the cases of demonstration and chains of probable reasoning, why it is the case that there is any second activity at all, that is, given that these are just chains of the simpler activity, why posit a second activity? The answer is this: different mental virtues are required for the chains than are required for the single steps, and they are required in different proportions. Thus, while one may be built up out of the other, there is still good reason to class them as separate kinds of activity: if I am very acute at noticing similarities, I may be very good at intuitive reasoning, but if I have a short attention span, I may yet be very bad a demonstration. Thus we have good reason to name and treat them differently.}

This explains the third item in the list I gave above as well. It is so hard to pin down what “reasoning” is on Hume’s view, and its relationship to a faculty of “reason” because each word has multiple, related senses. Because “reasoning” is used to describe two distinct kinds of activity, and activities corresponds to faculties, Hume uses “reason” in two distinct ways as well.

One sense of “reason” corresponds to the narrower sense of “reasoning.” The second use of “reason” corresponds to the wider sense. The two uses of “reason” to refer to a faculty are intimately related because the activities that serve as the basis for the positing of those faculties are intimately related: they are related by the set/sub-set relation. Because Hume uses the same word to describe each activity, he ends up using the same word to describe the associated faculty. Thus, were we to think that the use of “reason” only picked out the narrower usage, then we would be confounded by Hume’s use of “reasoning” to describe the activity of immediate reasoning; conversely, if we took seriously Hume’s use of “reasoning” as it applies to immediate reasoning, it would be difficulty to account for the uses of “reason” that seem to apply the faculty that makes inferences according to a medium.

This way of viewing Hume’s method in positing faculties explains the connection between “reasoning” and “reason”: one is the activity, the other is the faculty posited to be responsible for that activity. Further, it explains why each of these words has two senses and why
those two senses are conflated: there are two closely related activities. (These distinct activities
are not usually carefully distinguished in Hume scholarship.) Each of these activities gets called
“reasoning,” and each, because it is a distinct kind of activity, is entitled to its own faculty. Both
of these faculties get called, unfortunately, “reason.” Finally, it explains the structure and aims of
the negative argument and the sections on animal reasoning. Garrett’s Challenge claimed that it
would be impossible for a dual-use theory of Hume’s use of the terms “reason” and “reasoning”
to explain the structure of the negative argument, but we see that my reading is built on the
negative argument and explains the seeming infelicities there. Additionally, it meets a further
burden: it explains the nature of Hume’s discussions of animal reasoning. It explains both why
Hume makes the claims he does there and why those claims are important.

What I propose is a dual-use theory of the term “reason” in Hume. Every faculty term is
posited on the basis of some mental activity, and reasoning is the mental activity the faculty or
faculties of reason are posited in response to. “Reasoning,” as we have seen, has two senses, so
there are two senses of the term “reason” to refer to a faculty, one that corresponds to each
activity. Because the senses of “reasoning” are related by the set/subset relation, the faculties will
be related by this relation as well. The use of the narrower sense, by which “reason” refers to the
faculty that produces inference by way of some medium, will exclude the other sense—i.e., there
are instances of “reasoning” (in the other, wide sense) that are excluded from “reasoning” when
used in this narrow sense)—so my theory is a dual-use theory.

Because I have given a dual-use theory of Hume’s use of the term “reason” and have
delivered on my promise a theory that is as-explanatory-or-more-explanatory of the text than
Garrett’s theory (and in particular, explanatory of Hume’s negative argument), I take it that I
have defeated the third part of Garrett’s Challenge. The dual-use view I offer, then, is the best
available interpretation of Hume’s use of the term “reason.” It can also help us understand Hume’s faculty psychology more generally.

IV. The faculty of Habit (or Custom)

An advantage of my interpretation is that it explains the relationship of “reason” to “Custom or Habit.” Habit is, on Hume’s view, the faculty that accounts for the reflexive transitions that were under investigation in the negative argument, those transitions from occurrent impressions to ideas of non-present objects or qualities. Habit is the faculty that moves the mind from something to which it is exposed to something else that has been (habitually) associated with that first object or quality. Habit recapitulates connections found in experience (and so does not trace relationships or connections intrinsic to the ideas themselves). By understanding that faculties are posited on the basis of characteristic sorts of mental activity, we can see both (1) why habit is a faculty, and (2) what relationship it has to “reason,” construed in both senses.

First, to see why habit is its own faculty, we only need to see that it is posited on the basis of a unique kind of mental transition. These mental transitions occur without any medium and on the basis of connections in experience, not relationships between the ideas themselves. This particular type of mental activity, Hume thinks, is exceedingly important: he says that this form of reasoning is of “more general use and application” than demonstrative reasoning and that “an operation of such immense consequence in life, as that of inferring effects from causes, [cannot] be trusted to the uncertain process of reasoning and argumentation” (EHU 9.5). This kind of reasoning governs “the active parts of life,” (EHU 9.5) and is that “on which the whole conduct of life depends” (EHU 9.6). Thus, as it is utterly important and forms a uniquely determined

25 I will refer to this faculty as, simply, “habit” or “the faculty of habit.”
class (it is both immediate and on the basis of experience), the mental traits or structures that give rise to it deserve their own name. That name is “custom” or “habit.” (I have elected to use “habit.”)

Second, this explains the connection that this faculty has to the two senses of “reason.” The faculty of habit makes inferences, so it is, on the wider sense of “reason,” a sub-faculty of reason. The faculty of habit contrasts with the narrow sense of “reason,” though: habit is just what is excluded from the wider sense to generate the narrow sense. (This setup ends up mimicking the two senses of “the imagination” to be discussed in the next chapter.) Habit is a very important faculty to Hume, and the interpretation that I have explicated (1) shows just where it is located in Hume’s faculty schema and (2) explains just what it is supposed to be.

V. Explanation of Other Dual-Use Views

One further advantage of the view that I give is that it can explain both how the other dual-use views surveyed in chapter four each get something importantly right about Hume’s use of the term but also how they end up missing the mark. Norton’s view was very close to the view that I give indeed, and only the distinction between argument and inference (and the multi-step nature of the former) kept his view from being successful.

Winters, whose argument foreshadows the distinction between reasoning-including-sensation and reasoning-excluding-sensation that I made earlier, gave two senses of “reason”: one of these included causal inference and one of these excluded it. This reading is close to the one that I gave but not correct: first we must countenance the difference between mediated probable reasoning and immediate probable reasoning. Winters’ argument properly pulls out that immediate probable reasoning is not included in the narrower sense of “reason,” but incorrectly claims that this is all that is excluded, and does not explain why it is excluded. Thus my view is
superior to the Winters view, but we can now see what is correct in the Winters view: it properly excludes reflexive probable reasoning and sees that Hume’s discussion of the difference between sensation and reasoning is key to understanding the different senses of “reason” and “reasoning” in Hume.

Similarly, Beauchamp & Rosenberg’s dual-use view has as its two senses one that takes “reason” as a priori reason concerned with the relations of ideas and another that is “looser.” Beauchamp & Rosenberg correctly see that the notion of the a priori plays a role in the narrower sense of reasoning, though their restriction of the narrower sense of “reason” to relations of ideas is not ultimately successful. (It is just this restriction that we can see Garrett’s objection that the view cannot adequately account for the structure of the negative argument as arguing against.) But we can also see how close Beauchamp & Rosenberg were close to the correct view: it is not a priori reasoning per se that Hume excludes, but rather reasoning by way of a medium, which includes a priori reasoning. Thus, Beauchamp & Rosenberg give a view that is, ultimately, similar to the one I have advanced.

The final dual-use theory that I examined was Owen’s. Owen’s view had it that “reason” always referred to “the inferential faculty,” but that Hume changed what the operative account was of that faculty. We can see that my definition respects Hume’s use of “reason” to mean the inferential faculty; the difference between the two senses is just what proportion of inferences that faculty encompasses. Constrained narrowly, i.e., considering inference as only argumentative inference, that faculty cannot account for our beliefs about unobserved matters of fact. About this, Owen and I agree, and this is the key to understanding the structure of the negative argument.
Thus, all the different dual-use views that I surveyed were partially correct: each of them picks out a different feature that distinguishes the two uses of reason from each other; Winters picks up on sensation vs. non-sensation, Beauchamp & Rosenberg pick out the importance of a role for the *a priori*, and Owen correctly adduces that it is inference and the role of inference in Hume’s account of “reason” and “reasoning” that accounts for the difference in the two uses. This shows that, in addition to the dual-use interpretation being the correct one, *my* dual use interpretation is the correct one: it can account for all the different ways in which interpreters have seen Hume’s use to be multifarious while simultaneously showing why each of these interpretations is, on its own, insufficient.

**VI. Norton’s Eight Uses of “Reason”**

To close this chapter, I would like to show how my interpretation can also account for the different uses of “reason” Norton discovered in the text. These are the eight uses: (1) Hume uses “reason” as synonymous with “the understanding.” (2) Reason as the discovery of truth and falsehood. (3) Reason sometimes refers to the faculty responsible for demonstrative reasoning or abstract reasoning. (4) Reason sometimes refers to the faculty responsible for inferring matters of fact, i.e., probable reasoning. (5) and (6) are reason as non-inferential present awareness and as not non-inferential present awareness, respectively. (7) Reason as “nothing but a wonderful and unintelligible instinct in our souls.” (8) Reason as a calm reflective passion.

I will not consider sense (8), because that would require too much more explication of the passions than I am capable of here. The key is Norton’s senses (5) and (6), which correspond to the senses of reasoning-as-includes-sensation and reasoning-as-distinct-from-sensation I gave above. Sense (3), insofar as it refers to non-intuitive inference, will fall under sense (6), which is reasoning-as-distinct-from-sensation as I explicated earlier. Sense (4) insofar as it refers to
mediated probable reason will fall under (6) as well, and insofar as it refers to reflexive probable reason, it will fall under sense (5). There are no uses of “reason” to refer to probable reason that demand both of these as referent (so Hume’s view is consistent). Sense (7) of “reason” picks out reasoning-as-instinct, as Hume discusses in the sections on animal reasoning, and will fall under sense (5), as I showed above.

Given my project, I do not need to account for sense (2), as it only arises outside of Treatise Book I and EHU, but I will give a short gloss. Sense (2) is reason-as-the-discovery-of-truth-or-falsehood. Hume’s use here seems to refer to the achievement rather than the activity, as Norton (1982, 97) points out. Insomuch as this, I think Hume’s use is mistaken here but can be easily corrected: instead of saying that “Reason is the discovery of truth and falsehood,” (T 3.1.1.9) Hume should say that reason is the faculty, that, through its activity, is capable of discovering truth or falsehood. I do not think that making this change alters anything about the surrounding passages, so it ought be accepted. On this interpretation, it is ambiguous between senses (5) and (6) and resolving that ambiguity would require an account of Hume’s use of “truth,” a task too great for this late in this chapter.

This leaves only sense (1) as needed to be assigned: reason as interchangeable with “the understanding.” In order to definitively determine what is meant by this usage, I will need to give an account of what the faculty of the understanding is for Hume, that is, I will need to discover its characteristic activity. This is the project to which I devote the next chapter.
Chapter 6: The Understanding and the Imagination

Reasoning and inferring account for only some of our mental lives.¹ In this chapter I will explicate the remainder of Hume’s cognitive faculty psychology by giving an account of Hume’s use of the terms “the imagination” and “the understanding,” attempting to show what activity is characteristic of each. I will argue that these faculties—inferring, reason, understanding, habit imagination (and the related faculty of fancy)—together with memory, are a complete list of the faculties in Hume’s cognitive (i.e., non-passionate) faculty psychology.

In this chapter, I argue that Hume’s use of the faculty term “the understanding” is underdetermined by the text. I present three approaches that specify what “the understanding” refers to and show that the best approach takes “the understanding” to refer to all of the cognitive faculties. I also assess whether what Hume says requires interpreting him as holding a faculty psychology—it does—and what the faculties in that psychology consist in.

I. The Problem with The Understanding

The relationship that “reason” (in either of its two uses) has to the understanding is unclear in Hume. The first of the eight uses of “reason” to which Norton pointed was “reason” as interchangeable with “the understanding.”² What makes these passages that contain this usage both interesting and problematic is that, elsewhere, the understanding is equated with or intimately related to the imagination; for instance, Hume claims that the understanding is capable

¹ Chapter five delineated two ways in which the term “reason” refers to a faculty, for Hume. Because two distinct mental activities are called “reasonings,” there are two uses of the corresponding faculty term “reason.” For ease of reference and to avoid misunderstanding, I shall call the faculty that produces all inferences the faculty of inference and refer to the faculty that produces only arguments as the faculty of reason.

² In addition to the passages cited by Norton—Norton (1982, 96n) cites T 2.3.3.1-4, T 3.1.1.2-8, T 3.1.1.18 and T 3.1.1.25-26—Hume also uses “reason” in this (or a closely related way) in T 2.3.3.6, as well as in Bk. I, at, e.g., T 1.3.6.12.
of making us imagine things (T 1.3.10.12). If faculties are related to activities, it seems that imagining ought to be the chief activity (or one of the chief activities) of the imagination, not the understanding. In *Treatise* 1.4, Hume relates the understanding and the imagination, saying that the understanding is founded on the imagination:

> The memory, senses, and understanding are, therefore, all of them founded on the imagination, or the vivacity of our ideas (T 1.4.7.3).

and that the understanding is a subset of the imagination:

> If the consideration of these instances makes us take a resolution to reject all the trivial suggestions of the fancy, and adhere to the understanding, that is, to the general and more establish’d properties of the imagination; even this resolution, if steadily executed, wou’d be dangerous, and attended with the most fatal consequences (T 1.4.7.7, emphasis added).

And goes on in *Treatise* Bk. II to claim that they are the same:

> The imagination or understanding, call it which you please, fluctuates betwixt the opposite views (T 2.3.9.10).

This “or”-construction at T 1.3.8.13 seems to suggest the same reading:

> For we here find, that the understanding or imagination can draw inferences from past experience, without reflecting on it; much more without forming any principle concerning it, or reasoning upon that principle. (T 1.3.8.13)

But the understanding is also *contrasted* with the imagination, and particularly insofar as the understanding is clearly responsible for (at least some) reasonings, and the imagination is not:

> Had ideas no more union in the fancy [i.e., the imagination] than objects seem to have to the understanding, we cou’d never draw any inference from causes to effects (T 1.3.6.12).
This passage suggests that the imagination is different from the understanding. As does this contrast, where we see understanding and imagination broadly tracking the distinction between reasoning and merely perceiving:

The next question is, Whether experience produces the idea by means of the understanding or imagination; whether we are determin’d by reason to make the transition, or by a certain association and relation of perceptions (T 1.3.6.4).

Similarly, the contrast between the inconstancy of the imagination and the regularity of the understanding suggests that they are at least distinct:

When an object appears, that resembles any cause in very considerable circumstances, the imagination naturally carries us to a lively conception of the usual effect … But when we take a review of this act of the mind, and compare it with the more general and authentic operations of the understanding, we find it to be of an irregular nature, and destructive of all the most establish’d principles of reasonings; which is the cause of our rejecting it (T 1.3.13.12).

It is not quite clear how to parse this claim: is Hume comparing what the imagination does to the other acts of the understanding, those that are “more general and authentic”? Following this reading exclusively might lead to the conclusion that the imagination is part of the understanding—though this conflicts with the passage from T 1.4.7.7 given above. There is another reading available, though: Hume may be comparing the acts of the imagination to the acts of the understanding, which are in fact more general and authentic. The ambiguity in this passage frames the issue neatly: the relationship of the imagination to the understanding needs to be clarified. Determining that relationship provides a start toward determining the relationship of the faculty of reason to the faculty of understanding.

3 As at, e.g., T 1.3.2.2 where Hume contrasts reasoning with acts of mere perception with reasoning properly so called. See my chapter five for a detailed account.
II. The Imagination

Hume’s use of “the understanding” is thus tied up in the use of “the imagination.” In this section, I will set aside the understanding completely to examine Hume’s use of “the imagination” and lay out Hume’s entire faculty psychology (save, of course, for the understanding).

Unlike many of the other terms that I have dealt with, Hume gives his reader the two different senses in which he uses the term “the imagination.” Hume says that he uses “the imagination” sometimes to refer to a faculty that is “opposed to memory,” but also in another sense in which “the imagination” is “opposed to reason.” This latter sense, Hume claims, is just the former sense, but “excluding only our demonstrative and probable reasonings” (T 1.3.9.19n22).

So there are two senses of “the imagination,” one of which is narrower than the other. Each is defined by their contrasts: one is a contrast for the memory, one is a contrast for the faculty of reason. The first of these refers to the whole of the imagination and the second refers to only a part. Hume claims that what is excluded from the part is our demonstrative and probable reasonings. It is by excluding these reasonings that Hume draws the contrast between the faculty of reason and the imagination. This has three consequences that I will argue for and explicate below: (1) reason must be a part of the imagination, (2) there is some identifiable activity that is characteristic both of this remainder and of the whole of the imagination and (3) there must be some identifiable part of the imagination left over once reason is excluded, with some characteristic activity. By pursuing these three consequences, I will develop an account of

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4 This reinforces the tight connection to be found between the activity (or the process, or even the resultant mental items) and the faculty itself, as the reasonings are excluded, but the faculty terms are contrastive.
the imagination in Hume. In what follows, I will refer to the sense of imagination that is contrasted with the memory as the *wide* sense of imagination, and the sense that excludes our reasonings as the *narrow* sense of imagination.

**A. Reason as part of the Imagination**

First, Hume’s claim that one sense of “the imagination” excludes reasonings while being otherwise identical to the other sense shows that the faculty that produces reasonings is a sub-faculty of the imagination. If this were not the case, then these reasonings could not be excluded from the narrower sense of the imagination. Thus, because whatever is called “reason” is so called because it produces reasonings, “reason” must refer to a sub-faculty of imagination; that is, reason must be a part of the imagination in order to be excluded from one sense of it.  

**B. The Activity of the Imagination**

Second, because Hume’s faculty psychology is built by reference to particular observable forms of mental activity, there must be some observable form of mental activity that correlates with both reason and whatever is left over once reason is excluded. I think that the key to determining what kind of mental activity is correlated with both of these uses of “the imagination” is observing what is being excluded from the wider sense to form the narrower

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5 The way Hume phrases 1.3.9.19n22 seems to indicate that the sense in which “imagination” is opposed to “reason” is “reason” in its wider sense because there are probable reasonings that fall under both the narrow and wider senses. Though this will matter for the exact details of my later presentation—i.e., for determining the width of the fancy—interpreting “reason” in either the narrower or wider senses will generate the distinctions about the parts of the imagination that I am about to make. This is a case in which we see a feature of the uses of “reason” that I pointed to in chapter five: the text here is ambiguous between the two senses of “reason” but could be made to read consistently with either sense.

6 As we have set aside the understanding for now, placing reason here has no immediate bearing on where we will place the understanding, though this point will matter when we return to the understanding in section III.
sense: what is being excluded is the activity of transitioning between mental items on the basis of the philosophical relations.

Thus, because (1) inference is included in the imagination and is transitioning between mental items in a particular way, (2) the activity of the whole of the imagination must be suitably homogeneous in order for Hume’s faculty positing-methodology to produce a faculty of imagination, and (3) the imagination in this wide sense is contrasted with memory, it is the case that (4) the imagination is the mental faculty that accounts for all cognitive (i.e., non-passionate) transitions between ideas that are not products of memory.

This is to say: the imagination accounts for all the ways of transitioning between ideas that are not the way that the memory transitions between ideas; i.e., the imagination generates all cognitive transitions that do not directly reprise past experience.

One might think that Hume has claimed in Treatise 1.3.5 that the memory and imagination can only be distinguished by the force and vivacity of the ideas they deploy, which would contradict the claim I just made about. This is not the case though: Hume directly says that “it be a peculiar property of the memory to preserve the original order and position of its ideas, while the imagination transposes and changes them, as it pleases” (T 1.3.5.3). What Hume goes on to say that suggests the misreading I am now considering is that “this difference is not sufficient to distinguish them in their operation, or make us know the one from the other” (T 1.3.5.3, emphasis added). That is, that we cannot know, on the basis of the order and position of the presentation of the ideas themselves, whether that presentation arises from imagination or memory; instead we must rely on the superior force of memorial presentations to distinguish them from imagination. Hume is considering how we can know a presentation of succession of
ideas is the product of one faculty or the other, not the distinction between the two faculties themselves.

So, any time the mind transitions between ideas while not just re-presenting the order and connection of ideas just as they were given in experience, it is the imagination that is the faculty that makes that transition. Some of these transitions that the imagination makes are inferences, some are reasonings (in the narrower senses); some, as we will now see, are neither. The whole of the imagination collects all the non-memory transitions under it.

C. Activity and “The Fancy”

Third, because there is a portion of the whole of the imagination that is left over when reason is excluded (and is itself sometimes the referent of “the imagination”), there must be some characteristic activity of this remaining, narrower sub-faculty. This activity must be a form of mental transitioning because it is a part of the imagination, and can be picked out by the description ‘all non-memory mental transitioning not in accordance with the philosophical relations.’ But this negative definition is not very satisfying: it does not give a description of what transitions do belong to this narrower sense of the imagination.

The transitions in question could not be on the basis of any relation; that is, these transitions are not according to any of the relations available to the human mind. They are, neither, the connections found in experience, as several of those fall into kinds of relation and the rest would be the provenance of memory. Nor are they the product of the associations: each of the three associations matches up with a relation, so if the connection is unavailable via the relations, it is unavailable via the associations.

The transitions, it would seem, are the kinds of arbitrary linkages one might follow in a reverie or day dream. (Or even, perhaps, a proper dream.) Ideas follow each other for no reason,
based on no possible intelligible connection. These are the only transitions that are left when inference and memory are excluded from the class of mental transitions. This narrower sense of “the imagination” refers just to that faculty that makes these arbitrary connections and transitions. Though Hume uses “the fancy” to just mean “the imagination” in either sense, I will use “the fancy” in all cases to mean the narrower sense of “the imagination” that results from the exclusion of reason from the imagination, to accord with the arbitrary character of the transitions it effects.

**D. The Faculties Graphed**

Thus we see that Hume’s faculty psychology is much more complicated than might have been previously thought. As we saw in chapter five, Hume uses “reason” to refer to two faculties, one of which is a part of the other: one use of “reason” refers to the faculty that produces all inferences, one use of “reason” refers only to the faculty that produces mediated inferences. Hume also uses “the imagination” to refer to two distinct faculties, as he tells us. I have parsed out what those two faculties must be, on the basis of his definitions of them as “opposed to reason” and “opposed to memory.”

Hume’s account of the cognitive faculties, as thus far defined, is this: the first, basic division is between memory and the imagination (figure 1). Memory preserves as ideas the order and connection of impressions in experience. The imagination does not: it is free to move between mental items based on connections between those mental items other than direct, contiguous sequence in experience.\(^8\)

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\(^7\) These are the ‘irregular’ transitions that do not follow any of the general principles Hume has laid out: T 1.3.6.13.

\(^8\) Hume’s characterization of the memory is meant to be an empirical, descriptive one: there are no acts of misremembering that arise from the memory itself. The memory is defined as that function of the mind,
Within the imagination, there are also parts, though. As we just saw, the fancy and inference form a distinction within the imagination: probable and demonstrative reasonings are excluded from part of the imagination and what is left over is the fancy, the faculty that produces arbitrary transitions. The faculty responsible for those excluded demonstrative and probable reasonings is the faculty of inference, which produces all inferences (figure 2).

Then, within the faculty of inference, several distinctions need to be made. The faculty of inference is responsible for both demonstrative and probable reasonings (figure 3).\(^9\)

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whereby it re-presents past ideas ordered and connected as they were in experience. If the mind is not doing this, the memory is not what is doing the presenting.

\(^9\) Remember, these are types of mental operation, “demonstrative” here captures both demonstrative and intuitive reasoning (as they make use of the same mental mechanisms) and “probable” here captures both immediate and mediated probable reasoning (for the same reason). This is why “proofs” do not appear in this diagram either: “proofs” are all probable arguments, so they are captured under “probable” reasoning, and the later (narrow) use of “reason” in figures 4 and 5.
The faculty of reason is also inside the faculty of inference. Reason captures the subset of inferences that are mediate in character, regardless of whether they are demonstrative or probable (figure 4). The final piece of the puzzle is the faculty of habit. The faculty of habit immediately traces connections it has been habituated to in experience; this contrasts it with the faculty of reason. There are some inferences captured by neither faculty, for instance, intuitive inferences. Thus there are three parts of the faculty of inference: there is habit, responsible for immediate probable reasonings; reason, responsible for mediated reasonings, both demonstrative and probable; and an unnamed portion of the faculty of inference, responsible solely for intuitive inference (figure 5). “Reason” and “habit,” as faculty terms, operate at the same level; they are both subparts of inference, which is itself a subpart of the imagination.
Besides the understanding, which I set aside at the beginning of this section, this (figure 5) gives a complete picture of all the cognitive faculties that Hume offers. I do not mean to say that Hume could not have identified more faculties: it is consistent with his methodology that for any suitably distinct cognitive power he could have named a faculty; for instance, he could have named a faculty for intuition, though he did not. I do, however, mean to claim that all of the faculties that Hume talks about—and in particular, talks about qua faculty—and that deal exclusively with impressions and ideas are represented here (again, save the understanding) and so this constitutes a complete taxonomy of the cognitive faculties. This list and graph captures all of the cognitive faculties Hume is concerned with: it captures the two senses of “the imagination” (as imagination and fancy) as well as their contrasts, memory and inference. It captures the two senses of “reason,” as reason and as inference. It shows what faculty is responsible for reflexive probable reasoning, habit, and where it is located with respect to the others. There is no significant cognitive operation that Hume discusses in particular that is not covered by this taxonomy. Thus, I submit, it will be complete as an account of Hume’s faculty.
psychology as soon as we determine where to place the understanding. That account of the understanding will also show why this structure is a complete account.

**III. The Understanding**

The understanding produces at least some transitions of mind, including some sorts of reasonings, but it is not clear that the understanding is limited to inference or reasoning. Given the faculty psychology as thus far explicated, there are several plausible places to locate the understanding. The understanding may be (1) the faculty of inference, (2) the imagination, or (3) the entire complex thus-far defined, including both the imagination (and all its sub-faculties) as well as memory. Each of these approaches has both interpretive costs and benefits and there is no knock-down argument in favor of any of them. I will do my best to show that approach (3) is the most plausible, though my argument will not be strong enough to conclusively eliminate the other approaches. I am not concerned to do the latter, but rather to defend my interpretation that the understanding is extremely broad in scope.

**A. Approach (1): The Understanding as Inference**

First I will address approach (1), which takes it that the imagination is the same as the faculty of inference. This is the approach that Garrett and Owen each take. Garrett (1997, 28-9) and Owen (1999, 66) produce arguments that are supposed to show that the understanding must be a part of the imagination. These arguments are similar to the one I used above to show that the faculty of inference must be a part of the imagination: because the understanding effects different transitions between ideas, and the imagination collects under it all the diverse ways that the mind transitions between its items, the understanding must be part of the imagination. Garrett claims, further, that the understanding must, then, contain within it those transitions associated with
reason.\textsuperscript{10} Owen similarly identifies the understanding either with reason or with some related part of the imagination. Owen claims that the argument above shows that the understanding is a sub-category (i.e., a subset of the transitions of) the imagination.\textsuperscript{11}

However, the argument I adduced earlier regarded the faculty of \textit{inference} being part of the imagination, not the \textit{understanding} being a part of the imagination. This argument was clearly sound: the faculty of inference was defined as that faculty that produces all and only inferences. As such, if the imagination produces inferences, then the faculty of inference will be a part of it, and if the imagination produces more than inferences, then the faculty of inference will be a proper part. But the understanding has not been defined in just this way; from the textual evidence that has been adduced, all we know for certain is that \textit{some} transitions are effected by the understanding and it is clear that those transitions include at least \textit{some} of the transitions of probable and demonstrative reasoning.

Thus, unless the understanding is defined as \textit{only} those transitions, which it has yet to be, Garrett’s argument will not succeed. Owen’s argument fares similarly. This is to say that just knowing that the imagination is responsible for all transitions and that the understanding effects those transitions classed under reason (or inference depending on which way we disambiguate Hume, Garrett, and Owen in light of the distinctions I have made), underdetermines whether the imagination is part of the understanding or the understanding a part of the imagination. The interpretations of Garrett and Owen both leave opaque the connection between the faculty of

\textsuperscript{10} This despite the fact that Garrett (and Owen, too) subscribes to the view that “reason” is “\textit{the} inferential faculty.” (Emphasis, of course, mine.) If “reason” is \textit{the} inferential faculty, then why is it headed under another faculty that makes inferences? I think that this infelicity is further evidence that “reason,” “inference” and related terms have been thusfar insufficiently distinguished by these writers.

\textsuperscript{11} The issue of where to locate the understanding is less pressing in Owen’s case: because Owen gives a deflationary interpretation of the faculties it is not clear that Hume needs a clear or convincing story about how exactly they are related. Owen classes the understanding as one subset of the transitions collected in the imagination.
reason and the faculty of the understanding. Not to mention that they fail to adequately capture the nature of the faculty of inference, which I gave reasons to take to be distinct from the faculty of reason; Garrett and Owen give no such reasons.

The equivalence of the understanding to a part of the imagination (or to inference, specifically) cannot be substantiated merely on the basis of the argument given. This does not prove the view incorrect, merely unsupported in light of the distinctions I made earlier.

This approach does offer some interpretive advantages. One such advantage is that it gives us a name in Hume’s texts for the faculty of inference—as long as we disambiguate the Garrett and Owen readings to take the understanding to be equivalent to the faculty of inference as I have defined it. This approach would render the faculty of inference equivalent to the faculty of the understanding. This is a significant advantage because it would explain why some uses of “the understanding” seem equivalent to “reason” and some do not: the understanding is equivalent to the wider sense of “reason” (the sense I have defined as the faculty of inference) but not the narrower sense.

This interpretation does have some significant drawbacks as well; I do not think that it can account for some of the ways in which Hume uses the term “the understanding,” e.g., Hume’s claim that the understanding and imagination are the same (T 2.3.9.10), though this might be able to be accounted for with the two senses of the imagination. More importantly, it raises new interpretive questions: why, in defining the senses of the imagination, did Hume define the second sense of imagination (T 1.3.9.19n22) as opposed to “reason” and not “the understanding” if the understanding picks out just the faculty that produces the two things he goes on to name, our demonstrative and probable reasonings? The reading that I gave above can make sense of this by using two senses of “reason.” But it would seem that this approach
requires that there are two senses of “reason,” one of which is used in the same way as the understanding and one of which is not: this alone should be enough for Garrett—who endorses both this view and a univocal-use theory of Hume’s use of the term “reason”—to reject it. A second cost to this approach is that it does not fully explain why Hume seems so fascinated with the understanding. Why does the understanding show up in the title to Bk. I of the Treatise and the title to EHU if it is a mere part of the imagination?

The view that results from this approach is not fantastical, and each of these interpretive costs could conceivably be plausibly addressed, but the approach must be re-articulated with a new supporting argument and to account for these implausibilities.

B. Approach (2): The Understanding as the Imagination

Approach (2) claims that the understanding is equivalent to the whole of the imagination, not just the faculty of inference. This reading is supported by the previously-adduced quotations in which Hume seems to use the two terms as synonyms (T 1.4.7.3, T 1.4.7.7, T 1.3.8.13, and especially T 2.3.9.10). This approach is also strongly consistent with Hume’s claims about the nature of reasoning: reason can be located in the imagination, as shown earlier, and Hume claims that certain sorts of reasoning arise from the understanding, leading to a similar conclusion. Thus, if the understanding and the imagination are identical, then it would be no surprise that they both contain reason within them.12

Further, whereas approach (1) could not explain Hume’s focus on the understanding, if it is a mere part or subset of the imagination, approach (2) grants a satisfyingly Humean answer to the emphasis Hume places on both the understanding and the imagination by allowing that, after

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12 Unless reason were somehow a separate faculty altogether, but Hume’s philosophy is opposed to this potentially rationalistic conception. See my discussion of how the imagination relates to reason above for some evidence against this separation of reason from the imagination.
Hume has completed his investigation, the imagination and the understanding turn out to be identical. This answer is satisfyingly Humean because it shows Hume attempting to explain more of our cognitive lives with fewer parts, and, further, it explains why there are two terms for the same underlying faculty: because, heretofore, no thinker had understood that they were the same.

This approach, however, does not satisfactorily explain Hume’s use of the term: where exactly does Hume discover that the imagination and understanding are the same? And if it is so significant—it does radically reposition reasoning and the understanding in our cognitive lives—why does Hume not state it more explicitly, or give explicit argumentation for it? And why, if the understanding and the imagination do turn out to be equivalent, does Hume continue using both terms even after this becomes apparent? Further, the approach cannot account for the quotations where Hume contrasts the imagination with the understanding quite directly (T 1.3.6.12, T 1.3.6.4, and T 1.3.12.13); if they are identical faculties, these kinds of contrasts should be inapt, and nothing in these contrasts seems hypothetical or to rest on prior accounts of the understanding (i.e., nothing in these passages suggests that Hume is using “the understanding” inconsistently with his own views). These are significant costs associated with taking up approach (2).

C. Approach (3): The Understanding as All Cognitive Faculties

Approach (3) grants the most benefits with the fewest costs. It claims that instead of, as approach (1) would have it the imagination containing the understanding, the containment relation goes the other way: the understanding, on this approach, contains the imagination, as well as the faculty of memory; the understanding is the complex of all the cognitive faculties of mind, taken together. This approach avoids the disadvantages of approach (2) by positing that the
understanding is not identical with any faculty thus far defined, so it does not face the disadvantages of having to explain the difference between the use of this term and any other.

Approach (1) could not explain Hume’s fascination with what is, on that view, a part of a part of the mind. This approach avoids that problem because it explains why *Treatise* Bk. I (“Of the understanding”) and *An Enquiry concerning Human Understanding* are titled in the way they are: they are accounts of all of the cognitive faculties of mind. *Treatise* Bk. I and the first Enquiry are Hume’s only works that deal primarily with the human cognitive faculties, and they deal with this exclusively; it thus seems relevant that Hume chooses the single term “the understanding” as the only content term in the titles of the works that contain his systematic epistemological and cognitive-psychological investigations. This makes the view that “the understanding” encompasses all of the cognitive faculties attractive: Hume does not title the works “Of the Understanding and the Imagination,” or “Of Reason and the Understanding.” The understanding stands alone in these titles, suggesting that Hume takes it to be very broad indeed.

Also, I have used the passionate as the contrast for the cognitive for Hume. If the understanding is the sum total of all the cognitive faculties, it explains the three book structure of the *Treatise*: the understanding (i.e., cognition) is treated in Book I, the passions (i.e., the non-cognitive) in Book II, and Book III shows how the two interplay to produce morals.

Approach (3) also explains why I was able to adduce so much conflicting textual evidence at the beginning of this chapter about the meaning of “the understanding.” The meaning of the term is so hard to pin down in Hume because there is not a distinct faculty of understanding apart from the other cognitive faculties. When Hume refers to “the understanding” alone, he is referring to any of the activities of mind. When he refers to some faculty along with the understanding, he refers to the faculty as a part of the understanding.
This approach makes sense of some of these previously puzzling passages: what’s salient about Hume’s claim, for instance, that “we here find, that the understanding or imagination can draw inferences from past experience, without reflecting on it” (T 1.3.8.13), is that the understanding functions in this way, and it does so because the imagination functions in this way. As the imagination is part of the understanding, because the imagination generates these habitual inferences, so does the understanding. Similarly, “The imagination or understanding, call it which you please, fluctuates betwixt the opposite views” (T 2.3.9.10) can be made sense of because the imagination is the part of the understanding that does all the non-memory transitioning. So, as Hume is talking about non-memory transitioning here, it makes no difference whether he is talking about the understanding or the imagination, because the imagination encompasses all that’s left over when memory is excluded.

Hume’s investigation into “the understanding” in these books includes investigations of memory, fancy, reason and habit; it is an investigation of the human cognitive faculties, generally, and when one is investigating these faculties, one is investigating the human understanding. The class of activity that the understanding is posited in response to is *all* transitioning, memorial and non-memorial alike, thus, sometimes what is mentioned as resulting from “the understanding” is reasoning, sometimes it is mere inference, and sometimes it is the other kinds of transitioning associated with the imagination or the memory. The full faculty psychology, as generated by taking approach (3), replaces the account given above (figure 5) with one that has that entire complex encircled in and constituting the understanding (figure 6).
Another way in which the approach that generates this account, approach (3), is comparable or superior to approach (1) is this: one of the chief passages Garrett and Owen use to support their view that Hume’s use of “the understanding” denotes a part of the imagination is the long footnote to Treatise 1.3.7.5, in which Hume claims that each of the traditionally-defined three acts of the understanding (conception, judgment and reasoning) are all, at root, acts of coming to conceive. This passage, however, suggests that the understanding is much wider than just a part of the imagination. Hume claims that

“What we may in general affirm concerning these three acts of the understanding [i.e., conception, judgment, and reasoning] is, that taking them in a proper light, they all resolve themselves into the first, and are nothing but particular ways of conceiving our objects” (T 1.3.7.5n20).

This passage is the basis for the argument adduced in favor of approach (1), above, which claimed that the imagination is all the ways of coming to conceive, the understanding is shown here to be a set of ways of coming to conceive, thus the understanding is part of the imagination.
The footnote in question goes on, however, and Hume claims that all actions of the mind “exceed not a simple conception”:

“Whether we consider a single object, or several; whether we dwell on these objects, or run from them to others; and in whatever form or order we survey them, the act of the mind exceeds not a simple conception” (T 1.3.7.5n20, emphasis added).

The acts of the mind are all ways of coming to conceive: judgment, comparison, inference, and, most saliently here, memory, as should be made apparent by the italicized portion in the quote above: when we conceive ideas in the form and order they are given in past experience, this is an act of memory. But here Hume allows that to survey ideas in any form or order (which must include as given in past experience) this is conception. Thus, memory is a way of coming to conceive. Thus, according to the logic of the argument given above, memory must be a part of the imagination as well. But memory cannot be a part of the imagination: both senses of the imagination are distinct from memory. Thus we have a reductio ad absurdum of the argument above: it demands that memory be a part of the imagination, but memory cannot be a part of the imagination, so the argument cannot be correct. Thus, it cannot be used to prove that the understanding must be a part of the imagination, either.

One might think that I have moved too quickly, and it might be noted that the quotation goes on from where I have stopped. Hume says that there is a distinguishing feature “on this occasion” and one might take it that whatever he then points out (being “perswaded of the truth”) is what makes the understanding special:

“and the only remarkable difference which occurs on this occasion is, when we join belief to conception, and are perswaded of the truth of what we conceive” (T 1.3.7.5n20).

But this reading is also faulty: in this clause Hume is returning to the problem being addressed in the main text that gave rise to this digressive footnote in the first place: the problem of belief.
Hume wants to show that coming to believe is not anything special; it is merely a *manner* in which ideas are conceived, that is, as a “strong and steady conception, … and such as approaches in some measure to an immediate impression.” (T 1.3.7.5n20) This is to say, the quotation above should be read:

“and the only remarkable difference which occurs on this occasion [i.e., when we come to believe something] is, when we join belief to conception, and are persuaded of the truth of what we conceive.”

Thus, any support this passage could have offered approach (1) is further vitiated, and this passage instead is shown to support a view whereby the understanding *includes* the imagination: if the characteristic act of the mind that the understanding is posited to account for is conception, and memory, inference and judgment (as implicated in the list that Hume gives of actions of the mind) are ways of conceiving, then the understanding must contain these faculties.

But why think that *all* the ways of coming to conceive are acts of the understanding, rather than thinking just that all the acts of the understanding are ways of coming to conceive? I.e., why does this argument not beg the same questions I accused Garrett and Owen of begging earlier? Further, Hume seems to list the acts of the understanding at the beginning of the footnote—judgment, reasoning, and conception—and memory and imagination are nowhere to be found on this list.

The response to this second claim is that nothing Hume says commits him to these being the *only* acts of the understanding (only that “the schools” take it that they are), and that, further, once we have reached the end of the footnote, imagination and memory, like the acts of reasoning and judgment, have been explained in terms of conception as well, thus the acts of the imagination and memory can be explained in terms of an act we know that the understanding is capable of: conception.
But this returns us to the first problem: why think that all manners of conceiving belong to the understanding, not just some of them? My response to this worry is just that, given the methodology that Hume uses to arrive at faculties, conception is a very good candidate for, first, a mental activity that defines a faculty, and, second, the mental activity that defines the understanding in particular. That is, given that Hume posits faculties on the basis of a single, coherent activity and that conception is tied up intimately with the understanding, it would make sense that conception is the activity of the understanding. Within the understanding, then, there is conception according to past experience (memory), conception according to the ideas (imagination), which includes conception according to both their nature and relations (inference), and conception according to whimsy (fancy). This argument is not definitive, but it is compelling.  

So, while I grant that this response to the problem raised above is not definitive, I think it counts very strongly in favor of it. Even more problematic for Garrett and Owen, though, is not just that this approach is strongly supported by the text, but that Garrett and Owen’s chief evidence for their approach counts in favor of this approach and against their approach.

Further, though the text does not definitively settle the dispute between the Garrett and Owen approach, though it seems to strongly count in favor of my approach, there is another kind of argument that will strongly support my interpretation. This argument involves historical/intellectual context in which Hume was writing.

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13 I have avoided addressing the term “thought” in Hume, in part due to the fact that Hume does not consistently respect the operation/object distinction, and that his conception of “process,” as it relates thought requires some clarification. (It seems, usually, to mean something more like “procession” than “operation.”) Despite this, I will venture to say that “thought” appears to be Hume’s catch-all term in *EHU* for operations of the mind and Hume does seem to use the term “thought” in a way that captures the notion of conception. (“Conception,” helpfully, has the same operation/object troubles that “thought” does.) If this is so, it would support the claims I have made here about conception.
Charles Echelbarger (1997) argues that, given the scholastic themes Hume’s education in logic would have had, one of Hume’s goals in *Treatise* Bk. I is to replace the Aristotelian-derived view of the mind. The view Hume seeks to replace takes it that the human mind is purpose-built for deductive reasoning and thus has three distinct cognitive faculties: understanding (which was responsible for conception, apprehension, or perception of ideas), judgment (responsible for combining ideas), and reasoning (responsible for deriving new propositions/judgments from others). Echelbarger argues that in transitioning from medieval and scholastic conceptions of logic, which represented *all* human reasoning as resulting from these three faculties, to the more modern logics of Burgersdijk, Watt and the *Port-Royal Logic* of Nicole and Arnauld (as well as that of Hume’s university logic instructor, Drummund), these authors had left in place the scholastic tripartite division of understanding/judgment/reasoning to account for deductive logic, while simultaneously attempting to account for inductive reasoning using other methods. This, Echelbarger argues, is (and was, from Hume’s perspective) “an unexamined, apparently *ad hoc* metaphysical picture of the mind as having one part that is specialized for deductive reasoning and another that is specialized for inductive reasoning” (Echelbarger 1997, 145).

In response to this failing, Hume endeavored to create a view of the mind as unified and the way in which he did this was to fold all these operations into the faculty of the understanding. Doing so will unify the sorts of ideas available to the mind:

“Ideas qua objects distinct from propositional contexts, ideas qua propositions, and ideas qua arguments are to be thought of as being essentially the same sort of object” (146).

Echelbarger concludes:

“A theory of the understanding, for Hume, is not to be *identified* with a theory of how human beings think syllogistically. It must be broad enough and flexible enough to also provide the foundations of an account of how the ability for such thinking as well as a wide variety of other cognitive
abilities, including, of course, abilities for inductive and causal reasoning, are acquired by human beings” (148).

The only question that remains is how widely we construe the understanding. If the understanding is meant to take over only reasoning, then Garrett and Owen are right. But if the understanding, as Echelbarger’s analysis and my textual examination earlier suggested, is meant to do more—that is, if it really is the faculty of reasoning, judgment and conception—then it makes sense to understand it as the cognitive faculty; it is the faculty that generates and sustains ideas and results in belief. It is the faculty responsible for this, though it has many subfaculties that accomplish this in many different ways.

None of this is to say that this approach does not have its drawbacks as well: there do appear to be some cases where Hume construes “the understanding” more narrowly than this. This interpretation does still allow that, in doing so, Hume is at least talking about something that is part of the understanding.

In the end, Hume’s use of the faculty term “the understanding” is underdetermined by the text, but approach (3) is the best approach that takes Hume’s use to be consistent. This approach is comprehensive, renders a consistent account and is supported by several different avenues, including both textual and historical arguments. It may very well be that “the understanding” is a term where—particularly if we want to reject approach (3) or these approaches generally—we must accept that Hume’s use is inconsistent with respect to the term, but approach (3) gives an easy way of accounting for the one remaining use of the term “reason” that Norton left us with, “reason” as synonymous with “the understanding.” On this interpretation—as on Norton’s—this usage is explained just by the fact that reason is the part of the understanding that Hume is most interested in at certain points in the text. After all, the traditional conception of reason is one of the faculties that Hume is trying to wholly replace with the understanding, so it would make
sense that sometimes, in talking about the understanding or about reason that he would treat the
two as equivalent: reason is the most significant part of the understanding in those cases. This is
Hume falling prey, as Norton diagnosed, to a simple part-whole conflation.\textsuperscript{14}

At this point, we might ask two questions: is Hume’s view plausible? And why posit a
faculty psychology at all? The answer to each of these questions depends upon the other.

IV. Does Hume Endorse a Faculty Psychology?

That Hume endorses a faculty psychology may seem, at first, strange; the notion of
faculty at work in Scholastic authors can be supremely obscure. Locke, for instance, sees
faculties, as they had been previously viewed, as wholly explanatorily superfluous:

“…introducing into Discourses concerning the Mind, with the name of
Faculties, a Notion of their operating, has, I suppose, as little advanced
our Knowledge in that part of our selves, as the great use and mention of
the like invention of Faculties, in the operations of the Body, has helped
us in knowledge of Physick… For it being asked, what was it that digested
the Meat in our Stomachs? It was a ready, and very satisfactory Answer,
to say, That it was the digestive Faculty… What moved? The
Motive Faculty: And so in the Mind, the intellectual Faculty, or the
Understanding, understood… which is in short to say, That the ability to
digest digested; and the ability to move, moved; and the ability to
understand, understood.” (Essay, II.xxi.20)

Faculty psychologies are supposedly postulated in order to explain operations of the
human mind but yet seem to do very little explanatory work on their own, as when it is explained
that humans are capable of willing because they have the faculty of will. The explanation of
willing in terms of possessing a faculty of will is vacuous: the faculty of will adds no explanatory
power to our description of human choice. This lack of explanatory power leads faculties to have
an occult character: by accepting a faculty of will as the ultimate explanation of willing, there is
no investigation into the causes and mechanisms of willing, so we know very little about how

\textsuperscript{14} Though Norton’s diagnosis follows from very different reasons from my reasons.
these sorts of faculties do what they do, and we know even less about how to go about investigating that question. We are methodologically blocked, on a Scholastic view of faculties. So why should anyone endorse a faculty psychology at all? And why read someone like Hume, with his strong empiricist leanings, as endorsing one?

This latter question is easier to answer: we ought to read Hume as endorsing a faculty psychology because the text demands it. Seeing Hume as endorsing a faculty psychology makes sense of the character and contours of certain passages. For instance, in the passage I invoked, in which Hume attempts to give the correct account of the understanding,\(^\text{15}\) what seems to be at issue for Hume is the number and kind of cognitive faculties: where there had been posited three distinct faculties, there is really only one kind of activity, conception, and the operations of the mind can be understood as arising from whatever it is in the mind that does the conceiving.

Another passage in which Hume clearly endorses a faculty psychology comes when Hume distinguishes the two senses of “the imagination”:

> When I oppose the imagination to the memory, I mean the faculty, by which we form our fainter ideas. When I oppose it to reason, I mean the same faculty, excluding only our demonstrative and probable reasonings (T 1.3.9.19n22).

Here again the only responsible way to read Hume is as endorsing a faculty psychology, as this is another example of Hume seeking to get the number and kind of faculties correct: he delineates two distinct senses of “the imagination” in order to get us to see that there are two different faculties here, though they are both headed under the same term. Hume even explicitly refers to them as faculties twice here. This concern with making sure the reader sees that the two

\(^{15}\) “What we may in general affirm concerning these three acts of the understanding [i.e., conception, judgment, and reasoning] is, that taking them in a proper light, they all resolve themselves into the first, and are nothing but particular ways of conceiving our objects” (T 1.3.7.5n20).
are distinct, but are both faculties, suggests that Hume is deeply concerned with having the proper number of faculties, and having them assigned to the appropriate tasks.

Examples of Hume talking explicitly of faculties and his concern with their capabilities and limits can be multiplied nearly without end. Hume even expressly asserts that there are faculties of mind as something that cannot be doubted:

> It cannot be doubted, that the mind is endowed with several powers and faculties, that these powers are distinct from each other, that what is really distinct to the immediate perception may be distinguished by reflection.

(EHU 1.14)

**A. Argument Against Hume having a Faculty Psychology Defeated**

So what argument could there be that Hume does not endorse a faculty psychology? In *Treatise* 1.4 Hume does issue some rather harsh condemnation toward the manner in which some philosophers deploy faculties. Hume says that everything in nature is given some consolation, and

This consolation [that nature has given to the false philosophers] principally consists in their invention of the words *faculty* and *occult quality*: … By this means [i.e., by the belief that common but insignificant and unintelligible terms must have secret meanings that can be discovered by reflection.] these philosophers set themselves at ease, and arrive at last, by an illusion, at the same indifference, which the people attain by their stupidity, and true philosophers by their moderate scepticism. They need only say, that any phenomenon, which puzzles them, arises from a faculty or an occult quality, and there is an end of all dispute and enquiry upon the matter. (T 1.4.3.10)

Hume seems to claim here that the term “faculty” is one that is “wholly insignificant and unintelligible,” that faculties are an “illusion” that “people attain by their stupidity” and that these philosophers use to halt enquiry.

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16 See, for example, T intro.5, T 1.1.3.1, T 1.1.4.1, T 1.3.5.5, T 1.3.7.7, T 1.3.9.16, T 1.3.10.7, T 1.3.12.22, T 1.3.13.11, T 1.3.13.13, T 1.3.13.19, T 1.4.1.6-8, EHU 2.1, EHU 2.5, EHU 4.6, EHU 5.3, EHU 5.12 EHU 7.9, EHU 8.1, EHU 9.6, EHU 12.3-5—and these are only (some of) the cases where it is explicit that Hume is talking about (and endorsing) faculties.
But what Hume is objecting to here is not faculty talk *simpliciter*, but really the abuse of the term “faculty” (and related terms) by some philosophers: Hume thinks that, in addition to the way in which bad philosophy leads to faculty talk, there is a way in which true philosophers, by pursuing methods of enquiry that do not overstep the limits of human inferential powers, arrive at a faculty view. So, while this passage may at first seem rather damning for faculty talk, Hume also says that true philosophers attain this view through “their moderate scepticism.” Presumably, this “moderate scepticism” is what Hume has practiced himself: properly withholding judgment on that about which he is not entitled to judge; not coming to any decision on the nature of those “springs and principles, by which the human mind is actuated” (EHU 1.15) that cannot be investigated, but properly enquiring into those things that can be investigated. Thus Hume’s objection is *not* to positing a faculty psychology, but the *occult*, non-explanatory and enquiry-halting character of some practices of faculty-positing.

While Hume thinks that he can eventually explain the actions of the human mind by adverting to the causal relations found among its traits, mechanisms and characteristic activities and postulating mental faculties is a key part of this, Hume does not think *the existence of the faculties will by itself* explain the operations of the human mind. The postulation of the faculties is merely meant to group together whatever mental traits or features eventuate in certain kinds of mental activity, so that they can be investigated.

Positing faculties inductively, and taking them to be no more than placeholders for to-be-investigated features that bring about certain sorts of mental activities, is completely different in character than the pseudo-explanatory positing to which Hume is objecting: Hume *can* and *does*

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17 i.e., as Hume apparently thinks of, e.g., Hume thinks the ultimate origin of our sensations are not investigable (T 1.1.2.1, T 1.3.5.2).

18 Note EHU 1.14’s claim that the mind is endowed with “several powers and faculties,” and Locke’s long discussion of how faculties name powers (Essay, II.xxi.17-20), which Hume echoes and endorses.
tell us about what the principles are that make the understanding function the way it does, what
principles link together the functioning of the imagination and reason, and so on. Hume’s
faculties are not ways of stopping enquiry into the laws and regularities of the human mind, they
are his way of starting it. Hume begins with the evident activity of the mind.

When the mind produces some activity, it is apparent that there are structures in the mind
that produce that activity. Hume investigates the activity to probe the character of the structures,
i.e., the mental traits, mechanisms and regularities, that produce the activity and eventuate in the
observable evidence, both introspective and behavioral. Without positing these structures, there
would be nothing to investigate; Hume is doing a science of human nature, and what that
requires is an enquiry into what mental characteristics of human beings produce the observed
behavior that is evident; positing faculties—not occult, opaque faculties—but scientifically posited
and investigable faculties—is the only way to pursue this.

B. Owen and Faculty Psychology

Owen (1999) draws on much of the same insights and data that I have adduced here in
order to draw the opposite conclusion. Let me first enumerate the points on which we agree:

Owen and I agree that Hume does not take it that the simple existence of the faculties that
he is positing is supposed to be explanatory of the mental phenomena to be explained (Owen
1999, 71), and in so doing we agree with Norton.19

Owen and I agree that Hume wants to characterize faculties in terms of activities of mind,
and that these activities are what is of paramount importance to Hume’s discussion.20

19 “Rather, this manner of speaking [i.e., faculty talk] is intended only to draw attention to certain
generally similar human capabilities” (Norton 1982, 208)
20 “Like Locke, Hume is happy to speak of reason and the understanding as faculties, not with distinct
ideas but with characteristic activities. Hume wants to explain these activities, not in terms of the proper
Owen and I agree about the placement and nature of the faculty of reason. We also agree that Hume resists classifying reason as an interesting or special faculty.

Owen and I even agree about why Hume uses faculty language, and why it is problematic: Hume “needs such substantive concepts for ease of exposition, but they carry baggage that is against the spirit of his theory” (76).

Owen and I disagree that Hume’s use of faculty talk is disingenuous. Much of Owen’s argument for this claim comes from his interpretation of Hume’s distinction between ideas of memory and ideas of imagination. Owen thinks that this distinction, along with claiming reason as part of the imagination, leads to an incoherence within Hume’s text. Owen claims that, insofar as reason is part of the imagination, it should make use of (only) ideas of the imagination in its activities. But reason does not: reason also makes use of ideas of memory, and impressions (as in ‘the inference from the impression to the idea’). Owen does not expressly follow this argument to its conclusion, but the conclusion to be drawn is this: this is incoherent; either reason must, as a subfaculty of the imagination, use only ideas of the imagination (which it does not, on Hume’s view), or we must reject faculty psychology as an apt description of Hume’s system. Owen takes the second disjunct: “The problem comes from Hume’s use of faculty terms such as ‘imagination’, ‘memory’, and ‘the understanding’” (76). His alternate explanation is that “At the basic level for Hume, there are ideas and impressions that can be classified in various ways.

functioning of the faculty, but in terms of general principles of the imagination, principles that are empirically grounded and do not go beyond experience” (74).

21 “To the extent that reason or the understanding should be considered a faculty at all for Hume, it is a sub-class of the imagination” (75). Though we do disagree about the exact characterization of the understanding.

22 “We should read Hume’s classification of reason as a sub-category of the imagination as a determination to resist the tradition of treating reason as a special faculty, independent and superior to the other faculties” (76).
These perceptions of the mind interact in various ways” and that really “there are only impressions, ideas, and the ways they interact” (76).

This is to say that Owen concludes from what he takes would be required of reason were it to be a sub-faculty of the imagination that Hume does not (actually) endorse faculties at all. But nowhere does Hume expressly assert that reason must only make use of ideas of the imagination, nor does it seem that Hume’s view of faculties would require it: if faculties are inductive posits understood in terms of characteristic activities, there needn’t be any restrictions on what they take as inputs: reason could very well be a sub-faculty of the imagination and still take certain non-imagination ideas and impressions as inputs; what makes reason a sub-faculty of the imagination is not that it used ideas of the imagination (only or at all); there is no suggestion in Hume’s text that this is the case. Rather, what makes reason a sub-faculty of the imagination is that it connects and orders ideas in a way that is a subset of the way(s) that the imagination orders and connects ideas. The distinction between ideas of memory and ideas of the imagination is entirely irrelevant to the discussion of the nature of the faculty of reason.

And even if it were relevant, the distinction between ideas of memory and ideas of the imagination comes up much less frequently and less forcefully in Hume’s texts than Hume’s assertion that he endorses humans as having faculties. Indeed, while the faculty talk remains in the first Enquiry, the distinction between ideas of the imagination and ideas of memory is gone entirely. Thus, if we must see and remedy an inconsistency in Hume’s text, it should be in the treatment of ideas of imagination and memory, and not in Hume’s endorsement of a faculty psychology. It would be possible to treat the distinction between ideas of memory and ideas of imagination as difference, not in ontological status, but in terms of different ways of the same idea appearing: either as in memory or as in imagination; as they appear in each, they will be
transitioned to on a different basis and lead to different sorts of consequences. Their dispositions, so to speak, would be what makes them different. This way of treating the distinction between ideas of memory and imagination is consistent with the chief difference Hume expounds between the imagination and the memory, which is given in terms of the ordering, presentation and connection of ideas, not in their ontological character.

Further, the chief distinction Hume makes between ideas of memory and ideas of imagination is in their force and vivacity, claiming that the latter have none and appear as ‘pure ideas.’ But this claim contradicts Hume’s later assertions that ideas are efficacious on the imagination insofar as they have force or vivacity (as at T 1.3.7.7). This tension leads to two consequences.

First, it is further evidence that Owen’s general principle that the imagination can only deal with ideas of the imagination (“pure ideas”) is wrong, as ideas of the imagination have no force or vivacity, yet ideas must have force or vivacity to produce some of the kinds of effects on the imagination that Hume claims they do.

Second, it means that marking the distinction between the two sorts of ideas as an ontological difference itself introduces incoherences independent of considerations of the nature of faculties. So, in picking between a feature of the text that introduces multiple interpretational problems and inconsistencies and eventually drops out of Hume’s discussion, and one that Hume repeatedly and clearly endorses and that generates no other interpretational problems (once properly understood as being in terms of activities), the latter is the one that ought to be preserved, and the damage done by the former should be minimized in the interpretation of Hume (as can be done by transmuting difference in kind into difference of aspect, as I suggested earlier).
But all this argumentation rests on my assertion that faculties are inductive posits to be understood in terms of characteristic activities. Hasn’t this already given away the game? Do I not already have to agree with Owen that Hume doesn’t “really” endorse faculty psychology? The answer to this question depends on how one construes the term “faculty psychology.” There are two possible ways to construe the term: one that gives explanations for mental occurrences as instances of well-functioning faculties, and one that gives faculties as a way of categorizing mental phenomena and determining their relationships. Hume denies the former and endorses the latter. The harsh words that Hume has for the “antient” philosophers who arrive at their faculty psychology by error are enough to show the former is not the case, and Hume’s repeated insistence that “it cannot be doubted” that humans have mental faculties provide enough evidence to claim Hume as endorsing the latter. So I agree with Owen that Hume does not endorse a faculty psychology construed in this first way. But Owen ought to acknowledge that Hume does endorse a faculty psychology construed in this second way.

C. Empiricism and Psychology

These two construals of “faculty psychology” generally match two construals of the term “psychology,” one that is normative in character and explains how human mental lives ought to go, and one that is descriptive in character, which seeks to describe the laws and regularities of how human mental lives actually do go. There is nothing inherent in positing faculties when doing psychology that demands that the psychological project then be normative in some way. It may very well be the case that prior to Hume this was in fact the dominant sense in which faculty psychology was employed (particularly in the Aristotelian/Thomistic/Scholastic tradition), but there is another, descriptive way to view faculties—which became more popular after Hume,
incidentally—and that is strongly consistent with Hume’s claims, both about his methods and about the faculties.

Thus I have answered the first question set out in this section: why should we interpret Hume as endorsing a faculty psychology? My answer is that we should interpret Hume as endorsing a faculty psychology because Hume does in fact endorse a faculty psychology. In providing this answer, I made some clarifications about what exactly Hume’s faculty psychology entails and I think that these clarifications help provide the answer to the second question: why endorse a faculty psychology at all? The answer is that—as I suggested earlier—positing faculties allows us to engage in an investigation we otherwise would not be able to: it allows us to investigate the connections between certain kinds of mental activity on the basis of the features of that activity and the relations that the internal traits or mechanisms that must give rise to those activities must have to each other. Without some way to collect various mental particulars together and without a way to talk about the structures that give rise to that activity/those activities, our investigation of the character and capabilities of the human mind would be substantially limited. As I said before: this kind of faculty-positing does not impede investigation, rather it enables it.

This kind of investigation is within the empiricist boundaries Hume has erected. We are not allowed to go beyond our experience, but our experience informs us of the existence of and the character of certain sorts of mental activity. In so far as there is some activity, there must be something that produces that activity, which we can call the faculty, and in so far as the activities are different, there may well be an investigable explanation for this difference. This investigation must be careful, and it must avoid the sorts of badness that Hume finds in the ancients who posited faculties; but by adhering to the empirical method, the badness of faculties themselves
melts away and we are left only with a useful tool: the ability to move from discussing the activity itself to the feature or features (whatever they may be) that give rise to that activity. We move from giving descriptions to investigating mechanisms. And this transition from investigation stopping to investigation starting, it seems to me, is exactly the kind of move that enables progress in our understanding of the mind.

V. Conclusion

In this chapter, I argued that “the understanding” is best understood as referring, for Hume, to the entire complex of cognitive faculties, not, as some interpreters would have it, just the faculty of inference alone. By taking the understanding to encompass all the other cognitive faculties I have defined—memory and imagination, then, within imagination, fancy and inference, and within inference both reason and habit—we come to a complete account of Hume’s cognitive faculty psychology. Hume’s methodology for positing faculties and his ruthless reduction of all the other cognitive acts of mind to conception demands that the understanding be the master cognitive faculty, as it seems to be responsible for conception entirely.

Early on in this dissertation, I gave a gloss on my use of the term “cognitive” as dealing with impressions and ideas, and as being non-passionate in character. That the faculty of conception is the main cognitive faculty should be no surprise, then: cognition works with impressions and ideas, and conception, that is, having and holding these representations, is the key—at least on Hume’s view—to recapitulating, working with, moving between, transmuting, comparing and associating those representations. What Hume gives us with the other cognitive faculties is distinct and variously more specific ways of doing so.

Further, insofar as memory is conception according to past experience and the imagination is conception not according to past experience, it would seem that memory and
imagination are necessarily exhaustive of the understanding. Thus, any other faculties that are
cognitive in character will have a place in the taxonomy I just gave. So, even if I have missed a
reference to another cognitive faculty—which I do not believe I have—it will be locatable within
the taxonomy I have given.

As such, I submit that this is a full account of Hume’s cognitive faculty psychology, and
the preceding chapters are a full account of what inference, argument and reasoning are on
Hume’s view. What I shall take up in the final chapter is a bit different; I will, in chapter seven,
address the connections between Hume’s view and contemporary philosophical cognitive
psychology, showing how Hume’s naturalism and other views influence the positions held in
those debates today.
Chapter 7: Hume and Contemporary Cognitive Psychology

In the previous chapters, I laid out Hume’s view of inference. Hume thinks that the impressions that humans experience lead them to have correspondent ideas copied from those impressions, that the correlation of these items in past experience leads to the ideas being connected in various ways, and that, as a result of the connections between them, the mind is apt to move between those connected ideas.

The culmination of the work I did on the theory of inference was an explication of Hume’s faculty psychology. Hume does not have to reject faculties altogether in light of the shift from scholastic to mechanistic explanatory desiderata: he can retain faculty talk by treating faculties as initially unknown but to-be-explored sets of mechanisms that give rise to patterns of activity/behavior. (It is in this way that, though they are not themselves explanatory, Hume’s faculties enable explanations.) There are certain regular and predictable ways that the mind moves between its ideas, and these regular sorts of movement are the basis for the faculties of mind we posit. In the last chapter, I argued that conception is the key cognitive (i.e., non-passionate) capacity of mind insomuch as it enables all inferential movement. I argued that Hume uses “the understanding” to refer to the faculty responsible for conception. I also argued that Hume understands all the other cognitive faculties of mind (i.e., memory, reason, habit, &c.) as enabling different, more specific ways of conceiving; the other cognitive faculties are thus subfaculties of the understanding.

Hume’s methods and areas of enquiry make him an early cognitive scientist, determined to give a descriptive psychology of the mind. In this chapter, I will suggest that the particular features of Hume’s cognitive science are determined in some sense by his commitment to scientific naturalism. I will also argue that there are four, further features of his view and that
these can be found in contemporary investigations that share scientific naturalism as a starting point. I will show how each of these further theses arises from scientific naturalism, and suggest that, taken together, they form a consistent naturalistic package.

Showing how Hume’s view is remarkably similar to contemporary views—and how the features of these views stem directly from scientific naturalism itself—illustrates that contemporary philosophers of psychology and cognitive science are indebted to Hume, as they realize, but I try to show that this debt goes much deeper than they perhaps realize. Showing how Hume’s view relates to contemporary views is a key part of the project I have undertaken in this dissertation: it is not enough to simply explicate Hume’s view, though I hope my prior six chapters were interesting enough. By examining how fundamental features of Hume’s view hang together and how these features are taken up by contemporary authors, we gain insight into how these contemporary views are structured.

This chapter suggests that the structure of Hume’s view is not an accidental artifact of his placement in history, but rather a feature of the natural scientific approach itself. That the view derives fundamentally from the natural scientific approach illustrates why it is important and interesting. Hume is praiseworthy and his view emulable insofar as he sets up a coherent naturalistic program for understanding human cognition that informs contemporary views. Hume breaks a path; though his view has been continuously updated and transmuted since he put it forward, its fundamentals remain remarkably intact. It is those fundamentals I mean to capture with the five theses outlined below.

1. Hume’s Theses

In this chapter, I will suggest that Hume’s natural scientific view of the mind consists primarily in five different theses. I will argue that each of these five theses is plausible, primarily
by showing that contemporary thinkers who deeply disagree with each other still endorse them. I will also argue that the five theses are linked and that together they form a compelling specification of scientific naturalism. Spelling out precisely how tightly the five theses are linked (i.e., that they are mutually entailing, or some similarly strong relation) would take a dissertation unto itself, so in this final chapter I only aim to show that they are linked and suggestive of one another.

The five theses are, briefly, as follows:

1. Scientific naturalism is the appropriate method by which to study the mind.
2. The mind is active, not passive, in representing the world.
3. Faculties should be postulated and investigated on the basis of observations of mental activities.
4. Human and non-human animal minds form a continuum of capacity.
5. Our ideas, both simple and complex, result exclusively from our experience of the world.

Within each section below, I will address one of these theses toward two distinct ends. First, I will provide some reasons to think that Hume subscribes to that thesis. Second, I will illustrate how that thesis appears in the disparate views of contemporary philosophers of psychology and cognitive science Jerry Fodor, Peter Carruthers, and Jesse Prinz.¹ Fodor, Carruthers and Prinz seemingly hold very different views; part of the point of this chapter is to show that even thinkers that disagree about the specifics of their scientific naturalism about the mind still all agree on the key points Hume endorses, and, in part, do so because Hume was the

¹ I will cite Fodor’s various works by abbreviation and page number: Language of Thought will be represented as LOT, Modularity of Mind as MM, and so on. A complete list of the Fodorian works that I will cite and their abbreviations can be found in the bibliography. I will also follow a similar convention for Carruthers. Prinz’s works will be cited in my typical fashion.
first to conclude these theses from scientific naturalism and see that they all fit well together. All 
three see their views as deriving in some important way from Hume’s.²

In a single chapter, I will scarcely have space to articulate all five theses and suggest that 
they are held by these contemporary authors, and I will have even less space to devote to the 
nuances of their positions or the virtues thereof. My chief goal is to suggest that they endorse 
these theses, just as Hume did, and that their endorsement springs from scientific naturalism, just 
as it did for Hume. I will also, as I get further along in the theses, provide some arguments to 
suggest that these five theses fit nicely together and form a compelling specification of scientific 
naturalism. I aim to show that Hume’s scientific naturalism about the mind underwrites and 
informs the rest of his view of how the mind works. In particular, I think Hume’s aim to 
investigate the mind with the methods of the new natural science generates the other four theses.

II. The First Thesis: Scientific Naturalism and the Study of the Mind

The first thesis I will consider holds that the appropriate way by which to study the mind 
is by making use of those view and methods fruitfully used to investigate natural phenomena. 
This is what I will call “scientific naturalism” about the mind. I will show how scientific 
naturalism leads to the other four theses by first providing a more detailed account of what it 
consists in.

A. Hume’s Scientific Naturalism

At some point in the last 250 years, scientific naturalism displaced 
theological/teleological models of investigation and became the sensible default for 
investigations of human reasoning. It is now treated as obvious and apparent by those that take 

² See Fodor (HV, ch.1), Carruthers (AM, intro), Prinz (2002)
this approach that the mind and the natural world can be investigated using the same methods and explained using the same kinds of explanations. This was not always so obvious. Hume subtitles his *Treatise* with “an attempt to *introduce* the experimental method of reasoning into moral subjects,” (emphasis added), thereby framing his entire account as bringing natural scientific reasoning into subjects of human life and concern. Hume proposes that our investigation of reasoning (and other mental phenomena) should better mirror our investigations of natural phenomena, and more closely resemble fields like physics, astronomy, physiology, and optics.

Like Hobbes and Locke, Hume is committed to producing a science of human nature, and he seeks to do so by introducing the experimental method to that pursuit. But if “the experimental method” means just appealing to experience, then Hume’s styling of himself as *introducing* the experimental method is a bit disingenuous: Locke and Hobbes both rely heavily on introspective observations of their own mental operations (and content). Hume would still be entitled to the term “introducing” if he thought these prior thinkers had failed entirely, but this would be inconsistent with the praise he gives them throughout his works. Better to think of Hume as giving the first well-worked out use of the methods of empirical science with respect to the human mind. He also evinces a greater depth of attachment to the new science, as well as a slightly different conception of what it consists in. I will address these points in turn.

Hume’s commitment to the new science surpasses Hobbes’ and Locke’s in several key ways. First, though all three figures want to produce a science of human nature that can serve as a foundation for other investigations, Hume sees the science of human nature as foundational for more kinds of investigation. Hobbes and Locke both used investigations into the capacities and capabilities of the human senses and mind as a springboard for their political and ethical
investigations. But Hume seeks more than ethical knowledge. Hume thinks the science of human nature is foundational to all scientific enquiry; Hume says that “there is no question of importance… which can be decided with any certainty before we become acquainted with that science” of human nature (T intro.6). He concludes from this that “the science of man is the only solid foundation for the other sciences” (T intro.7). An investigation of the mind that follows the same principles as our other scientific endeavors in search of the same kinds of explanations is required to underwrite those other investigations. Hume wants to import methods from fields that have made tremendous explanatory progress in the century leading up to the Treatise in order to secure those very gains. The scope of Hume’s investigation is thus broader than it was for these earlier figures.

A second way Hume differs from Hobbes and Locke is in the depth of his relationship to the new mechanistic science. Hobbes’s investigation seems to be mechanistic in nature, but does not provide mechanistic explanations for the phenomena Hobbes is most interested in: the psychology takes place at the level of aversion and desire, not mechanism. This feature and similar features of Hobbes’ explanation of minds have led interpreters to claim that “Hobbes’s psychology owes more to Aristotle than it does to the new science of mechanics” (Gert 1967, 504).

3 Hobbes’ De Cive, Elements of Law and Leviathan all start with considerations of the workings of the mind before moving on to ethical and political concerns; see Duncan (2013). One conclusion of Locke’s Essay is that moral truths are susceptible to certainty, and Locke endeavors to show, given his theory of mind, why it had not been previously understood to be so (Essay, IV.iii.18-20). From Locke’s framing of these matters and the content of the rest of his corpus, it is conceivable that difficulties in these moral matters were the inspiration that Locke cites for the origin of the Essay (see his “Epistle to the Reader” preceding the Essay).

4 For more, see Gert (1967) in general, which offers a good introduction to how Hobbes’ explanation of minds strays from the new science. See also Gert (1996), who says of Hobbes’s investigation of the passions and voluntary motion, for instance:

Once Hobbes has the concepts of appetite and aversion, pleasure and pain, his account of the individual passions completely ignores the relation between
Neither does Locke fully embrace the new science, retaining Aristotelian science’s syllogistic deductions as the ideal standard (Kochiras 2009). So, while Locke and Hobbes are responsive to the new science, Hume is fully immersed in it; he does not need to help birth the new science (like Hobbes) or to defend it (like Locke). Instead, Hume is already engaged in it in school, when he is a boy of 13 or 14.5

Hume also differs from Hobbes and Locke in his relationship to Isaac Newton’s work. Because Newton’s contributions to the new science are still being assimilated in Hume’s time, what it means to think scientifically about the mind is consequently different for Hume than it was for his predecessors. Hume has new formulations of the methods and more results to draw on simply by virtue of being positioned later in history. Hume’s view of the new mechanistic science shows the “casual amalgamation of Newton’s method with Bacon’s” found in other writers of the middle of the 18th century, and throughout England in this period there is a common conflation of Boyle’s views with Newton’s (Barfoot 1990, 161-2). Hume comes on the scientific scene while Newton is being popularized, so Hume has a somewhat different view of how science works than his predecessors did. Hume’s view is more deeply influenced by a well-worked out conception of the Newtonian method.6 It has been claimed that Hume wanted to be the “Newton of the moral sciences” (Passmore 1980, 43),7 and the swell of claims to be “the

human behavior and his materialist philosophy. He simply proceeds by way of introspection and experience, along with liberal borrowings from Aristotle’s account of the passions. In the Introduction to Leviathan, Hobbes admits that he does not use his materialist philosophy to explain either the individual passions or human behavior in general… (Gert 1996, 160-1)

For a somewhat contrasting view, though, see Moore (1899) which offers a detailed account of how Hobbes’s psychology arises from features of Bacon’s view.

5 See Stewart (2005) and Barfoot (1990) for in depth accounts of Hume’s intellectual background.

6 Much has been written about how Hume’s view of science mirrors (and departs from) Newton’s, so I will not tread that ground again here. Schliesser (2008) surveys that topic in service of one view of it.

7 For a catalog of comparisons of Hume to Newton, see Noxon (1973, 27-9).
Newton of” other places or fields only highlights how the popularization of Newton that
influenced Hume’s view only increased in subsequent years. These multifarious ‘Newtons of…’
illustrate the depth of influence Newton had on his successors that was not operative on his
contemporaries.

Hume’s appreciation and appropriation of the new science can be seen in several key
commitments of his enquiry. First, Hume wants to ground his investigation in experience and
observation. Hume’s aim is to give a solid foundation to our other sciences by assimilating
methods of and developments in those sciences to the study of the mind. The foundation he
wants to give must itself have a solid foundation, though, and Hume claims that “the only solid
foundation we can give to this science itself must be laid on experience and observation” (T
intro.7). This illustrates how Hume makes use of one of the new science’s key commitments: just
as careful observation of falling bodies was crucial to making discoveries in physics, Hume
thinks that observation of human mental activity is crucial to explaining these mental
phenomena.

Observations are key to the “experimental philosophy” like Boyle’s hydrostatics, which
Hume would have understood it to typify the new science (Barfoot 1990, 167). Boyle’s
investigations were largely driven by experiment: Hume would have witnessed experiments
derived from Boyle’s as a student, and these would “exemplify the sensory, experience-based,
largely non-mathematical approach” to investigating natural phenomena; they were “designed to

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8 Laplace, for instance, was declared the Newton of France. James Clerk Maxwell called Ampère “the
Newton of electricity” (Maxwell 1904, 175). In France, François Magendie styled himself the Newton
of physiology, bringing a new concern with experimentation (and with it, vivisection) to the field
(Guerrini 2003, 73). One of Adam Smith’s students described him as the “Newton of the nature of civil
society” (Millar 1803, 430). Kant sought Newtons, too: he compared Rousseau’s work on the mind to
Newton’s work on comets (Neiman 2004, 36), and claimed there could be no ‘Newton of the
grassblade’ (see Cornell, 1986). Darwin, it has been argued, filled this role, and others have claimed him
as the Newton of biology (Huxley 1888).
be surprising, to be a public spectacle, and to secure belief… by convincing the student’s reason through his senses” (Barfoot 1990, 164-5).

Boyle’s method means to surprise and convince by appeal to the senses, but producing these same kinds of experiments with respect to minds is much more difficult: minds are much more complicated systems whose springs and levers are hidden from view. Hume’s experiments would have to be different from Boyle’s. They sometimes rely on the reader to undertake a task for themselves (and find it either possible or impossible). This is not a true, contrived experiment, but it is quite similar to the experimental presentations Hume saw. Hume’s experiments also include thought experiments, for instance, the imagined Adam of *EHU* 4.6.

Hume also appeals to natural experiments, that is, circumstances that are not contrived in the manner of true experiments but that embody the same sorts of conditions one would have contrived if one could have. Hume appeals to these cases, particularly when they, like Boyle’s experiments, give surprising results. For instance, in Hume’s discussion of liberty and necessity, he draws on the prisoner’s view of the jailer and the jail:

> A prisoner, who has neither money nor interest, discovers the impossibility of his escape, as well from the obstinacy of the goaler, as from the walls and bars with which he is surrounded; and in all attempts for his freedom chooses rather to work upon the stone and iron of the one, than upon the inflexible nature of the other. (T 2.3.1.17)

Hume here seeks to show that humans believe in moral necessity just as they believe in physical or natural necessity. Though we claim to think that human nature is more capricious in character than the natures of physical materials, the prisoner always elects to work to alter the stone walls and iron bars rather than working to alter the guard’s psychology. This case shows that, when placed in a circumstance that has both psychological and physical barriers to their

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9 He has no “money or interest” persuade the guard to free him; such would be equivalent of having excavating equipment: it would skew the example to favor one method of escape over another.
escape, the prisoner treats the physical barriers as more apt to being changed and breached, not the psychological ones. By finding an already occurring circumstance that places equal weight on both, we generate a surprising result: contrary to our claims that we believe in liberty, when push comes to shove, we take psychological necessity to be stronger than (or at least on par with) natural necessity.

Because contrived experiments are so difficult with respect to minds (and natural experiments so rare), Hume also appeals to past experience in order to substantiate his claims. For my purposes, this is no problem: Hume’s appeals to past experience exhibit the same core commitment; they display a responsiveness to observations of the phenomena that are being investigated. That Hume uses both kinds of appeal in the same way toward the same ends is corroborated by the fact that “experiment” and “experience” were not rigorously distinguished until much later. So, while Hume sometimes appeals to (contrived, natural or thought) experiments—and certainly does so more than, e.g., Locke—his experimental philosophy will still rely on both introspective and extrospective observations. These appeals serve the same function as his appeals to natural, thought, or contrived experiments (though they may carry less epistemic weight).

The main modes of observation of others’ minds available to Hume are introspective observation, the self-reports of others, and observations of (bodily) behaviors. The final kind of observations are not observations of minds per se, but do enable inferences about regularities in the system that generates those behaviors, i.e., about minds. Hume’s commitment to observation comes through clearly in his denial of innate ideas and the attendant story of how ideas and impressions are related in Treatise 1.1.
It is Hume’s commitment to observation that comprises the core of his scientific naturalism. In observing humans, we see that there is a wide range of behaviors they exhibit, many of them stemming from mental capacities for reasoning, passionate reactions, &c. But careful observation is required in order to understand those capacities, clarify what it means to engage in any of those activities, determine just what the relevant underlying capacities are and how are they related to one another. Accomplishing these tasks using the same patterns of explanation so fruitfully deployed in physics, astronomy, anatomy, &c. is Hume’s goal. The ideal standard here is a theory of the mental that rises to the same standards of justifiability, coherence and explanatory power that theories of physical phenomena do. In the introduction to the Treatise, which I quoted earlier, Hume makes clear his commitment to this second feature of scientific naturalism, a commitment to deploying the same patterns of explanation found in other sciences.

But what do those same patterns of explanation consist in for Hume? Hume’s intellectual background prized mechanistic over corpuscularian or atomistic views, so giving an explanation of minds requires the use of the same kinds of mechanistic patterns of explanation that typify the new science as he sees it.\(^{10}\) Using force, impulse, and the other concepts belonging to the mechanistic science to explain the mind is the goal for Hume, and it is the goal because it represents the state of the art with respect to scientific explanation. The mind has not seen an explanation in these terms: Hobbes does not articulate a version of the mind that is fully mechanistic, nor does Locke.\(^{11}\) It is debatable whether Hume manages to fully accomplish this, but it does seem to be his goal: Book II of the Treatise shows clearly the relationship between the

\(^{10}\) See Barfoot (1990), section I.

\(^{11}\) Hobbes fails to give accounts of the mental phenomena he investigates in mechanistic terms (Gert 1967), and Locke holds a corpuscularian view.
hydrostatics/pneumatics that Hume would have learnt at school and his view of the mind, as the picture of the passions that Hume gives is articulated nearly completely in terms of pneumatical relationships. Articulating a theory of the mind that makes its explanation like explanations in the other sciences is a key goal for Hume.

A final piece of Hume’s naturalism regards scientific reasoning itself. Being a naturalist about the mind also means taking seriously that scientific reasoning is human reasoning. It is for this reason that explaining one will be crucial to explaining the other. For instance, the way we get our ideas of space and time will affect how we reason about those ideas. More than the subject matter of our scientific reasonings needs explaining, though: we will need to explain what scientific reasoning is and how it is possible, too, just like all the other forms of human reasoning. This will entail answering questions like: What is it that we are doing when we, e.g., infer a particular cause from its effect? What is it that we are doing in a case where we assign a lower likelihood to one outcome versus another? Explaining how the mechanisms responsible for human reasoning can be used to account for scientific reasoning is a key part of the natural scientific explanation of mind. This is what Hume is doing in Treatise 1.2 and 1.3, and in particular in his discussion of causal reasoning.

Mathematization is one key feature that set the new science as practiced in the 17th and 18th centuries apart from prior forms of science. Without mathematization, it would seem, Hume’s account is incomplete or incompletely scientific. Newton’s Principia, for instance, is

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13 Though prior philosophers (Bacon and Newton primary among them) explicated the new scientific reasoning, many philosophical attempts that took themselves to be explaining scientific reasoning (in Descartes, Locke, and Leibniz, for example) focus exclusively on Aristotelian scientific reasoning. (In Locke we see the signs of strain on the old model as Locke just tries to give a system that generates a set of propositions isomorphic with Aristotelian scientific reasoning: see Barnes (2001), particularly section V.) Hume is part of a new tradition, and focuses on how scientific reasoning can aid in explaining scientific reasoning (and human reasoning more generally).
both organized like a system of geometric deductions and contains a good deal of mathematical description and explanation of phenomena. Hume’s science of the mind has no such math: instead it focuses on giving descriptions of mechanisms.

But one need not produce a mathematized science to be an experimentalist or Newtonian. Boyle, who held pride of place in Hume’s schooling, deployed a largely non-mathematical method in his experiments, as noted above. With respect to Newton, Hume would have been more familiar with Newton’s *Opticks* than he was with the *Principia*, and the *Opticks* does not display the mathematical structure or the dependence on calculation that the *Principia* does. The *Opticks* does, however, give mechanical explanations, just as Hume’s science of human nature does.

We can see the different attitudes toward mathematization play out in the slightly later disputes between Priestley, an English chemist, and his continental counterpart Lavoisier: Priestley held fast to prior experimental methods while Lavoisier pioneered quantitative chemistry. In part, Priestley did so because he thought that one could do experimental and empirical work without the costly re-tooling and restructuring that the quantitative approach would require. Mathematization was not necessary for a fully fledged science of the kind Bacon or Boyle sought, and it is possible to be a Newtonian without mathematizing.

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14 See Barfoot (1990, 152ff), as well as Schliesser (2008).

15 See Koertge (1985, 185) on the differences between Priestley and Lavoisier, and Burns (1999, 32) on Lavoisier’s contributions.

16 On one reason why Priestley may not have abandoned phlogiston theory:

> But there are other costs involved which are more endemic to the scientific process. Switching theories requires an enormous amount of institutional re-tooling. Reagent bottles must be relabelled, textbooks and encyclopedias rewritten, and one’s entire working vocabulary and intuitive thought processes revamped. (Koertge 1985, 185)
The main commitments of Hume’s scientific naturalism, then, are the commitment to observation, to explaining the observed phenomena using the same patterns of explanation deployed in the other natural sciences, and to explaining scientific reasoning. It is these commitments that will generate the other four theses.

**B. Scientific Naturalism in Contemporary Cognitive Psychology**

Just like Hume, philosophers today are still striving for a naturalistic account of the mind, and in doing so, they exhibit these same commitments. The science and scientific methods they use—while descended from the new science Hume drew from—differ, but the goal is one and the same: to use the same patterns of explanation evident in the scientific thinking about other natural phenomena to also explain the mind. This is evinced by the fact that we see the same scientific naturalist commitments that I identified in Hume in the previous sub-section in these thinkers as well. This begins to illuminate the link between Hume’s view and contemporary views as well as the connections between those contemporary views themselves. This shows what is valuable in both Hume’s view and these contemporary views.

Fodor chastises other contemporary philosophers he sees as, in the sway of bad arguments, not pursuing a naturalistic theory of mind, like he is, and like they should.\(^{17}\) Fodor spells out what explanations of the mental would look like on a naturalistic theory, saying that they must be “like explanations in other sciences.” He lays out what conditions they must meet if their “explanations are to have the character of scientific theories” (PE, 15).\(^{18}\) Fodor then goes

\(^{17}\) See PE, ch. 1.

\(^{18}\) Fodor does so in terms of appealing to certain sorts of theoretical entities (causes, effects, events); this reflects a difference in what the relevant features of scientific explanation are between Hume and Fodor. It does still illustrate, however, that they both seek to apply essential features of natural scientific theories to their explanations of minds.
about undercutting the arguments marshaled against psychology as a descriptive natural science, concluding that

Nothing so far shows… that the psychologist may not reasonably seek to provide explanations of a type that would be acceptable in the other sciences. (PE, 47)

Fodor, like Hume, seeks the naturalistically specifiable (and investigable) entities, patterns or processes that could explain the psychological features we see in humans: it is this goal that comprises thinking scientifically about the mind. Though Fodor and Hume have different conceptions of what those entities, patterns or processes will consist in, they agree that they will be naturalistically specifiable using the methods of science.

Carruthers, too, sees scientific naturalism as key to the philosophy of psychology, saying that

According to naturalism human beings are complex biological organisms and as such are part of the natural order, being subject to the same laws of nature as everything else in the world. If we are going to stick to a naturalistic approach, then we cannot allow that there is anything to the mind which needs to be accounted for by invoking vital spirits, incorporeal souls, astral planes, or anything else which cannot be integrated with natural science. (PP, 1)

Carruthers’s second constraint on naturalistic investigations of mind embodies the second commitment we saw in Hume’s naturalism: a demand that theories of the mental be responsive to observation. Carruthers says that “a theory of mind ought to fit in with a reasonable view of the extent and nature of psychological knowledge” (PP, 2). That is, that the appropriate way to get evidence for (or the check the truth of) our claims about the mind is by observing minds. Carruthers here makes explicit the commitment to observation that is evident every time a philosopher or cognitive scientist cites the discoveries of practicing psychologists.¹⁹ Philosophers

¹⁹ Prinz, like Carruthers, Fodor and many others, regularly makes use of the psychological literature.
of cognitive science routinely appeal to the experimental literature of psychology, which itself appropriates the methods, practices, and standards of the other sciences. Hume’s appeals to his ‘experiments’ function in just the same way, and he makes these appeals for the same reason contemporary philosophers do: because doing so is required of a scientific naturalism about the mind. They believe that the correct explanation of the mind will be the one that maximally coheres with our best observations of the human mind.

The third and last facet of scientific naturalism is the commitment to explaining scientific reasoning. Fodor is pessimistic, in the short term, about our ability to do so and Carruthers is a bit more sanguine. Both, however, like Hume, see explaining how humans are capable of scientific reasoning as an essential feature of a complete natural scientific explanation of the mind.

Carruthers explicitly sets out to try to show how a mind like the naturalistically specified, massively modular one he has described in *The Architecture of the Mind* can reason scientifically (AM, ch. 6). He says:

“...The human capacity for science has led us to the most amazing accomplishments. ... Some have claimed that our capacity for science is itself one of the last remaining deep scientific mysteries... In the present chapter, I shall take up this challenge.” (AM, 335)

It is this same desire for a naturalistic explanation of scientific reasoning that seems to be driving Fodor’s early (LOT-era) worries about hypothesis-based concept-acquisition, and his worries about explanations of abduction (MDWTW, ch. 3). Just as Hume worked to explain the mechanisms of causal reasoning, so too do Fodor and Carruthers work to explain the mechanisms responsible for other, related kinds of scientific reasoning. Scientific naturalism about the mind demands an explanation for how humans are capable of engaging in scientific reasoning, and all three authors look to provide (at least part of) that explanation.
The depth of Hume’s treatment of the mind as investigable through recently developed natural-scientific means was innovative in the 18th century—though he does benefit from standing on the shoulders of Hobbes, Locke and others—but his particular way of viewing the mind has been taken up by many philosophers since then. As we will see later, Fodor, Carruthers and Prinz all see their view as originating in some key sense in Hume’s view.\(^{20}\) They see what Hume sees: naturalism demands a theory consistent with and founded on the observable evidence and an account of natural scientific reasoning itself, and they see it, in part, because Hume saw it. In what follows, I will argue that viewing the mind as apt to natural-scientific investigation demands a certain way of spelling out that naturalism, namely, the other four theses I mentioned earlier.

### III. The Second Thesis: The Mind as Active

The next of the five theses is that the mind is active and not passive in representing the world. In this section, I will show how Hume’s naturalism leads to seeing the mind as active, while also showing how activity of mind turns up in the views of contemporary scientific naturalists about the mind.

Hume’s goal is to explain the operations of the mind. Explaining human inference in particular will entail seeing the mind as active in two ways. In chapter two, I presented an argument that the best interpretation of Hume must take him to view the mind as active.\(^{21}\) Hume takes it that the mind’s faculties link its perceptions in ways that supersede mere reports or recreations of past experience. A passive mind would, by hypothesis, represent the world just as

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\(^{20}\) See section VII below as well as Fodor (HV, ch.1); Carruthers (AM, intro); Prinz (2002).

\(^{21}\) Section I; see note 6 there in particular.
it is. An active mind works on its experiences, determining certain ways of presenting and re-presenting them. Wolff describes activity of mind:

Put briefly, the theory runs like this: The human mind has a small number of innate propensities, or “dispositions to form dispositions.” When the mind is presented with perceptions conjoined in certain ways, its propensities are activated and it develops dispositions. These dispositions determine the mind to reproduce in imagination certain impressions when it experiences certain others. … The innate propensities constitute the basic “machinery” of the mind. (Wolff 1960, 294-5)

It is these propensities to form certain sorts of dispositions (that is, habits of moving from one perception to another) that constitute the activity of the mind: the mind does not merely report on the world, the mind *shapes* the world: in presenting the world, essential features of the presentation are produced/introduced by the mind itself.22

Norton, putting the view more clearly, gives this description of the active mind, describing Hutcheson’s view that he claims Hume adopted and modified (in order to exclude divine design):

He does clearly echo Hutcheson’s view that we are endowed with *active* minds, that we have a set of faculties, instincts and propensities which determine how the elements of moral and non-moral experience will be organised, and which provide us with a set of natural beliefs which serve to organise and direct our behavior. (Norton 1981, 338-9)23

The mind does not ascertain connections in the world by simply experiencing them; the beliefs, associations and ideas it has are not simply results of copying the impressions of objects it is given; the mind does something more, something that links these perceptions in ways that

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22 In Kant, the propensities of mind to build the world in certain ways correspond to the categories; to simplify and avoid unnecessary Kant exegesis, I have omitted here some of Wolff’s claims that equate Hume’s propensities to Kantian categories.

23 The statement that Hume countenances “natural beliefs” may seem inconsistent with Hume’s empiricism. See Norton (1981) more generally wherein Norton argues that ‘empiricism’ and, in particular, “British Empiricism” are bad ways to understand Hume. More to the point, Hume denies innate *ideas*, not processes, structures or faculties. See section VI of this chapter.
create new connections between them. The activity/passivity distinction is not congruent with the distinction between agency and non-agency: if it does more than merely receive from the world the structure of the world and recapitulate that structure, it is in that sense that it is active; it is a participant in the creation of the world.

The mind is active for Hume insofar as the mind represents the world as a result of the operations/structure of the mind itself. The most obvious example of this is necessary connection, and I will use this as my primary example below. But it is also evident in Hume’s discussion of persistent objects (T 1.4.2.22ff), moral features of the world (EPM App1.21), and (the pre-appendix) view of the self (T 1.4.6.).

Hume has a direct line of reasoning from scientific naturalism to seeing the mind as active. Scientific naturalism about the mind demands an explanation of scientific reasoning (as explained in the previous section). This scientific reasoning that humans engage in regards matters of fact and real existence, and makes use of our belief in necessary connection. The necessity required for necessary connection (and hence for scientific/causal reasoning, too) cannot be perceived in the world (T 1.3.2.9, EHU 7.26), that is, necessity is not evident when we carefully attend to what is presented in our independent bouts of sensory experience themselves (EHU 8.4).

The requisite necessity cannot be passively received by the mind from impressions of succession in the world (because necessity applies to all occasions and we have observed only a

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25 This is in contrast to Locke, who thinks that the mind just perceives the relation of cause and effect when considering the two ideas and the production of one by the other (Essay, II.xxvi.1-2).
few, particular occasions), so because necessity does appear (to us to be) in the world—and the causal successions in it—despite the fact that it cannot be perceived, it must be the case that the mind structures the world so necessity does appear to us in it: when we reason causally, we see necessity as being in the world, but this appears to be the case because “the mind has a great propensity to spread itself over external objects, and to conjoin with them any internal impressions, which they occasion” (T 1.3.14.25).

From this, we can conclude that causal—and so scientific—reasoning cannot be explained by a model of the mind as passively receptive: a passively receptive mind would have no conception of necessity, because necessity cannot be observed in the impressions of objects themselves. That is, we must conclude that we endorse some features of the world not as a result of perceiving them in our observations of the world in itself, but rather as a result of the operations of the mind. Hume’s treatment of this issue is a consequence of Hume’s natural scientific view of the mind.

Hume thinks that the mind shapes the presentation of the world for us; he also holds a related view of the mind that takes mental phenomena to result from dynamical features of the mind itself, not merely from its contents. As I argued in chapter two, Hume’s assertions that his enquiry will be into the “unbounded liberty” (EHU 2.5) that the mind possesses to “form monsters, and join incongruous shapes and appearances” (EHU 2.4) demand that we see him as treating the mind as dynamic. Another way to put this is to say that Hume’s investigation outstrips what the mind has to consider what it does.

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n.b., here I am discussing causal inference and the successions of impressions and ideas that give rise to it, i.e., addressing causes on Hume’s second definition.

This argument works just as well if you think that Hume is an inductive skeptic, too. Instead of appealing to the fact of scientific reasoning, we just need to appeal to the observation of certain activities of mind that cannot be explained on the passive model, even though they do not rise to the level of (justified) reasoning.
For many prior thinkers, the operations of the understanding occurred regularly as a result of the mind coming to have particular contents: when I come to know the proposition *humans are animals* and the proposition *animals are living*, my mind entertains the proposition *humans are living* and knows it to be true. The explanation for how I come to know that *humans are living* is not given in terms of any activity my mind itself undertakes, but instead in terms of *receiving* the content.\(^{28}\) The role for the activity of the mind itself is very narrow.

For Hume, the mind’s operations take pride of place over its contents. Seeing this takes only observing, as I did in chapter two, that while Hume begins his investigation by triaging types of mental contents—impressions and ideas—he gives the distinction between the two in terms of what mental operations are germane to each (T 1.1.1; EHU 2.1). So, while Hume will speak of the “force” and “vivacity” of impressions and ideas, this is not a quality intrinsic to them: witness how it changes constantly based on other things going on in the mind. Impressions and ideas have only the life that the mind gives them. Impressions and ideas alone cannot explain the operations of the mind because the mind produces inferences or passionate reactions *in response to* its impressions or ideas.\(^ {29}\)

The operations are performed on the contents, for Hume, the operations are not themselves explicable entirely in terms of the contents. Whereas in the *human-animal-living* example above, the contents themselves entirely explain the mind’s coming to know *humans are living*, on a view of the mind as dynamic, the mind has to itself *do something* in order to come to

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\(^{28}\) Both Descartes and Locke still see knowledge and reasoning primarily as perception. (Spinoza similarly equates the two, but in a very different way: he does so by reducing contents to activities; still, though, the two are equated.) Aristotle presents an interesting case because it seems that the intellect *actively* grasps the essences of things from the things themselves, but someone more expert on Aristotle than I would have to comment on how the mind is active in reasoning or knowledge production itself.

\(^{29}\) Interpreters who view Hume as an associationist will disagree at this point; see my discussion of Fodor below for my response, though.
know *humans are living*. (The contents of mind of course play a role in explaining the operations of the mind: explaining why *humans* and *living* get linked up of course depends on features of those ideas but, on the kind of view Hume endorses, the features of the ideas themselves do not exhaustively explain why and how the connection is made.)

For Hume, then, the mind is the medium in which the impressions and ideas occur; it is the set of structures that enables and manipulates these perceptions. The mind has a robust set of faculties/capacities/abilities apart from what contents it has; it has dispositions/propensities/predilections of its own that produce key features of its experience of the world. The mind is thus dynamic, producing and not merely receiving the contents of its reasonings. It does not serve as a uniform background, the flat pool table on which the billiard balls of our ideas careen into and rearrange each other. Instead, the mind has a dynamic topography, influencing the course of the balls, shifting in response to their positions, and causing them to collide. Further, it is not some faculty of will alone that produces movement of ideas within the mind: it is the nature of the inferential faculties themselves to produce these collisions and shifts and they do so without prompting.

Hume recognized that there are important activities–probable reasoning among them–that theories of the mind as passively receptive cannot explain. In response, he posited that the mind was active. Seeing the structure of the mind as dynamic allowed him to investigate the mechanisms and movements the mind makes to draw connections (rather than just find them). This provides enormous explanatory gains; for instance, it helps explain the difference in reasoning capacities between individuals (EHU 9.5n).

Fodor explicitly takes up the view that the mind must be active, saying that the explanatory benefits are too great to be ignored (MoM, 31-35). This is a natural scientific move:
Fodor posits a thesis that would be explanatory of the observed phenomena (that the mind is active), then argues that because the explanatory gains from accepting that thesis are so great (and the contrary thesis is non-explanatory), that we ought to accept that thesis. In this way, the patterns of thinking associated with scientific naturalism lead to seeing the mind as active for contemporary philosophers as well.\(^{30}\)

Fodor’s particular argument claims that views of the mind where the contents themselves are supposed to explain cognition—such as in a pure associationism—cannot explain certain features of our mental lives. Fodor concludes this in the midst of an argument against Hume, but Fodor has misread Hume’s view. Fodor thinks Hume is a passive associationist: on this model, the pieces of content themselves produce their connections/changes/transitions; the mind itself is nothing over and above the contents.

Fodor cannot really be blamed for this, it is a common mistake: a number of major commenters have taken Hume to be a passive/pure associationist, and Hume does seem to present himself in this way sometimes. But two key factors should cause us to reject this view of Hume: first, it does not do justice to Hume’s discussion of demonstration/intuition. I have not seen a single commentator that treats Hume as a pure associationist address how we are supposed to account for what Hume says about demonstration and intuition with a pure associationism. It seems that a pure associationism can account merely for probable reasoning (at most). Hume sometimes does seem to present himself as being an associationist, but a passive/pure associationism is inconsistent with several expressed features of his view. (Wolff

\(^{30}\) Though Carruthers and Prinz do not directly make and commitment to activity of mind, nothing that they say conflicts with it, and their thinking seems to focus around what the mind does, not what it has. Further, they draw on the results of thinking about the mind as active, as we will see in the next section.
presents his view of Hume’s active mind with an eye toward how Hume’s language, he claims, is unable to express his underlying meaning.

Second, Hume moves away from the ‘gravitation’ metaphors that underwrite most ascriptions of pure associationism as his work matures. He moves away from this Newtonian language and toward a language that gives more of a role to the features of the mind itself. This shift suggests that, because certain features of his view (like demonstrative/probable reasoning) are incompatible with a passive/pure associationism, we should view Hume’s early metaphors as just metaphors and as metaphors that turn out to be inapt.

Treating Hume’s view of reasoning as a passive/pure associationism will not suffice. Prior commentators were confused, it would seem, by the large role that the associations play in underwriting some forms of reasoning. The best understanding of Hume’s view is probably as what Fodor calls a “computational associationist.” Fodor agrees that this kind of associationism—and others that allow that there is something to the mind over and above its contents, like, e.g., the associationist interpretation Wilson (1976) gives—can evince the requisite activity of mind.

So the activity that Fodor thinks Hume cannot account for is actually evident in Hume and thus Fodor’s argument from the necessity of mental activity contra Hume actually counts in favor of Hume’s view.

IV. The Third Thesis: Observed Mental Activities lead to Faculties

I now move to the third thesis, which holds that mental faculties should be postulated and investigated on the basis of observed mental activity. When we observe the mind—as we committed naturalists do—we see a number of distinct but consistent patterns of activity across individuals and across single individuals over time: these patterns of activity include reasoning,
remembering, perceiving, and so on. The third thesis claims that it is these patterns of activity that should serve as our basis for any presumption of mental faculties.

A. Hume’s Faculties

Hume objects to the abuse of the term “faculty,” whereby it does no explanatory work (T 1.4.3.10). Hume’s concern is a version of Locke’s. According to Locke, use of faculty talk to answer questions about, e.g., digestion yields exchanges like this: “What was it that digested the Meat in our Stomachs? … The digestive Faculty.” This view tells us no more than “That digestion is performed by something that is able to digest.” Locke’s response is that “in truth it would be very strange, if it should be otherwise” (Essay, II.xxi.20).31

Like Locke, Hume’s objection is to the enquiry-halting character of some practices of faculty-positing. On the kind of view Hume is objecting to, faculties are God-given, uniform, and brute: except in cases of breakdown or interference, they just do what they do. Precisely because there is no interesting question of constitution or mechanism, any investigation into these faculties would have to be rational, ethical, or theological in nature; it would be an investigation, not into how the faculties work, but into how we deploy them.

Because it halts investigation into the underlying mechanisms, the new science of Hume’s time takes this kind of investigation to be non-explanatory. According to the new science, mechanistic causation is the paradigm of good explanation of natural phenomena: phenomena are organized into patterns or classes, and then those patterns or classes are explained by a description of the mechanisms that give rise to them.

31 Hume does not take Locke’s solution to the problem, though, which is to make faculty, power and ability to all mean just the same thing and, in essence, reduce faculty talk to power talk. This move would, in effect, reproduce the same non-explanatory structure, just with a prima facie less occult notion in place of faculty.
Hume can make talk of faculties consistent with the constraints of his new mechanistic science by treating faculties as initially unknown but to-be-explored sets of mechanisms that give rise to the patterns of behavior. Hume is asking for a mechanical, causal explanation of mental powers and capacities, and because this is what Hume is looking for, Hume will ultimately understand the faculty itself as whatever set of mental mechanism *brings about* the activity. The mechanisms will be given as generalizations regarding how the mind processes impressions and ideas. Hume gives us a descriptive and functional way of viewing faculties, and this descriptive faculty psychology contrasts starkly with the normative faculty psychology that Hume rejects. It is because Hume’s faculties *enable* explanations, unlike the Scholastic faculties they replace, that they are unproblematic with respect to the objections above.

Hume’s naturalism entitles him to this abductive inference: because there is a coherent pattern of activity *remembering*—one that recurs across individuals and times and that is confirmable by all three sorts of observations we make—we are entitled to suppose a human *faculty of memory*. That is, insofar as there is a unique and characteristic pattern of activity of the mind, there must be some feature (or set of features) within the mind that brings about that activity. To treat the mind as inapt to this kind of investigation is to fail to treat it naturalistically.

Most importantly among the gains this view grants us is the ability to revise, recombine and clarify the faculties we posit and how they relate to each other. It does so in part because it allows us to investigate the connections between different kinds of mental activity: insofar as seemingly different activities share features, we should suppose they share some internal traits or mechanisms that must give rise to them, i.e., ‘what could be the best explanation for these different instances of mental activity that share lots of features? It is that they result from a similar set of cognitive mechanisms.’ By seeing what links, e.g., intuition and demonstration, we
can engage in an investigation of the genus of reasoning. In so far as the activities are the same, we should expect similar etiologies, and insofar as they are different, we should look for an explanation for this difference.

Revisability in light of new evidence is a hallmark of natural science and natural science as practiced in the 18th century. Hume repeatedly investigates, clarifies, revises and recombines faculties within his account. In particular, I am thinking about Hume’s explanation of causal reasoning in terms of association, which requires clarification of the faculties involved and their roles: the faculty of reason gets nestled within the associative faculty of the imagination.

B. Faculties and Contemporary Cognitive Psychology

In contemporary philosophy, the modularity of mind thesis and its sibling, massive modularity, take up a position similar to the one Hume develops. These views claim that the mind is composed of separate structures that process independently of each other but that are able to pass representations back and forth. Hume’s descriptive understanding of faculties paves the way for this sort of investigation. One way to understand the independence of, e.g., demonstrative and probable reasoning on Hume’s view, is by seeing the underlying mental structures as, in essence, distinct modules. These modules work independently of one another but can communicate with the rest of the system.32

32 Hume’s view appears to differ from many contemporary modularity views insofar as Hume only has two sorts of representations—impressions and ideas—whereas many modularity theorists think that each processing system has its own endogenous sort of representations. But Hume only claims that these are the only sorts of perceptions that the mind has, meaning that only specific systems (or connections between systems) must make use of them, those systems or connections that produce conscious, phenomenal perception of those representations. Any processing that occurs inside a module may be done via these representations or any other: Hume makes no claims about non-observable representations, either for or against them. We can see some trace of hidden representations in Hume’s rejection of the transparency thesis: if we are not aware of all of the things the mind is doing, then there would seem to be some representations that are not being perceived. This at least suggests there may be something in Hume’s view that is like the lower level representations Fodor posits.
Fodor’s view works similarly, and can be productively read as way of spelling out Hume’s view (or something very much like Hume’s view). On Fodor’s view, there are higher level systems, those responsible for reasoning, which use a shared set of representations (the organism’s concepts) and that can produce and pass these shared representations (and structures composed of them) amongst themselves (MoM, 101-119). These higher level systems take as input representations that have been processed by lower level systems, initially actuated by representations transduced from external stimuli by sensory receptors. Insofar as Hume and Fodor both think that there is a central set of representations—the organism’s concepts—involving in reasoning, Fodor’s modularity of mind view would seem to be an extension of Hume’s view that is more specific about the structures involved. It seems like Hume’s view with more data.

But what of massive modularity? Carruthers describes the thesis:

Massive mental modularity would claim that the mind consists entirely of distinct components, each of which has some specific job to do in the functioning of the whole. (AM, 2)

He specifies that if the thesis “were just that the mind consists of some modular components,” then

nearly everyone is a massive modularist, given the weak sense of “module” that is in play. For everyone will allow that the mind does consist of distinct components; and everyone will allow that at least some of these components can be damaged without destroying the functionality of the whole. (AM, 2)

Hume’s views about the nature of the mind’s faculties and his method for discovering them are both strongly consistent with modularity and massive modularity of mind, two popular contemporary positions. Hume’s faculty-positing abductive inference takes place at a level of description where it seems uncontroversial; we accept it as appropriate to delineate and investigate different functions of the mind on the basis of our observations of mental activities.
In spite of this, it remains unclear whether any of the more particular modularity views is ascribable to Hume. Indeed, it is unclear if there is enough textual evidence even to make a case for any of them. Most importantly, there is also disagreement about whether modularity per se is a tenable position: there is significant disagreement on what exactly counts as a module, how insulated the modules need to be from one another in order to be genuinely modular, and so on.

But it is clear that Hume endorses the basis for all modularity views, i.e., he thinks that the faculties of the mind can be determined functionally, by examining patterns of mental activity. Though it is not close to everything included in Fodor’s or Carruthers’s final view, even a staunch opponent of modularity like Jesse Prinz can agree to this claim. Prinz says he endorses “functional decomposition,” the view that “the mind contains systems that can be distinguished by the functions they carry out” (Prinz 2006, 23). Though he denies modularity, he does allow that denying modularity per se does not mean that the mind is a disorganized mash. At the outset, I said that modularity is not equivalent to functional decomposition. The mind can be described as a network of interconnected systems and subsystems. We can represent the mental division of labor using flowcharts whose units correspond to functionally distinguished components that carry out subroutines and contribute, in their limited way, to the greater whole. (33-34)

So perhaps the best way to describe what the naturalist about the mind must be committed to is functional decomposition (though many are committed to more). Fodor describes naturalistic cognitive science as engaged in a functional taxonomy of the parts of the mind (MoM, 36-38), which I take to be expressing the same substantive idea as Prinz’s functional decomposition. Of it, Fodor says “this very strategy of functional analysis… according to the now standard philosophy of psychology, allows the individuation of mental constructs to steer a proper course” (MoM, 25).
Functional decomposition seems like the minimal theoretical starting point for a scientific naturalism about the mind, and functional decomposition is just what Hume gives us: Hume identifies sub-units of mind (whether these are modules properly so called or not) through abductive assumptions based on the observed patterns of activity. So, while Hume’s view cannot help us to adjudicate any of the more particular disputes, his identification of faculties via investigation into mental activities and functions prefigures many contemporary authors working in the naturalistic tradition. The direction that Hume sets—identifying functions (née, activities) of the mind, and investigating their cognitive substrates—is the one prominent naturalists about mind are following still today.


I now move to the fourth thesis, regarding human and non-human animal minds. In Treatise 1.3.16 and EHU 9, Hume draws the conclusion that animals evince the same capacity for basic causal reasoning that humans have, and that, further, it must take place via “habit,” “custom,” or “instinct,” just as it does in humans.\(^{33}\) In both, this sort of reasoning explains how it is possible for the beasts in question to navigate the world.

A. Natural Science and Explaining Shared Behaviors

The same naturalism that demanded an explanation for probable reasoning also demands that Hume account for how human and non-human animal minds relate: a natural scientific framework requires that where we see similarity, we seek similarity of explanation. While we do not have introspective evidence from non-human animals and they do not make reports, we do

\(^{33}\) Since animals exhibit probable reasoning and probable reasoning depends on an active mind, it would seem, then, that animal minds are likely active, too.
have observations of their behavior that suggest that, in critical respects, it is similar to human behavior. So, Hume thinks, because we see similarity in human and animal behavior, we should show that what generates that behavior is the same (or largely similar). This line of reasoning is notably similar to the one deployed in reasoning about the faculties of mind and their underlying structures, and both arise directly from scientific naturalism itself. It is for this reason that Hume thinks we should reject any theory of human reasoning if it is not also sufficiently explanatory of non-human animal reasoning (T 1.3.16.3, EHU 9.1). Within this frame, Hume argues that the mental mechanics he outlined earlier (that is, association and habit-provoked transitioning) can account for non-human animal reasoning as well.

There is not space in this chapter to do justice to Hume’s view of non-human animal inference, but suffice it to say that Hume thinks, as Darwin would later, that human and non-human animal minds differ primarily in degree and not in kind. The best way to think about the relationship between human and non-human animals on Hume’s view is to see the two as lying on a continuum of capacity. This naturally leads to the question of whether human and non-human animal minds do exhibit any differences in kind whatsoever. Hume does think that non-human animals are less good at inference (EHU 9.5, 9.5n), but Hume does not state that non-human animals lack the capacities humans have for other sorts of reasoning (that is, induction, deduction, and reflective probable reasoning). Hume does not directly address these capacities in

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34 See Boyle (2003) for an explication of Hume’s arguments regarding non-human animal reason. See Beauchamp (1998) and Driver (2011) for a primer on whether Hume thinks human and non-human animal minds differ in kind at all. Note, though, that Driver and Beauchamp agree that Hume thinks non-human animals are incapable of demonstration, a position I do not see evidence for in Hume’s texts. Other key texts for interpreting Hume’s view of non-human animals include Seidler (1977), M. D. Wilson (1995), and Korsgaard (2008).
non-human animals at all. Without answers—or even hints of answers—as to whether non-human animals lack these capacities there can be no definitive answer as to whether there is any difference in kind between human and non-human animal minds.

What is clear is that, on Hume’s view, humans and (many) non-human animals share the same basic representational and associative capacities that underwrite human reasoning, and that they do indeed share the capacity for reflexive probable reasoning. So, with respect to the capacities that Hume does render judgement on, humans and animals form a continuum: animals may be, on the whole, less good at these sorts of inferences, according to Hume, and they may be more acutely subject to biases than humans are, but they possess the relevant capacities, and can sometimes exceed human capacities (and particularly those of human children). The reverse is also likely true, with animals producing better inferences when they have sensory sensitivities or modalities that humans lack, or are not subject to biases that come from civil society. In reality, talk of a spectrum is too simple (as it is in most cases). The factors that lead one to be good at inference are multifarious and (some of them) can vary independently of each other. Thus we should think that humans and non-human animals are arrayed in an n-dimensional space according to their abilities with respect to the different virtues and vices of inference. In this space, (most) humans will exhibit (in sum) better inferential abilities than (many) non-human animals in (some/many/relevant) circumstances.

Hume does not issue any direct statements on whether or not non-human animals are capable of intuition/demonstration, and nothing in his position entails either a positive or negative answer to that question. It is not even clear if, on Hume’s view, it is possible to get the data one would need from non-language users to show that they do or do not intuit or demonstrate. This would render the question of difference in kind unanswerable for non-human animals. This makes Hume somewhat of an outlier: his predecessors all laid out views of how non-human animal cognition is both similar to and different from human cognition. See Descartes, *Discourse on Method*, part V, AT 56; Locke, *Essay* II.xi.11; Leibniz, *New Essays*, II.xi.11.
That human and non-human animal cognition are intimately related is a Humean point that has become the sensible default position in scientific thinking in the last 150 years. Since Hume, the similarity and continuity of humans and non-human animals (across a number of different dimensions) has been underwritten by evolutionary theory. The basic naturalistic insight, though—that the similarities between the two require similarity of explanation—remains.

B. Arguments by Analogy

When Carruthers, for example, argues that because animal minds are massively modular, this provides good evidence that human minds must be massively modular, it is the natural scientific analogical premise that does much of the work (AM 34, 65, 148-9). But Carruthers sees no need to argue for this premise: it is obvious that the other analogies between humans and animals—physiological, evolutionary, molecular biological, etc.—require that we see human and animal cognition as (at least prima facie) needing the same kinds of explanation. Carruthers calls this “normal biological reasoning” (AM, 149).

This kind of reasoning has not always been the norm, though, and it has not always been obvious that it should be: in Hume’s similar argument by analogy, we see that he needs to substantiate this premise for his readers when he runs much the same argument. To support the claim that “The anatomical observations, formed upon one animal, are, by this species of [analogical] reasoning, extended to all animals” (EHU 9.1), Hume cites circulatory studies of fish and frogs.\(^\text{36}\) He then goes on to make a further, substantive claim that this analogical reasoning can be applied to human and non-human animal reasoning itself. This is one of

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\(^{36}\) Beauchamp’s notes to the Clarendon edition of EHU link Hume’s claims to William Harvey’s *An Anatomical Disquisition on the Motion of the Heart and Blood in Animals*. Beauchamp also cites James Keill’s 1738 *Essays on Several Parts of the Animal Oeconomy*. 
Hume’s great contributions: he links together comparative anatomy with comparative psychology in pursuit of a natural scientific explanation of reasoning.

I do not mean to claim that Hume was the first to evaluate animal minds in comparison to human ones; this is an ancient tradition and one with a vibrant Early Modern history that predates Hume. But it is Hume’s natural scientific methodology that gives this comparison the particular shape and direction that it continues to have to this day. Carruthers’s discussion of animal mentation looks nothing like, e.g., Descartes’s or Locke’s, but it does look substantially like Hume’s.

Fodor (LOT, 57), too, runs a similar argument by analogy. Fodor does a bit to substantiate the naturalistic premise also, arguing that a sharp break between human reasoning capacities and those of non-human animals is *prima facie* implausible, given our evidence. Fodor concludes that because we must take seriously that animals decide—and take seriously that deciding requires some representational capacity—that representation can happen without verbal language. So, Fodor takes it, the fact that non-verbal animals (and not-yet-verbal children) must have a means of representation, means that representation does not take place solely via natural, spoken language in adult, verbal humans, either. While Fodor’s position is contested, it is primarily its presuppositions about what is required for decision that are disputed, not the quality of the argument itself: the argument itself depends on believing that non-human animal minds can be instructive for thinking about human ones, and this is, broadly speaking, accepted.

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37 “Certain kinds of very central patterns of psychological explanation presuppose the availability, to the behaving organism, of some sort of representational system. … To use this sort of model is, then, to presuppose that the agent has access to a representational system of very considerable richness. … Deciding is a computation process, …the consequence of computations defined over the representations of possible actions. No representation, no computations. No computations, no model” (LOT, 31).
The fact that Fodor’s analogy goes uncontested speaks to a larger point: in all three of these arguments by analogy (Hume’s, Carruthers’s, and Fodor’s), the analogy runs opposite to that which might be thought of as the ‘typical’ way; that is, each of these authors argues from claims about animal minds to claims about human minds and not *vice versa*. From this we see that the way of thinking that Hume engages in when he relates human and non-human animal minds is not just informative of the *positions* that contemporary philosophers of cognitive science and psychology argue for, but for the arguments themselves as well.

**VI. The Fifth Thesis: Empiricism about Ideas**

Each of the theses examined thus far arises from treating the mind as apt to natural scientific investigation, and, in its successes, reinforces that same naturalism. For instance, naturalism leads to seeing the mind as active, and the explanatory gains from seeing the mind as active in turn show that scientific naturalism was the right way to be thinking about the mind. Each of the other three theses I have discussed can be used as the basis for a similar argument *mutatis mutandis*. But the four daughter-theses (that is, the theses aside from the scientific naturalism itself) are also linked to each other. I hope that examining the fifth and final thesis—empiricism about ideas—will bring out these connections even more clearly. This might be surprising, because of all the theses, Hume’s empiricism about ideas is the most seemingly dated. In this section, I argue that a strong version of the thesis is still plausible, and that the further one

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38 Considering the evidential origins of the claims involved would make this argument stronger: as studies of non-human animal minds have grown more sophisticated and subtle in the last 250 years, the strength of the arguments has increased as well. This is evident even in the shift from Fodor’s *Language of Thought*, written in 1975, to Carruthers’s 2006 *The Architecture of Mind*: Carruthers is able to cite a number of very subtle and well put together studies across an incredible range of animals (from ants to bees to birds and chimps) to advance his thesis.
strays from it while endorsing the other theses, the more, *ceteris paribus*, one’s theory looks implausible.

**A. Hume’s Empiricism**

All I mean to attribute to Hume with the phrase “empiricism about ideas” is the view that all ideas result from sensory experience (or combinations of other ideas). In particular, Hume claims that ideas are copies of that sensory experience. What exactly Hume means is difficult, but he seems to mean that when I have the idea of green before my mind, I have before my mind (in some, faded sense) exactly what I had before when I observed a patch of green. I simply have it less vividly than I had it when it first was apparent to me. This is Hume’s particular specification of empiricism about ideas. This empiricism is about the mental contents one has, not mental *endowments* or *abilities*.  

As expressed by Hume, this view is unpopular today. Views of the mind’s contents have shifted dramatically since Hume’s time, as worries about, e.g., representation and reference, have been dealt with by philosophers. These worries have led them, for instance, away from talking about ideas and toward talk of concepts (though ideas serve much the same role in Hume’s theory that concepts do in contemporary theories). Despite the fact that Hume’s particular way of understanding the contents of mind has fallen out of favor, the empiricism under discussion here is not primarily a view about what the ideas/concepts are, but a view about the *relationship* between the transient contents of experience and the more permanent contents of mind, whatever they are called.

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39 Contemporary debates over nativism and empiricism often focus around which *processes* of mind must be innate (and to what extent). While the debate about idea/concept empiricism is intertwined with that one, as I will explain below, the primary focus here is the claim about the contents of mind.
Scientific naturalism about the mind gives rise to empiricism about ideas because observation (and our other theories of the natural world) suggest experience as the natural place to look for the origins of the contents of the mind: it seems clear that human beings learn from experience. Further, it seems human beings learn new concepts on the basis of those experiences: substantive biological concepts, for instance, seem to be acquired when taking a biology course. It may turn out to be the case that humans do not learn new concepts, but the regular deployment of concepts that an individual has never previously deployed after being exposed to that concept being used by others (and, oftentimes, a system or several systems—or representations of systems—that it applies to) suggests that the concept is acquired by the individual on the basis of those experiences.

Insofar as this, scientific naturalism about the mind counts in favor of empiricism about ideas: our everyday observations see individuals regularly become exposed to novel circumstances and then deploy concepts they have never deployed before. The novel circumstances serve as the best explanation for the deploying of the new concepts afterward, and the best explanation for why they were never deployed before is that they were not possessed.

Natural scientific thinking about the mind—that is, deploying the patterns of inference we use elsewhere in explaining the natural world—counts *prima facie* in favor of this form of empiricism. The link between exposure to new experiences and deploying of concepts one has never deployed before is unquestionable, and one would have to be already in the grips of a theory to deny that the *prima facie* most plausible explanation for this is that the experiences cause the individual to acquire the concepts: the reason they are not deployed before the experiences is because they are not had; the reason they are deployed after is because they are.
To show how deep the connection between empiricism about ideas/concepts and scientific naturalism runs, I will consider Fodor as a test case. I will illustrate how scientific naturalism (and its consequences) count in favor of idea/concept empiricism by showing how Fodor moved away from his views that were incompatible with concept empiricism, which he held early in his career.

B. Fodor’s Shift in View

Early on in Fodor’s career—in, e.g., *The Language of Thought*—he provided some arguments that concepts could not be learned; thus, he concluded, they must be innate. The view that concepts are innate is *conceptual nativism*. Fodor claims that all lexical concepts—including seemingly erudite or obscure concepts like CARBURETOR, BUREAUCRAT, and BROCCOLI—must be already built in to the mind. His argument was that learning is the best model for acquisition. But concepts cannot be learned, Fodor claimed, because learning requires hypothesis formation. The to-be-learned concept would have to figure in the hypotheses, which would mean that the to-be-learned concept would already have to be possessed. Fodor claimed this argument as a *reductio ad absurdum* of concept acquisition: if concepts are to be acquired, they must be already possessed. Fodor’s early nativist arguments produced a position inconsistent with the kind of empiricism under discussion here.⁴⁰

These arguments for conceptual nativism are radically disquieting, in part because Fodor is arguing from naturalistic premises to a conclusion that seems drastically inconsistent with naturalism. Fodor’s arguments generated a wealth of criticism for just this reason, and many of

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⁴⁰ Nativism and empiricism about concepts are not *conceptually* exclusive as Prinz (2002, ch. 8) reminds us. Whether the members of any empiricism/nativism pair are inconsistent with each other will depend largely on the character of the “innateness” on offer. Fodor’s early career nativism is such that it is in fact inconsistent with this brand of empiricism.
the critiques relied on Humean-type presuppositions. These critiques came from a number of different directions: that Fodor’s view cannot encompass imaginative construction of concepts, that it gets the character of ‘acquisition’ wrong, that it is inconsistent with the psychological data, or that it presupposes too much about content.41

Even if one were to spell out a naturalistic version of nativism consistent with Fodor’s arguments—perhaps a genetic-determinist account, whereby one comes to have the concepts that they have as a result of the genetically-determined organization of their brain—the resulting view would be implausible given Fodor’s view of the content of non-human animal minds. The problem for Fodor is dilemmatic. Fodor will have to say that a brain like mine naturally develops a mind that has seemingly sophisticated concepts like CARBURETOR, BUREAUCRAT and BROCCOLI and either (A) every other non-human great ape does not, or (B) that great apes have these concepts, too. The first option violates continuity: the genetic basis for difference between humans and non-human great apes is so slim that finding CARBURETOR, BUREAUCRAT and BROCCOLI in it is implausible. The second option violates our observations: to my knowledge, there have been no instances of non-human great apes deploying the concept CARBURETOR, and children do not seem to use this concept until after their exposure to carburetors (or representations thereof). If we are to take humans and non-human animals to be as intimately cognitively related as Fodor’s arguments by analogy require, then Fodor’s early career nativism is implausible.

So, while there might be other possible naturalistic stories of concept acquisition that would satisfy Fodor’s LOT-era arguments, it would seem like none of them will be consistent

41 Laurence & Margolis (2002) provide this list as a catalog of the objections to Fodor’s early nativist arguments.
with the other (fruitful) Humean commitments Fodor has endorsed, given the panoply of different types of Humean criticisms.

The drive to maintain these other Humean commitments has pushed Fodor, over the years, away from the stark nativism of his early career and toward what he calls an “attractor” view of the innate character of concepts. On this view, the concepts one develops depend on one’s experience and the geometry of one’s mental landscape (LOT2, 159-169). Fodor claims that if one’s experiences fall sufficiently close to the “attractors” on this landscape, then one develops the concept related to that experience/attractor. That is, I only develop the concept TREE once I have experiences (presumably of trees) that fall close enough to the TREE attractor.

The crucial part of this view, for my purposes, is not that what concepts one develops depends upon one’s experiences—even many staunch nativists can accept that; instead, the crucial part is that Fodor thinks that the topography of the mental landscape itself can shift with experience and the acquisition of other concepts. That is to say, Fodor thinks that I develop an attractor around the area that would correspond to NIGHT FLYING BLACKBIRD only once I have the concepts NIGHT FLYING and BLACKBIRD (LOT 2, 163).

Thus, concepts are only innate to the extent that the starting geometry is innate (LOT 2, 163). It is not the content of the representations that is innate, then. Rather it is something like the capacity to generate such representations that is innate, and there is nothing about concept empiricism that rules out this kind of nativism: Hume allows that the sensorium is innate, and would almost certainly grant that one is more apt to develop certain kinds of concepts on the basis of experience than others.42 Capacity innateness is a completely different kind of innateness.

42 Which Fodor acknowledges of, in particular, Hume: LOT 2, 167.
than representation content innateness, and this former is compatible with scientific naturalism about the mind while the latter seems to be incompatible.\textsuperscript{43}

Fodor’s view of concept acquisition, which he modifies in response to reasonable Humean criticism, goes from strongly implausible to plausible as it moves into consistency with concept empiricism. In modifying his view, Fodor is surely responding to both empirical data and flaws he sees in his own, early arguments. But it is only with scientific naturalism up and running and the particular Humean considerations I have explicated earlier lurking in the background that Fodor does finally get pushed to change his position in this way. I gave just one argument based on the fourth thesis. There are other arguments to be had—as the long list of Humean criticisms I adduced earlier should show—that depend at least in part on the other four theses. This is just an illustration of how the theses might, with further analysis, be shown to be related to each other and function better as a complete unit: I will return to this point below.

\textbf{C. Prinz’s Defense}

In addition to claiming that the other theses push one toward accepting the empiricism, I also claimed that a strong version of Hume’s empiricism about ideas was plausible. Jessie Prinz’s \textit{Furnishing the Mind} (2002) articulates and defends a form of concept empiricism very much like Hume’s: on Prinz’s view, all concepts begin with perceptual representations (or combinations of them), that is, concepts begin in impressions. The key to Prinz’s theory is what he calls “proxytypes.” Proxytypes are patterns of mental activation that serve as stand-ins for other similar forms of activation.

\textsuperscript{43} See Carruthers, et al., (2005). It would appear that radical empiricism about capacities is as unpopular as radical nativism about contents.
On Prinz’s view, concepts result from sensory impressions by being recapitulations of the patterns of activity present in those sensory impressions: the same neurons are activated in the same patterns in the proxytype as were activated by the initial sensory experience. Prinz argues that proxytypes have all the features required to function as concepts. Proxytypes can provide the connections required for an account of reasoning (and other mental phenomena) while giving us a strong empiricism about concepts: the patterns of activation in each proxytype are just the same patterns of activation that were present in the sensory experience. The proxytypes are thus *copies* of the sensory representations in much the same way that Hume’s ideas are *copies* of impressions.

Proxytypes can also, Prinz claims, both better account for the desiderata of a theory of concepts and account for more of the desiderata than any going theory that denies concept empiricism. I do not have time to recapitulate or to defend Prinz’s arguments here, but, I do want to flag that Prinz forcefully argues that our concepts are copies and recombinations of copies. This was Hume’s preferred view: our more permanent mental contents (ideas/concepts) are copies of our transient mental contents (impressions/sensory experience); from Prinz’s prominent defense of the thesis, I take it that the stronger view that ideas are *copies* of sensory impressions—and not just that they *result from* our impressions—is defensible, too.

Whether Prinz is right with his proxytype theory or Fodor with his attractor landscape may very well be an empirical matter. What everyone involved in the debate agrees on, however, is just what Hume subscribed to: human beings have innate perceptual and representational capacities and that it is these capacities, as actuated by our actual sensory experience, that allow individuals to have the concepts they have.
VII. Hume and Contemporary Cognitive Psychology

The innate perceptual and representational capacities that are actuated by our sensory experience enable humans to acquire novel ideas/concepts. That the mind acquires these concepts through its activity shows that seeing the mind as active is linked to the right view in the nativism/empiricism debate: how does the mind get concepts from experience if it doesn’t work and shape the raw materials into something more permanent? Similarly, the argument I ran against Fodor’s nativism depended on continuity between human and non-human animal minds: while an evolutionary psychology-style genetic story of the innate origins of ideas/concepts could be made to be technically naturalistic, if it is strong enough to be inconsistent with empiricism about ideas it will be inconsistent with continuity of human and non-human animal minds, as I suggested above.

The vision offered by the cocktail of human/non-human animal continuity and empiricism about ideas is itself supported by functional decomposition: by identifying that the mind has individually investigable subunits, we enable seeing one of those subunits as responsible for generating concepts from experience. Functional decomposition is itself a direct descendent of seeing the mind as active, as articulated above. In this way, seeing the mind as active serves as a basis for an argument that concludes in endorsing all four daughter-theses.

This argument should show that all four of the daughter-theses, in addition to stemming from scientific naturalism, are connected to each other. There are a number of other interesting and robust connections between the theses, but I only meant to suggest here that the four daughter theses are more than merely consistent with each other; they are connected to and can be seen to be supportive of each other as well.
This is in addition to the fact that, once properly understood, each of these theses has no real naturalistic competitor. So, for instance, while someone might endorse Prinz’s view of the faculties of mind over Carruthers’s, any plausible view will agree to functional decomposition. Denying functional decomposition means no longer playing the naturalistic game. The same thing goes for the views of concepts I discussed earlier: Fodor’s view and Prinz’s view are genuinely at odds, and would entail very different consequences for how human minds work. But both agree to the simple Humean starting point: there’s got to be some way that ideas/concepts get into the mind, and that way is (broadly speaking) through experience. Much the same can be said for the other theses, too.

One reason these five theses recur together in author after author is that they are each, considered individually, the most plausible theses in their area. Another reason, we might presume, is that the four daughter-theses are more than simply consistent with each other. Their individual plausibility and mutual consistency suggests that each of these five theses should be accepted. The arguments that I have given in the chapter suggest that being a scientific naturalist about the mind seems to mean accepting, broadly speaking, this way of spelling out that naturalism.

This specification of scientific naturalism about the mind is first evident in Hume, and it ends up appearing again and again in contemporary philosophy of psychology and cognitive science. As Fodor describes it:

It’s possible to regard the psychology in the *Treatise* and the *Inquiry* as an early attempt to construct a naturalistic theory of the mind within the assumptions of Cartesian Representationalism. My view is that, so regarded, Hume is remarkably perceptive and remarkably prescient about the architecture of such theories; in particular, he’s exceptionally good on what else you have to do if you want to run Cartesian Representationalism as an empirical option in cognitive psychology. (HV, 27)
Hume’s view is praiseworthy and emulable for this reason. Fodor sees himself as carrying on in Hume’s footsteps, as does Carruthers, who says of Hume’s naturalism and attempt “to ground an empirical science of psychology” that “the framework that he laid out has proven immensely influential among working psychologists ever since” (AM, xiv-xv), Carruthers himself among them. Prinz, similarly, sees himself as working directly in the Humean tradition, rehabilitating Hume’s view in light of contemporary objections and research. Each of these authors acknowledges their debt to Hume, but I have done my best to spell out just how deep that debt goes and, in so doing, show why Hume’s view is still so vitally important.

VIII. Conclusion of the Chapter and the Dissertation

In this chapter I have shown that Hume’s view of the workings of the mind still matters today: there are numerous philosophers of psychology and cognitive science working on positions that draw essentially from Hume’s view. Examining the view that gave rise to these positions helps give a better picture of the linkage between some of its parts, and guides us to consider questions like those briefly addressed above, regarding the character of the linkage between views of animal cognition and human cognition.

In this dissertation as a whole, I have shown that a certain method of investigating Hume was fruitful. I wanted to show that, while it is true that Hume often deploys his terms in multifarious ways, by paying close attention to the different uses of particular terms we could make headway on some interpretive disputes in current Hume scholarship. The work that I did in chapters two through six shows this neatly: by starting with “inference,” a central term, and working forward through “argument” and “reasoning” to the faculty terms “reason” and “the understanding,” I showed that by paying careful attention to the terms themselves we could derive a consistent interpretation that stood up to the objections leveled against the current non-
skeptical interpretations. It was only once I had given this interpretation that I could even approach the question of what makes Hume’s view worth holding (or at least worthy of serious consideration), as we finally saw in chapter seven.

The interpretation I presented succeeds where similar views faced problems, but it also shows how those authors were approximating the correct view. Because my view succeeds against the common objections to interpretations of Hume that take him to be primarily engaged in cognitive science in *Treatise* 1.3, I take it that it is the correct interpretation; it is, at least, the best and most defensible interpretation currently available.
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See also Botterill & Carruthers (1999).


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