

JUST IMAGINING THINGS:
HUME'S CONCEPTION-BASED ACCOUNT OF COGNITION

by

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EPIGRAPH

A system of consequences, however absurd, acutely and justly drawn from a few principles, in very abstract matters, is of real utility in science, and may be made subservient to real knowledge. This merit MR HUME's metaphysical writings have in a great degree.

Thomas Reid, *Essays on the Intellectual Powers of Man*, II.12

DEDICATION

To Mom and Dad:

I could not have succeeded without your love and support.

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ABSTRACT

In his *Treatise of Human Nature*, David Hume sought to revolutionize the science of the human mind in the same fashion that Isaac Newton had revolutionized physical science, attempting to explain the mechanisms of human thought and behavior in terms of just a few principles sharing the same sort of simplicity and elegance as Newton's basic laws. A major component of this project was to provide reductive analyses of all acts of human cognition in terms of acts of simple conception or apprehension of an object. I term this act *objectual conception*, and characterize Hume as seeking to reduce other acts of the understanding—such as acts of judgment and of reasoning—to it. Given Hume's systematic approach to philosophy, these views about the understanding shape his views in a broad array of areas. While Hume's theory of cognition has been a major focus for Hume scholars, the limitations arising from Hume's Newtonian aspirations have routinely led them to the conclusion that Hume's explanatory resources are utterly inadequate to his needs.

In my dissertation, I defend Hume from these doubts by investigating an array of objections offered against him by his contemporary Thomas Reid and echoed by more recent scholars. While I argue that Hume's system evades Reid's objections, the concerns raised by Reid are nonetheless quite valuable, insofar as they help to reveal some of the core philosophical demands on a theory of cognition.

In the first chapter of the dissertation, I present Hume's framework for analyzing mental states: the basic elements of his mental ontology, including the range of interactions there are among those elements. Merely considering a certain object—or, equivalently for Hume, *imagining* that object—is nothing more than (presently) possessing an idea of it. Here, Hume's account is relatively orthodox. His radical divergence from the orthodoxy of the day comes in his view that all other acts of the understanding—acts of judgment, inference,

and reasoning—can be analyzed in terms of acts of objectual conception with varying degrees of force and vivacity. In order to best understand Hume’s goals in offering such analyses, I also investigate his views on explanation. The result of my discussion is an outline of Hume’s aims and resources, which provides a basis for some general interpretive strategies that I employ throughout the dissertation. In the four remaining chapters, I defend Hume from a number of concerns raised by Reid, showing how these concerns arise from underestimations or misunderstandings of Hume’s views.

In the second chapter, I present Hume’s account of existential belief, and Reid’s objection that this account conflates differences in kind with differences of degree. Hume’s view is that that merely imagining an object differs from believing that it exists only by the force/vivacity with which the idea of the object is present to the mind. The force of Reid’s objection can be brought out by observing that, on Hume’s view, a truth-apt state like *believing that the sun exists* has the same content as, and involves the same activity as, the decidedly not truth-apt state of *imagining the sun*. The two states differ only in degree of attendant strength or vivacity. While there is a real challenge here (i.e. explaining the differences between the two acts), I argue that Hume’s differences of degree are sufficient to answer that challenge. On the resulting interpretation, Hume’s fundamental attitude of cognitive commitment is *belief in* (in the sense of, for example, believing in ghosts) rather than *belief that*.

In the third chapter, I present Reid’s objection that Hume’s system precludes states of *denial*. Reid’s concern is that, for a given content, Hume can only distinguish between the states of affirmation and uncertainty, with no room to account for states of denial. In the course of presenting a similar objection, Barry Stroud points out that there are two ways one can approach the issue of relating affirmation and denial. One can maintain that they are

related a) by being *opposite* activities with the *same* content, or b) by being the *same* activity with *opposite* contents. I show that powerful objections offered by Reid and Stroud only succeed against views which adopt the first understanding of the relationship, and argue that Hume avoids the concerns, since, on a careful reading of the text, he is properly understood as adopting the latter understanding of the relationship.

The remaining two chapters concern Reid's four objections against the principle that conceivability implies possibility. As Hume's adoption of this principle places some severe constraints on his system — especially as regards judgments of possibility and impossibility, as well as for an account of mathematical/demonstrative reasoning — answering these objections is central to my defense of Hume's account of judgment and reasoning.

In chapter four, I focus on the first two challenges, one regarding linguistic understanding and the other regarding modal thought. Reid argues that understanding sentences which express impossibilities will require the ability to conceive of impossibilities. As Hume does not provide an explicit, systematic theory of language, I do not attempt to offer a specific interpretation of Hume's views on that front. Instead, I demonstrate which assumptions about a theory of language are built in to this linguistic challenge, and argue that the objection succeeds against Hume *only* if there is good reason to think he would have been committed to those assumptions. The latter challenge concerns thoughts *about* possibility and impossibility. Here the objection is that we can make the judgment, about some impossibility, that it is impossible, which requires conceiving of that impossibility. In responding to this objection on Hume's behalf, I develop an account of modal thought that is suggested by Hume's own comments on possibility and impossibility, showing that it does not conflict with Hume's commitment to the inconceivability of impossibilities.

Finally, in chapter five, I turn to Reid's objections about mathematical and demonstrative reasoning. The first of the two objections is that Hume's system legitimizes what I term "demonstration by imagination", which is suspiciously absent from mathematical practice, and gets the wrong results. I argue that Reid's objection here assumes too weak a notion of what it is to imagine something (for Hume's system), and that, properly understood, such demonstrations by imagination would amount to constructive mathematical proofs. Thus, Hume's system is correct to legitimate them. The second of the two is that Hume's system renders demonstration by *reductio ad absurdum* impossible, which is curious given that its use is not only prevalent in mathematics, but also productive and useful. Reid's objection here depends on Hume accepting that the state of *supposing C* cannot occur without an accompanying state of *conceiving C*. I argue that Hume has no such commitment, even though supposition is to be defined in terms of conception. I present an interpretation of Hume's account of supposition that allows for *reductio* arguments, while respecting Hume's reductive aims, in order to defend Hume's commitment to the view that conceivability entails possibility.

PREFACE

Being a Hume scholar in your late twenties is a good way to keep your ego in check. The Scottish philosopher David Hume was born in 1711, and published the three books of his *Treatise of Human Nature* in 1739 and 1740. The *Treatise*—unquestionably one of the most important works of philosophy ever written—was composed before Hume was 28 years old, and published before he turned 30. To this day, some 235 years after his death, Hume’s influence is still felt in virtually every area of philosophy.

The full title of Hume’s masterwork is “A Treatise Human Nature: Being An Attempt to Introduce the Experimental Method of Reasoning Into Moral Subjects”. By “Moral Subjects” here, Hume has in mind the sciences concerned with human nature: human reasoning (logic), human tastes and sentiments (morals and criticism), and human society (politics). The first book of the *Treatise* focuses on logic, understood as the science of human reasoning. This means that his project in this book rests at the intersection of three different subjects: a) what we what we would now think of as psychology and cognitive science, b) the philosophy of mind and language, and c) epistemology (or the philosophical investigation of knowledge). Hume’s approach to this is to start with direct observations about the workings of the human mind, and systematize these observations. The “experimental method” Hume seeks to apply does not go beyond the observations that are directly produced by experience. Hume is thus limited to the immediate deliverances of sense perception and the imagination’s ability to rearrange parts as the only basic elements of his theory of human mental activity. In a sense, Hume’s constraints, in relation to the magnitude of his project, would be akin to someone hoping to build a fully-functional spaceship using only twigs and vine.

My Project

The following dissertation is a work of historical philosophy. My aim is to defend Hume's views about thought, judgment and reasoning from criticisms that were offered by his contemporary Thomas Reid and echoed by more recent scholars. I do this despite the fact that I think Hume's views are largely misguided (a point I will come back to later).

In Hume's posthumously published autobiography he reveals that he consciously resolved to avoid responding to his critics, and also that he was able to inflexibly abide by this resolution (Hume [1805]). Hume's concern was that if he responded to some of his critics, and not others, the ones he didn't respond to would think that this was because he had nothing to say in response to them. By abstaining from any responses whatsoever, no one would be in a position to think that he was failing to respond simply because he had nothing to say. Whether or not we think this is a sensible plan, it means that when, for example, Thomas Reid, offered any number of objections to Hume's views, we nowhere have Hume's official statement of where he thinks Reid's objections go wrong. Given that several of Reid's objections have a lot of intuitive pull, many of these objections have long survived and have recurred in discussions by contemporary scholars.

My project then, in this dissertation is not to ask, "Are Hume's views on the structure of mental activity correct?", but rather, to ask, "Does Hume's system give him enough resources to answer Reid's worries?". I argue that none of the (roughly) seven to ten objections from Reid that I consider actually make trouble for Hume's views.

Hume's Philosophical Virtues

Given that I think Hume's approach is pretty misguided, and that his views are all pretty likely to be false, what is the point of engaging in this defense? To answer this question, I

need to (briefly) explain my view of what I am doing when I do historical philosophy. People who work on historical philosophy are often categorized (by others or by themselves) in terms of where their work falls on the spectrum between pure historical inquiry (that happens to be about philosophers) and pure philosophical inquiry (that happens to mention figures from the past). In my experience, most of us doing historical philosophy are somewhere in the middle, but with a pretty clear sense of which side of the mid-point we are on. When it comes to the question of which projects are valuable, the reality is that there are valuable projects to pursue at pretty much any point on the spectrum, but I am personally most interested in the project of studying the philosophical positions of historical figures to help make progress on contemporary debates. Far from answering the initial question, this should actually bring the worry behind it home: I am skeptical of Hume's approach to theorizing about the structure of human mental activity and pretty doubtful of his views. So, how can studying Hume help make progress in the ongoing philosophical debates about the structure of human mental activity?

First, it helps that Hume was a genius. It is likely that, in spite of the drawbacks to his approach, and implausibility of his views, he still produced some sharp insights that are directly relevant to the contemporary debates. Second, it helps that Hume was very good at sticking to his system, and understood his system well. It is likely that, if his starting assumptions force him to say one thing rather than another about some topic he discusses, that he recognized both which thing he was forced to say, and which of his assumptions were forcing him to say it.

Third, it helps that Hume adopted strong/strict constraints. This limits his options, which makes it much easier to tell when they have all been exhausted. Fourth, it helps that his system appears to be absurdly inadequate. This makes it easier to identify things his

system needs to do in order to be viable that there is reason to doubt that it can do, which, in turn, makes it easier to figure out how to go about investigating the adequacy of his system.

Except the first of these items, each of these goes to explaining why we can expect to have success at learning about Hume's system. In fact, they combine to suggest that it should be easy to learn what Hume's system can and cannot do *as well as why it can or cannot*. And this is where I think we gain a great deal of value for contemporary debates by examining Hume's system. If we can learn exactly what we want to be able to do that Hume's system can't do, and why Hume's system can't do it, we'll have learned something important about what a system has to look like in order to do that thing.

To offer a crude analogy: if I can figure out that some particular recipe for soufflé is bad because it gives the wrong instruction on how much to beat the eggs, then, I've gotten myself pretty close to having a good soufflé recipe. This, roughly, is how I take historical philosophy (as I pursue it) to contribute to the project of contemporary philosophical inquiry.

CHAPTER 1: HUME'S RESOURCES

Introduction

The project of this dissertation is to investigate the prospects for David Hume's systematic theory of human cognition, as that theory is presented in Hume's *Treatise of Human Nature*. The first steps in our investigation are to articulate Hume's aims and methods, as well as to catalog the fundamental resources of Hume's system. In the process of carrying out these tasks, I will also have an opportunity to outline some of the interpretive strategies that I will employ throughout the dissertation, and show how Hume's own conception of his project lends support to the interpretive strategies I will pursue.

Before getting into the details of Hume's system, it will be helpful to sketch the key elements of the system and present a 'big picture' take on Hume's project. Hume was a self-consciously systematic philosopher, and Hume's views on the proper limits of explanation play a large role in shaping his theory of the human mind.

Hume's approach to explaining mental phenomena was to seek after broad generalizations based in observable commonalities among the diverse particular mental phenomena. This process would ultimately conclude when no further generalizations could be offered, leaving the system to rest on some ultimate principles which are not themselves subject to explanation. It is a crucial feature of Hume's approach that the ultimate principles of this theory are not hypotheses or theoretical postulates, but rather, unifying generalizations verified by the data. It is in this sense that Hume's views on explanation echo Isaac Newton's use of gravity as a fundamental principle and the view he so famously expressed with the latin *hypothesis non fingo*.¹

So, Hume's aim is to pursue unifying generalizations about our mental lives that are as broad and simple as possible, but which are nonetheless validated by the concrete particular

occurrences we are taking as data. And this is the stopping point for our explanations. Just as Newton did not seek to attribute a cause to the force of gravity, Hume will not seek to produce an account that explains why these tendencies, rather than some others, are the most general associative tendencies of the human mind.

Hume's method of data collection is, loosely put, introspective. The principle determinant of what counts as the data to be explained is Hume's awareness of his own mental life. Insofar as the theory Hume propounds was generated in such a manner, it seems proper to take Hume's claims about the nature of his mental life as *prima facie* reliable, at least for purposes of extrapolating details of the theory from the various specific things we are told about it. Hume may be completely wrong about the introspective character of his own mental life (or of human mental life in general), but the theory he proposes is based on his assessment, and our method should take account of that.

A second parallel to Newton emerges when we look at the resulting theory. Newtonian physics is distinguished by the relatively small stock of primitive elements it requires to accommodate the rich variety of physical interactions among bodies (both celestial and terrestrial). His theory contains a small set of laws describing the behavior of particles based on the mass and velocity of those particles. With this elegant system, Newton was able to account for an enormous range of physical behavior. Hume's system is similarly spartan in its fundamental resources. Mental activities, for Hume, can be analyzed in terms of perceptions (Hume's basic mental entities), which generally possess some sort of content or, more neutrally, some sort of intrinsic character, as well as an extrinsic feature that Hume terms "force" and "vivacity" (among other things). In combination with a small set of principles describing associative tendencies among perceptions, Hume hopes to have a

system that does for the science of the human mind what Newtonian mechanics did for physical science.

The shape of Hume's system is the product of two things: a) a modest conception of the aims of explanation, and b) a relatively austere set of resources with which to analyze/explain mental phenomena. Both are consequences of Hume's empiricist methodology and commitment to systematic philosophy. With this overview in place, we are now in a position to attend to the details of Hume's methods, aims, and fundamental resources.

Section 1. Humean Explanation

Hume tells us that, for his project in the *Treatise*, he “proposes to anatomize human nature in a regular manner, and promises to draw no conclusions but where he is authorized by experience” (T, p. 646).² Hume's introspective access to his own mental life clearly plays a role in determining what he judges to be “authorized by experience”. I should note here that my methods do *not* involve a direct comparison between the claimed or implied qualitative character of Hume's experiences and the apparent qualitative character of my own experiences. One reason not to attempt such comparisons is that it is not always clear how to understand the terminology Hume uses in characterizing his experiences. An example is Hume's use of the terms “force” and “vivacity”. It is not clear that we can separate the question of what such terms are intended to suggest about the character of Hume's experiences from other interpretive questions in order to directly ask whether it is true that our impressions are more vivacious than our ideas. Simply put, a far more productive approach to investigating Hume's views is what I term “interpretive algebra”. To the best of our ability, we should treat terms like these as Hume's technical labels for some as-yet-unknown feature of experience, examine what would have to be true of some feature

of experience in order for it to do the work that Hume requires of it, and then see if there is any feature of our experience that meets those demands (or, at least, very nearly meets them).

The most important thing to keep in mind regarding Hume's explanatory aims in the *Treatise* is that Hume explicitly regards explanation as (eventually) giving out. Though I don't take this observation about the limits of Humean explanation to be especially controversial, it is worth going through a couple of passages in which this point is starkly illustrated.

And tho' we must endeavor to render all our principles as universal as possible, by tracing up our experiments to the utmost, and explaining all effects from the simplest and fewest causes, 'tis still certain we cannot go beyond experience; and any hypothesis, that pretends to discover the ultimate original of qualities of human nature, ought at first to be rejected as presumptuous and chimerical. I do not think a philosopher, who would apply himself so earnestly to the explaining the ultimate principles of the soul, would show himself a great master in that very science of human nature, which he pretends to explain, or very knowing in what is naturally satisfactory to the mind of man.

T, p. xvii-xviii

This quote seems, to me, an absolutely clear statement of the view that explanation gives out at the limits of experience, that attempts to go beyond such limits produce pretend explanations, at least as far as the science of human nature is concerned. Shortly after this passage, of course, Hume makes it clear that this follows from principles about science and explanation in general:

But if this impossibility of explaining ultimate principles should be esteemed a defect in the science of man, I will venture to affirm, that 'tis a defect common to it with all the sciences, and all the arts, in which we can employ ourselves, whether they be such as are cultivated in the schools of the philosophers, or practiced in the shops of the meanest artizans. None of them can go beyond experience, or establish any principles which are not founded on that authority.

T, p. xviii

Again, Hume's position in this passage strikes me as sufficiently clear that paraphrase would be unnecessary. What is worth noting, however, about this pair of passages, is that, besides making it clear that explanations stop at the bounds of experience, Hume also makes it clear to us that the explanations he is looking for are the most parsimonious unifying generalizations directly confirmed or validated by the data. To give a toy example, we might consider the observations that lions hunt prey, that tigers hunt prey, that leopards hunt prey, etc. A potential explanation of this fact, for Hume, is simply the broader generalization that great cats hunt prey. Note that this generalization is not a hypothesis, posited to explain the behavior of lions; rather, it is a generalization that unifies a number of other observations. Of course, our ideal goal would be to find the broadest group G about whom our experiences directly confirm the claim that members of G hunt prey. Supposing we determine what group that is. For Hume, the ultimate explanation we can give of the prey-hunting behavior of lions (or of an individual lion) is simply that lions (or that lion) are members of G, and members of G hunt prey. We move into the realm of pretend explanations if we propose that there is an underlying nature to the members of G one of the elements of which is an occult quality like predatory spirit. Or, as Hume eloquently puts it:

Nothing is more requisite for a true philosopher, than to restrain the intemperate desire of searching into causes, and having established any doctrine upon a sufficient number of experiments, rest contented with that, when he sees a farther examination would lead him into obscure and uncertain speculations. In that case his enquiry wou'd be much better employ'd in examining the effects than the causes of his principle.

T 1.1.5, p. 13

Again, I don't take this to be especially controversial as a matter of Hume interpretation, but it is worth noting, so that we are better able to see, as we proceed, which explanatory

burdens Hume takes to be within the scope of his project, and which explanatory burdens Hume takes to be beyond the scope of any project.

Section 2. The Humean Theory of Mental States and Transitions

I have found it helpful, in thinking about Hume's system, to adapt the contrast between statics and dynamics. As I'll be using this distinction, it is intended to differentiate questions about the state of a mind at a time, and questions about that state (such as, questions about the fundamental elements from which that state is composed, and their synchronic, or "snapshot" features) from questions about transitions between states, and the rules governing such transitions.

The way Hume presents the different components of his system not only suggests such an analysis, but is cleaved in precisely the correct place for pursuing such an analysis. Hume gives us a theory of ideas (or, more properly, a theory of perceptions), and a separate theory of the associations among ideas, which combine to describe, for us, the states a mind can be in, and the various tendencies which combine in the mind's transition from one state to another. In what follows, I will simply ignore some complications that arise for passions, though much of what I say applies to Hume's account of emotions and the will as well as to his account of cognition and the understanding.

The Humean Theory of Perceptions (HTP)

Hume's broadest term for the particular mental occurrences he is concerned to investigate is "perception". Perceptions can vary in the strength of their attendant "force" or "vivacity" or "liveliness" (with the stronger class being designated "impressions" and the weaker class being designated "ideas"). This is an extrinsic feature. Perceptions possess

qualitative characters (in the case of impressions of sensation, these are related directly to the way the perceptions look/feel/taste/etc.). This is an intrinsic feature. Pretty much everything about this picture is outlined clearly in the first pages of the main body of Book 1 of the *Treatise*, which I will not reproduce here. To individuate perception-types in the most basic manner relevant to the science of human nature, we need only these two features: an intrinsic character, C, and an extrinsic vivacity, V.

Thus, we can represent the types of perceptions, for our most basic theoretical purposes, as ordered pairs $\langle C, V \rangle$. The content of a perception—i.e. what it is a perception *of*—is a function of its intrinsic character. Thus, for any two perceptions, P1 and P2, P1 and P2 have the same content only if P1 and P2 share the same value for C. Similarly, any change in intrinsic character will change their content. Thus, for any two perceptions, P1 and P2, if P1 and P2 have the same content, then P1 and P2 have the same value for C. Given both of these results, we can use intrinsic character as a basis for sorting perceptions into equivalence classes of sameness of content. In essence, perceptions can be treated as pairings of a *content* with an attendant vivacity.

The only other feature relevant to this way of individuating perceptions is their attendant vivacity.³ While Hume's hodge-podge collection of terms to reference this feature are suggestive of very different things, it is a consistent feature of Hume's discussion of vivacity that it comes in degrees of strength. Thus, regardless of what else we accept about vivacity, the values for V can be organized by degree, such that, for any two values, v1 and v2, exactly one of the following relations obtains:

- i) $v1 > v2$
- ii) $v2 > v1$
- iii) $v1 = v2$

As noted above, one way of subdividing perceptions, perhaps the most significant, is into the types *impressions* and *ideas*. According to Hume's discussion of the difference between impressions and ideas, it turns out that there is some threshold such that perceptions in which the value for V is greater than that threshold are impressions, while perceptions in which the value for V is less than that threshold are ideas.⁴ For convenience, I will use 'H' to indicate the range of values higher than t, and 'L' to indicate the range of values lower than t.

This provides us with a good opportunity to outline the method I alluded to earlier as "interpretive algebra" as well as to articulate the reasons why I will not be wading into the interpretive debate about what vivacity is. Above, we have outlined a formal feature (the ability for individual values to be organized along a scale of strengths by way of these pairwise comparisons), which could be possessed by any number of aspects of our experiences. We could organize perceptions by the amount of resistance they give, taken as a strength, to our willful attempts to dismiss them. Alternately, we could organize them by the phenomenological intensity of their "colors" (literal with visual impressions, and metaphorical with those of other senses), taken as strengths. Or, if we desired, we could organize them by the degree to which they demand our attention, taken as strengths, or by the ease of calling them to mind, taken as degrees of strength. The reason I canvas this handful of options, stressing that each one would license us to arrange the perceptions on a scale of strengths, is that each of these is at least a moderately plausible way of taking one of the words that Hume uses to indicate this feature of a perception. Hume's list includes, "force", "vivacity", "liveliness", "steadiness", "solidity", "power", "firmness", and "intensity". Since this list of terms varies greatly in meaning, it seems hopeless to choose a

single sense of a single term from the list, and declare it to be the one that Hume had in mind. Particularly since Hume tells us not to do that:

This variety of terms, which may seem so unphilosophical, is intended only to express that act of the mind, which renders realities more present to us than fictions, causes them to weigh more in the thought, and gives them a superior influence on the passions and imagination. Provided we agree about the thing, 'tis needless to dispute about the term.

T p. 629

As we will see in Chapter 2, a refusal to prematurely assign an interpretation to Hume's use of "vivacity" will help us when we seek to understand Hume's analyses of different mental operations. These mental operations are typically differentiated in terms of differences in their degrees of vivacity, and consequently, the quickest way to misinterpret Hume's proposed analyses is to rush to judgment on the nature of vivacity.

Another way of subdividing perceptions, also crucial for Hume's framework, is into the types *complex* and *simple*. Regardless of what else we accept about the relevant notion of simplicity, the values for C can be organized compositionally, so that, for some privileged set of values for C—the "simple" values—every value for C is either among that set, or is to be analyzed as an arrangement of values from that set. Any perception whose value for C is in that set is a simple perception, any perception whose value for C is a non-trivial arrangement of values from that set, is a complex perception. For convenience, I will sometimes represent complex values in terms of an arrangement, $A_n(\dots)$, and a set of elements so-arranged. However, except when a restriction is indicated, my use of character/content variables (c_1, c_2, \dots, c_n) will range over both simple values and complex ones.

In principle (and, for that matter, in Hume's actual view), these distinctions can crosscut, producing a four way division of perceptions: simple impressions, simple ideas, complex impressions, complex ideas.

On this way of formalizing Hume's framework, we have a reasonably succinct way of making precise the substance of Hume's central maxims in the opening sections of the Treatise. The first maxim, Hume's infamous copy principle, is the claim that every simple idea, in its first appearance, is derived from a simple impression, which is exactly correspondent to it, and which it exactly represents. Or, in terms of this formalism: For any simple content c_1 , if there is an occurrence of the perception $\langle c_1, L \rangle$ at some time (in a given mind), then, there was an occurrence of the perception $\langle c_1, H \rangle$, at a prior time (in that mind).

I will call the second maxim, which is the subject of far less discussion, the "recombination principle." Hume puts this principle forward after observing that, in presenting ideas copied from impressions to the mind, "the imagination is not restrain'd to the same order and form with the original impressions" (T 1.1.3, p. 9). This observation leads Hume to present his "second principle, *of the liberty of the imagination to transpose and change its ideas*", elaborating thus:

The fables we meet with in poems and romances put this entirely out of question. Nature there is totally confounded, and nothing mentioned but winged horses, fiery dragons, and monstrous giants. Nor will this liberty of the fancy appear strange, when we consider that all our ideas are copy'd from our impressions, and that there are not any two impressions which are perfectly inseparable. Not to mention that this is an evident consequence of the division of ideas into simple and complex. Where-ever the imagination perceives a difference among ideas, it can easily produce a separation.

T 1.1.3, p. 10

There is quite a bit packed into this brief discussion of the second principle. What is absolutely clear from the discussion is that Hume takes this principle to explain how we can have ideas of fantasy beings we have never encountered. Additionally, the principle is alleged to be a consequence of simple/complex distinction as applied to ideas. It is not

immediately obvious, from the text, exactly what this freedom to “transpose and change” ideas is supposed to amount to (though some very natural interpretations spring to mind). The most natural interpretation that accords with use of “transpose” in the statement of the principle would tell us that one can produce new complex ideas which differ from existing complex ideas by replacing component simple ideas with different component simple ideas. More formally: for any simple idea $\langle c_1, L \rangle$ and any complex idea $\langle A_1(c_2 \dots c_n), L \rangle$ (possessed by a given mind), the imagination has the power to produce a complex idea which differs from $\langle A_1(c_2 \dots c_n), L \rangle$ by the substitution of c_1 for one of its component simple ideas.⁵ However, this is likely an overly simplistic interpretation of the principle, as it produces odd results when one considers replacing simple ideas from one sense modality with simple ideas of other sense modalities (what would it be to have an idea that is identical to my mental picture of a rose, but which replaces one of the simple colored component ideas with a flavor?). As the point of the present exercise is to illustrate how we might employ the formalism to encode Humean principles, I will simply note that I do not endorse the foregoing interpretation of the recombination principle, rather than engaging in a tangential attempt to revise the formal version of this principle so that it avoids such oddities. One thing worth noting before moving on, however, is that the end of this passage, as well as other discussions, suggest that Hume conceives of this productive power in terms of the mind’s capacity to break down complex ideas coupled with the mind’s capacity to freely combine simple ideas. Thus, the power to transpose ideas might be more accurately thought of as the joint powers of assembly and disassembly.⁶

It is worth pausing to ask, at this point, whether we gain much advantage from using this ordered n-tuple formalism, introduced above. For many purposes (including a fair number of my purposes), the answer is “no, or at least not much”, and consequently, I will often

refrain from actually recasting particular elements of Hume's account in this manner. I hope that spelling things out this way has helped clarify how I am conceiving of perceptions, and so one possible benefit was to serve as illustration, if nothing else. However, for some purposes, it is extremely useful to have a formal representation of Hume's framework. In chapter 3, for instance, it will be much easier to draw out the force of Thomas Reid's objection to Hume about states of denial, as well as to see what is needed to resolve it, by framing the objection in terms of this formalism. Mostly, however, the formalism will remain in the background.

I haven't explained why this way of individuating perceptions is the appropriate one. For instance, the principle I just spelled out references the times of occurrences of these perceptions. Why not individuate perceptions in terms of a character, a vivacity, and a time index? (Or: ...and a spatio-temporal index?, etc.). When we turn our attention to the Humean Theory of Association, it will be clear why this manner of individuating is preferable. Associative links and invariant relations will obtain between perceptions individuated in the manner I have just described. Treating them as 3- or 4-tuples, would simply require us to add a lot of distracting quantification over the third and fourth values when describing the associative tendencies.

There is still an important element of the statics of Hume's theory that we have not yet addressed. Setting aside difficult questions about what it is that grounds the fact, for a pair of perceptions, that they co-occur to a single mind, rather than that they are experienced by separate consciousnesses, it is important to note that the state of a mind, at a time, is not given by a single perception, but rather, by the set of all that mind's perceptions at that time. So, to specify the state of a mind M at a time, we would use a set of perceptions, $P_1 \dots P_n$, (potentially coded for some principle of organization among these perceptions, e.g. spatial or

temporal). And with that, we are in a position to sketch Hume's account of mental dynamics, embodied in his theory of association.

The Humean Theory of Associations (HTA)

Hume's associationism is introduced in Treatise 1.1.4, "*Of the connexion or association of ideas.*" Hume notes that, given his recombination principle, nothing has yet been said to explain the regularity with which a single mind behaves over time:

Were ideas entirely loose and unconnected, chance alone would join them; and 'tis impossible that the same simple ideas should fall regularly into complex ones (as they commonly do) without some bond of union among them, some associating quality by which one idea naturally introduces another. This uniting principle among ideas is not to be consider'd as an inseparable connexion, for that has already been excluded from the imagination: nor yet are we to conclude that without it the mind cannot join two ideas; for nothing is more free than that faculty: but we are only to regard it as a gentle force, which commonly prevails, and is the cause why, among other things, languages so nearly correspond to each other; nature in a manner pointing out to every one those simple ideas, which are most proper to be united into a complex one. The qualities, from which this association arises, and by which the mind is after this manner convey'd from one idea to another, are three, *viz.*
RESEMBLANCE, CONTIGUITY in time or place, and
CAUSE and EFFECT.

T 1.1.4, p. 10-11

Two phenomena have been identified as explanatory targets for HTA. One is that HTP alone cannot explain the prevalence of some complex ideas over others. And I think Hume is certainly correct about this. Insofar as HTP predicts anything about the relative prevalence of various complex ideas, we might be able to extrapolate something like a higher proportion of complex ideas that were preceded by directly correspondent complex impressions (since those complex ideas are possessed without exercising any voluntary power of the mind), but we certainly wouldn't have any explanation of why similar

adventitious complex ideas re-occur (either over time or between agents). The second phenomenon to be explained is the manner of the mind's transition between ideas (as distinguished from the production/construction of new ideas). In a sense, we could fold the former phenomenon into the latter, as idea construction is a process by which one moves from a state of conceiving several simple ideas to a state of conceiving a complex idea; but there is good reason not to conflate the two phenomena. The former issue is generally concerned with the introduction of new contents; an expansion of the class of things we can think about, whereas the latter is principally concerned with the movements of the mind between various thoughts already in its repertoire. This isn't to say that the two phenomena have no interplay whatsoever, but it is worthwhile to maintain some distinction between the two things to be explained, as the former is addressed, relatively compactly, in Hume's discussion of relations, modes, substances, and abstract ideas (T 1.1.5-7) while the other is not really centrally explored until part 3 of book 1, when Hume endeavors to explain belief in matters of fact and the process of causal inference.

It would not be fruitful to go through all the details of Hume's views of philosophical relations at present, but there are some important aspects of them to briefly highlight. When introducing his discussion of relations *as a category of complex idea*, Hume distinguishes between a philosophical use of the term "relation" which encompasses any circumstance in which we might wish to compare a pair of ideas, and a common use of the term "relation" which encompasses only those pairs of ideas that are naturally united in some substantive way. The former sort are termed "philosophical relations", and are a subset of our complex ideas. The latter sort are termed "natural relations" and are the elements of Hume's system which have been suggested as the basis for the theory of association. It is crucial for us not to overlook this distinction, as natural relations are intended to explain the prevalence of

some complex ideas over others, while philosophical relations are a class of complex ideas (meaning that the relative prevalence of some philosophical relations over others is one of the things Hume intends to explain by appealing to natural relations). In other words, the passage above clearly refers to resemblance, spatio-temporal contiguity, and cause/effect relationships as natural relations.

HTA generally tells us that if a set of ideas is strongly resembling, it is more likely to form a complex idea, that if a set of ideas is closely distributed in space or time, it is more likely to form a complex idea, and that if a set of ideas is causally networked, it is more likely to form a complex idea. This would be a sketch of the story Hume has to offer about the phenomena of complex idea construction. Additionally, HTA tells us that the flow of our thoughts—our movement from one idea to another—is governed by the same principles of association. And this is, particularly for our project, the vastly more interesting aspect of HTA. Not only does it bear on which ideas lead to which, it also determines the transference of vivacity from one idea to another. This should allow us to see why it makes sense to individuate perceptions as content/vivacity pairings: associations are sensitive to the intrinsic character/content of the perception, and govern transfers of force and vivacity.

The Moving Parts of Hume's Model of the Mind

Suppose we wished to program a computer model of Hume's theory of the understanding. HTP is a sort of guide for how to encode the most basic components of the total states a mind could be in (all the sets $\{P_1 \dots P_n\}$, roughly). That does not yet give us the whole field of possible total states of an understanding at a time, however. Hume recognizes that you could have two individuals with the same occurrent perceptions, but who differ in what those perceptions will lead them to expect. For instance, A and B may be

presented with qualitatively identical visual experiences of a room filled with smoke, with this experience leading A, but not B, to expect fire. At the moment A and B first have the visual experience of the smokey room, they may have qualitatively identical snap-shots of the occurrent components of their states of mind, but they clearly differ in their total state of mind at that moment. For our computer model of these Humean minds to capture the total state of a mind at a time, it would need to record the occurrent mental operations *and* the mind's associative tendencies at that moment.⁷ I'll use "AT" (with some numerical index) to indicate the different associative tendencies a mind could have, and thus, the total state of a mind at a time would be given by a pair $\langle \{P1...Pn\}, AT1 \rangle$. So that is one way in which our system would need to keep track of elements of HTA. But, as we observed, not all minds have the same associative tendency, and in fact, individual minds generally don't have exactly the same associative tendencies over time. This is because, while some of the grounds of associative tendencies are stable (relations of resemblance), others are, on Hume's view, dynamically modified by one's experiences over time (this is the case with both spatiotemporal and causal associations). Thus, if we want our computer model to capture HTA, it would have to tell us how to get from pairs $\langle \{P1...Pn\}, A1 \rangle$ to a new total state of the mind at a time (i.e. to another pair, $\langle \{Px...Py\}, A2 \rangle$).

This picture still omits some crucial components in the evolution of a Humean mind.⁸ Before launching into this complication, I need to apologize for taking so much time on the very nitty-gritty details of this "computer-model" analogy. By laying out the integral features of HTA in this fashion, I believe we will reveal some extremely important features of the Humean system, but I recognize that the particular method of presentation can easily become somewhat tiresome.

So, the slight complication that was omitted is that the present model is only adequate if the only source of transition between mental states was due to the associative function itself, or the associative function plus some constant rules (e.g. a rule governing the degradation of vivacity in a given perception over time).

This leaves out the continual influx of new high vivacity perceptions in the form of sense impressions. Thus, the model described would, given a starting mental state which is somehow populated by perceptions, really only give us something like the inertial projection of that mind, on the assumption that no further impressions are introduced. To really model things, we'd want the computer to take the total state of a mind at a time (understood as above), combine it with the new sensory experiences of the subsequent moment (modeled as a set of impressions), and take us to a new total state of the mind. Put in terms of the notation I've been using, the basic idea would be to encode a function that takes both $\langle \{P_1 \dots P_n\}, A_1 \rangle$ and a set $\{P_x \dots P_y\}$, and maps them to some pair $\langle \{P_w \dots P_z\}, A_2 \rangle$.

To see how the foregoing reveals what is fundamentally interesting about the structure of the Humean mind, it will be helpful to re-state the end-point of this discussion in ways that are less perspicuous with respect to the structures of the parts within the model. At the most general, the models produced by Hume's system can be described as representing how the total state of a mind at one time combines with new experiences to determine the total state of the mind at subsequent times. We could bring slightly more of the structure into view by noting that Hume's system represents the mind's total state at a time as the conjunction of its occurrent perceptions at that time with its associative tendency at that time. At this stage, we could simply re-write what we had above like this: $\langle \text{occurrent-state-at-t1}, \text{associative-inclinations-at-t1} \rangle$ and $\langle \text{experiences-at-t2} \rangle$ jointly determine $\langle \text{occurrent-state-at-t2}, \text{associative-inclinations-at-t2} \rangle$. I don't know whether this way of thinking about Hume's

system is especially controversial, but, if it is correct, then Hume treats the mind as a machine whose computational capacity is essentially that of a finite state machine. This tells us something important about the structural versatility of Hume's system, independent of the plausibility of the more substantive claims he is committed to about the realization of these structures.

Section 3. The Humean Theory of Cognition

For all that has been said so far, Hume's science of the mind could get off the ground without reference or regard to the traditional categories of mind. "Impression", "Idea", etc. could be treated as merely technical terms in a theory of mind that isn't concerned with mapping onto our traditional ways of describing mental activities. This is due to the fact that HTP and HTA are the foundational elements of Hume's philosophy. The specification of the reductive base for analyzing all mental activities. As such, they need to be a "vocabulary" sufficient to express every possible way a mind could be. But, that leaves open the question of whether it is possible (or feasible, or useful) to analyze the traditional categories of mind in this new vocabulary. It would be drastic oversimplification to consider, as the only possibilities for Hume's system, full-blooded vindication of those categories or full-blooded elimination of those categories, because of the obvious omission of moderate vindication/moderate elimination. And this isn't just a question of what percentage of the traditional categories are vindicated or eliminated. Rather, especially for Hume, there is also the question of which categories we should be attempting to vindicate. Notions like "ideas of substance", "abstract ideas", or "the idea of existence" might be regarded by some philosophers as equally "traditional" with, for instance, color and sound ideas. Hume's project involves both an adjudication between legitimate traditional categories

and illegitimate traditional categories, along with an attempt to (in general) vindicate the former and eliminate the latter. This issue of how to classify Hume's nuanced position with respect to vindication and elimination is important for making sense of some central elements of Hume's project (e.g. the discussion of vulgar and philosophical accounts of externality/distinctness/independence of sensation in T 1.4.2), but is not generally germane to the questions I will be investigating, and, so, I will not return to it in this work.

Hume's theory of perceptions, and his associative principles, are intended to tell us the composition/structure of our mental operations. Specifically, Hume hopes to provide HTP/HTA analyses of the operations of the understanding, which include conception, judgment, and reasoning. Hume offers an entirely orthodox account of conception. The important things to observe about Hume's account of this state are a) that the account reduces conception of some object to possession of an idea of the object, b) that, in large part because of Hume's views on the origins of ideas of the understanding in sense impressions, Hume equates conceiving of some object with imagining it. I use the term "objectual conception" for this operation in Hume, because the analysis in terms of the theory of ideas only directly tells us how to analyze the act of conceiving of some object, or the act of apprehending some object (as opposed to also telling us what it would be to conceive/apprehend a proposition). The theory of perceptions/ideas doesn't include an explicit independent commitment to propositions *or* an explicit account of how to analyze propositions in terms of ideas. Thus, the analysis of propositional conception is a substantive question for Hume (or perhaps better described as a substantive challenge for Hume's system). The most important thing to note about objectual conception is that the connection to HTP is so straightforward/simple that it can be easily overlooked as an independent element of Hume's theory. Strictly speaking, however, it makes a great deal of

sense to view Hume's reductions as occurring in two (or more) stages. Operations of the understanding (other than conception) are to be analyzed in terms of conception, and conception is to be analyzed in terms of the theory of ideas. Even though Hume often slips between giving analyses of operations in terms of states of conception and in terms of ideas, I will try to observe the distinction, as many of the analyses are more easily followed if we do not try to immediately make sense of the HTP level analysis, but instead, see how the intermediate levels of analysis bridge this gap.

Conclusion

We now have enough of Hume's system in place for me to preview one of the dissertation's overarching themes. There is a very natural, very appealing view about the relationship between the structures realized in language and thought, which I call "The Mirror Thesis":

MT: Language and thought share a set of parallel structures, and, in general, one can assume a certain degree of structural mirroring between the structures of psychological states and the structures of the bits of language used to describe or express those states.

As noted, MT is a natural and appealing view. If one accepts it, it winds up sensibly playing a guiding role for all sorts of subsequent theorizing about the nature and structure of our various mental states. However, if one thing is clear about Hume's theory of mind, it is that he does *not* accept the Mirror Thesis. And my contention is that many of the objections to Hume's theory that have held sway over the past three hundred years, are predicated on the Mirror Thesis. Now, we can distinguish theory-internal challenges for Hume from theory-external challenges. A single challenge or argument, even, can be understood in

either of these two ways. The theory-internal understanding treats the argument as purporting to show that things that would count as problems by Hume's lights follow from premises Hume would accept. The theory-external understanding treats the argument as purporting to show that things which are in fact problematic follow from a combination of premises which Hume would accept and premises which are simply true. In general, I think philosophical inquiry is far more fruitful when conducted in a theory-internal fashion. To decide whether Hume is defeated by the theory external versions of the challenges in question, we'd need to know whether MT is true. But one important method for trying to figure out whether MT is true is to find out what a theory that rejects MT can and cannot accomplish. So, we might want to investigate theory-internal challenges for a whole host of theories that reject MT before we'd be in a position to adjudicate on a theory external challenge which depends on MT, because that's how we find out what you can or can't do if you reject MT.

Hume's project is to use his primitive resources to offer a reductive theory of mind in terms of HTP and HTA. This means that I'll be thinking of objections as presenting tasks for the Humean theory of mind, alleging that Hume's system cannot perform those tasks. And I will take it as a victory for Hume if the challenge either relies on a misunderstanding of the elements of Hume's system, *or* if it underestimates the versatility of Hume's system in the way relevant to the task in question. By approaching the challenges in this fashion, we will learn quite a bit about what Hume's system can or cannot do, without distracting ourselves by the question of whether the way Hume's system does any particular thing is the same as the way we happen to think that particular thing is really done.

What we can already see, even without having a specific challenge in front of us, is how a background assumption of MT could appear to cause troubles for Hume. Hume's

underlying mental machinery pretty much exclusively involves manipulations and transitions of objectual contents. Language, however, appears to be thoroughly saturated with predicative structures. Hume's simplest contents correspond to individual particulate sense-impressions, but the simplest meaningful bits of language usually don't. There is the clear appearance of a mismatch, and thus, plenty of room for a tacit assumption of MT to generate concern. I think that these concerns are misplaced (at least, from a Humean perspective).

CHAPTER 1 ENDNOTES

¹ Compare to Newton [2004], p. 92. Also of interest for comparison is Condillac [1982], who similarly rejects supposition and hypotheses in favor of the empiricist philosophical system. For a much more nuanced and complete discussion of Hume's relationship to Newton, see Schliesser [2008].

² All citations from Hume's *Treatise of Human Nature* are to the Selby-Bigge/Nidditch edition (Hume [1978]), and will be cited in the text with "T [section], p. n" (where section references are omitted when deemed unnecessary).

³ I have arbitrarily chosen a single term to use, 'vivacity', to reference this feature, whatever it is supposed to be.

⁴ There is a temptation to read Hume's initial statements about the difference in vivacity as providing a restriction on the relative vivacities of particular ideas and the impressions from which they are copied, however, the various ways in which vivacity distinctions are deployed for Hume, as well as the fact that not all complex ideas require a prior corresponding complex impression, render such a reading unsuitable. See Govier [1972] for an interpreter who agrees with my assessment of the text, but takes that to be a bad result for Hume.

⁵ This formulation allows only for single component transposition (as opposed to whole-sale swapping), but, excluding cases of infinite complexity, there is no difference between the ideas one can produce via repeated application of this principle and the ideas one could produce via a principle which allows for multi-component transition.

⁶ Note how similar this is to the description of the powers of the mind with respect to its ideas in Locke [1975] (sections 2.2.2 and 2.12.1). Interestingly, Hume's discussion of the mind's power to separate ideas is fairly evocative of Locke's discussion of abstraction, despite Hume's purported rejection of Lockean abstract ideas.

⁷ I am setting aside the interesting, but thoroughly tangential question of whether the associative tendencies would be best modeled as holistic functions (from sets of perceptions to sets of perceptions) or as compositional collections of functions from individual perceptions to individual perceptions).

⁸ For an important discussion of a discussion which takes Hume's resources to be importantly richer than I am granting here, see Loeb [2002]. Loeb takes Hume to have, in essence a pair of scalar strength features for perceptions, one corresponding to volatility/stability, the other corresponding to intensity. For my purposes, it is useful not to avail ourselves of such a separation, as we learn more about the versatility of Hume's system by erring on the side of positing fewer resources.

CHAPTER 2: CONCEPTION AND BELIEF

Introduction

In this chapter, I present and explain David Hume's account of belief, and examine an important criticism against this account offered by Thomas Reid. In rough outline, Hume's account makes belief a species of conception, distinguished principally by its degree of liveliness, and Reid's criticism is that Hume's account fails because it conflates the clear difference in *kind* between belief and mere conception with a difference of *degree*. I argue that Reid's objection is only threatening to the extent that there are particular features of belief (as compared to mere conception) that are not adequately captured by the difference of degree Hume uses in his analysis. I then defend Hume's account from this objection by showing how the posited difference of degree can account for some central differences between belief and conception.

In the abstract to his *Treatise of Human Nature*, David Hume introduces the question of how to account for belief with the following passage:

When I see a billiard-ball moving towards another, my mind is immediately carried by habit to the usual effect, and anticipates my sight by conceiving the second ball in motion. But is this all? Do I nothing but CONCEIVE the motion of the second ball? No surely. I also BELIEVE that it will move. What then is this belief? And how does it differ from the simple conception of any thing? Here is a new question unthought of by philosophers.

T, p. 652

Setting aside the strangeness of Hume's proclamation to have discovered a "new question unthought of by philosophers", the discussion is relatively straightforward: there is a difference between merely conceiving the motion of a ball, and judging or believing that the ball will move.¹ Hume's concern is with giving an account of what more there is to belief than occurs in mere conception. In the first section, I present Hume's account of

belief, and explain how it relates to the framework articulated in the previous chapter. In the second section, I present Thomas Reid's objection that Hume conflates differences of kind and differences of degree, and outline what an adequate reply to that objection would need to look like. In the third section, I present and defend an interpretation of Hume's views on which he is able to adequately reply to Reid's objections. In the concluding section, I explain how this interpretation allows us to reframe Hume's account of belief, providing some considerations in favor of the comprehensibility and viability of Hume's project.

Section 1. Hume's Account of Belief

Consistently throughout the *Treatise*, including the appendix as well as the Abstract, Hume identifies belief as a species of conception, differing from mere conception in manner alone.² For illustration, consider the following six passages in which this view of belief is articulated:

Thus it appears, that the *belief* or *assent*, which always attends the memory and senses, is nothing but the vivacity of those perceptions they present ; and that this alone distinguishes them from the imagination. To believe is in this case to feel an immediate impression of the senses, or a repetition of that impression in the memory. 'Tis merely the force and liveliness of the perception which constitutes the first act of the judgment, and lays the foundation of that reasoning, which we build upon it, when we trace the relation of cause and effect.

T 1.3.5, p. 86

But I go farther; and not content with asserting, that the conception of the existence of any object is no addition to the simple conception of it, I likewise maintain, that the belief of the existence joins no new ideas to those which compose the idea of the object. When I think of God, when I think of him as existent, and when I believe him to be existent, my idea of him neither encreases nor diminishes.' But as 'tis certain there is a great difference betwixt the simple conception of the existence of an object, and the belief of it, and as this difference lies not in the parts or

composition of the idea, which we conceive; it follows, that it must lie in the manner, in which we conceive it.

T 1.3.7, p. 94

So that as a 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. An opinion, therefore, or belief may be most accurately defin'd, A LIVELY IDEA RELATED TO OR ASSOCIATED WITH A PRESENT IMPRESSION.

T 1.3.7, p. 96

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, and the only remarkable difference, which occurs on this occasion, is, when we join belief to the conception, and are perswaded of the truth of what we conceive. This act of the mind has yet to be explain'd by any philosopher; and therefore I am at liberty to propose my hypothesis concerning it; which is, that 'tis only a strong and steady conception of any idea, and such as approaches in some measure to an immediate impression.

T 1.3.7, p. 97^{fn}

When we are convinc'd of any matter of fact, we do nothing but conceive it, along with a certain feeling, different from what attends the mere *reveries* of the imagination. [...] This, therefore, being regarded as an undoubted truth, *that belief is nothing but a peculiar feeling, different from the simple conception*, the next question that naturally occurs is, *what is the nature of this feeling, or sentiment, and whether it be analogous to any other sentiment of the human mind?*

T *Appendix*, p. 624

Since therefore belief implies a conception, and yet is something more ; and since it adds no new idea to the conception ; it follows, that it is a different MANNER of conceiving an object; *something* that is distinguishable to the feeling, and depends not upon our will, as all our ideas do.[...] Belief, therefore, in all matters of fact, arises only from custom, and is an idea conceived in a peculiar *manner*.

T *Abstract*, p. 653-4

On Hume's view, belief is a species of conception, differentiated from the more basic species of conception — mere conception — by its superior vivacity. Note that many of

the times Hume states the view, there is nothing more to assent or belief than it being a conception whose manner more closely approximates the vivacity of one's impressions. The exception to this—the passage from page 96—includes the requirement that it be related to a present impression. Given that Hume's discussion of belief in *Treatise* 1.3.7 focuses on belief in as-yet-unobserved matters of fact—i.e. the result of causal inference—it is easy to see why that condition is not present in Hume's statement of the belief that attends memory or sensation—*Treatise* 1.3.5—or most of the other statements of the view. This does not mean the condition is unimportant in the case of beliefs resulting from causal inference, but only that there is a single account of what it is to believe, in general, which encompasses more than the specific case of judgments resulting from causal inference.³ Interestingly, given the claim Hume makes about belief attending the senses, the overall view is easier to state *without* reference to the division of perceptions into impressions and ideas: there is some cut-off X , such that, for any sensory perception $\langle C, V \rangle$, if the value for V is greater than X , then $\langle C, V \rangle$ is a belief. Since belief attends sensory impressions, as well as the ideas of memory and the output of causal inference, we know that X is a lower degree of vivacity than the degree at the cut-off between ideas and impressions.⁴ Belief as a category, is interesting to Hume because it is *not* limited to impressions, and includes some, but not all, of our ideas. Beliefs that result from causal inference are explanatory targets both for the question of their origins (which Hume hopes to do via associative mechanisms, and which I will not be discussing), as well as because they are part of a broader class—call this the class of “sub-impressional” beliefs—which attend some, but not all, conceptions, raising the question of the difference between the conceptions they do attend and those that they do not. It is this latter aspect that Hume purports to explain by appeal to vivacity.⁵

Section 2. Objection: Differences of Kind and Differences of Degree

The first objection from Thomas Reid that we will consider is Reid's most direct challenge to Hume's account of belief, which was presented both in Reid's early work, *An Inquiry into the Human Mind on the Principles of Common Sense*, as well as in Reid's magnum opus, *Essays on the Intellectual Powers of Man*.⁶ The framing for the objection is similar between the two works. In the *Inquiry*, Reid asserts that it is a serious error to attempt to define belief:

But what is this belief or knowledge which accompanies sensation and memory? Every man knows what it is, but no man can define it. Does any man pretend to define sensation, or to define consciousness? It is happy indeed that no man does. And if no philosopher had endeavored to define and explain belief, some paradoxes in philosophy, more incredible than ever were brought forth by the most abject superstition, or the most frantic enthusiasm, had never seen the light. Of this kind surely is that modern discovery of the ideal philosophy, that sensation, memory, belief, and imagination, when they have the same object, are only different degrees of strength and vivacity in the idea.

Inq 2.5, p. 30

It is interesting to note that Reid's primary concern is with the belief that attends the senses and memory. Reid makes no mention of belief that is the result of causal inference (though, as will be apparent, we can make the most sense of Reid by taking his concerns to be about belief in general (the broad notion I indicated above, rather than some restricted subset of our judgments). This aspect of Reid's framing is even clearer in the *Essays*, where the discussion occurs in the fourth essay, "Of Memory":

[I]t may still be asked, How it comes to pass that perception and memory are accompanied with belief, while bare imagination is not? Though this belief cannot be justified upon his system, it ought to be accounted for as a phaenomenon of human nature.

This [Hume] has done, by giving us a new theory of belief in general; a theory which suits very well with that of ideas, and seems to be a natural consequence of it[.] [...]

What then is this belief? It must either be an idea, or some modification of an idea; we conceive many things which we

do not believe. The idea of an object is the same whether we believe it to exist, or barely conceive it. The belief adds no new idea to the conception; it is therefore nothing but a modification of the idea of the thing believed, or a different manner of conceiving it.

EIP 3.7, p. 290

Here, it should be even more evident that Reid, like me, takes Hume's account of belief to range over more than just the output of causal inference; it is supposed to be an account of assent or conviction for any claim (i.e an account of belief in general).⁷ After all, this discussion is being presented in the essay on memory, and Reid explicitly frames the matter in terms of the beliefs attending both memory *and* the senses. In fact, Reid doesn't even take note of the fact that the passage from the *Treatise* he quotes as a presentation of Hume's view of belief is the one that *cannot* apply to cases of belief attending memory (as it includes the requirement of some relationship to a *present* impression). Reid, like me, sees Hume as offering a unified account of what belief is across the senses, memory, and instances of causal inference.

Also worth noting about Reid's presentation here is that it highlights the significance of accounting for the difference between conceptions which are attended by belief and those which are not. As I indicated above, this is what presents an interesting explanatory challenge for Hume, given that his underlying notion of explanation involves grouping phenomena by similarities and/or analogies in appearance/behavior. We get an explanation of the phenomenon of belief, for Hume, by seeing how beliefs form a set, and seeing how that set is similar or analogous to other sets of mental states.

I have been stressing the ways in which Reid and I align in our interpretation of Hume's account of belief not just because the alignment of our interpretations makes it more likely that Reid's objection targets the view I attribute to Hume, but also to make it clear why many of the details of Hume's views on causally inferred belief will be irrelevant to discussion of

this objection. Reid and I both attribute to Hume an account of belief (or assent, or conviction, etc.) that is meant to apply to the beliefs that attend sensory impressions and ideas of memory (as well as the output of causal inference). Nothing specific to the account of causal inference (such as the relationship to a present impression, or the role of habituated association in enlivening the idea) will help Hume avoid the objection, since those resources aren't involved in the beliefs attending sensory impressions or memory.

In the *Inquiry*, shortly after the passage quoted above, Reid describes his reason for finding Hume's view of belief so problematic.⁸ Returning our attention to the *Inquiry*, we get a clear and succinct statement of his worry about Hume's account of belief:

The same arguments that are used to prove that belief implies only a stronger idea of the object than simple apprehension, might as well be used to prove that love implies only a stronger idea of the object than indifference.[...] If it should be said, that in love, there is something more than an idea, to wit, an affection of the mind, may it not be said with equal reason, that in belief there is something more than an idea, to wit, an assent or persuasion of the mind?
But perhaps it may be thought as ridiculous to argue against this strange opinion, as to maintain it. Indeed, if a man should maintain, that a square, and a triangle, differ only in magnitude, and not in figure, I believe he would find nobody disposed either to believe him or to argue against him; and yet I do not think it less shocking to common sense, to maintain, that sensation, memory, and imagination, differ only in degree, and not in kind.

Inq, 2.5, p. 30

The analogy to love and indifference here can serve to clarify Reid's concern, but before we can use it to help us understand the objection, there is a bad reading of the analogy that we need to dispense with. Since Hume's view is that belief is simply a strong variety of conception, one might take Reid to be suggesting an analogy with the view that love is a strong degree of indifference. However, if that were what Reid had in mind, the proposed analogy would obviously fail: believing something entails conceiving it — a point agreed on

by both Hume and Reid — loving something, on the other hand, entails *not* being indifferent to it. So, there is nothing in Hume’s view corresponding to the absurdity of treating love as a variety of indifference.

As I noted, however, this is a bad understanding of the analogy. Reid’s point is about the state of “simple apprehension” (which I’ve been calling “simple conception”) as it relates to belief. The terminology here makes the issue seem trickier than it is. Reid is thinking of simple apprehension/conception as the state of entertaining something without having an opinion on it. Reid regards Hume as analyzing that state in terms of possessing a weak idea. Thus, he thinks that Hume is committed to treating the state of lacking an opinion on something as differing from the state of believing it only by a difference in strength. This, then, is analogous to the view that indifference towards something differs from loving that thing only in strength. And Reid thinks that one has not explained the relationship between the two states on such an analysis. Note that this understanding of the objection accords well with the way the objection is given in the *Essays*. After quoting Hume’s statement of the view, and observing how central the account is for Hume’s overall system of the mind, Reid’s tone becomes explicitly critical, and he presents what is, effectively, the same objection:

The belief of a proposition is an operation of mind of which every man is conscious, and what it is he understands perfectly, though, on account of its simplicity, he cannot give a logical definition of it. If he compares it with strength or vivacity of his ideas, or with any modification of ideas, they are so far from appearing to be one and the same, that they have not the least similitude.

That a strong belief and a weak belief differ only in degree, I can easily comprehend: but that belief and no belief should differ only in degree, no man can believe who understands what he speaks: For this is in reality to say that something and nothing differ only in degree, or that nothing is a degree of something.

EIP, 3.7, p. 291-2

I find it easiest to understand Reid's objection here by considering sliding dimmer switches for lights. The position would be that it makes sense to think of various settings of the light as differing in degree: when the slider is all the way up, this is the highest degree of brightness. When it is one third of the way up, this is a relatively low degree of brightness. This is an adequate explanation of the difference between those two settings. However, when the slider is all the way down, it isn't right to think of this as simply a different degree of brightness.

While this analogy is helpful for understanding the worry, it does not convey the full strength of Reid's case, all by itself. It may make the objection more compelling when we observe that, unlike the dimmer switch, which has only one "off" setting, Hume's perceptions exhibit numerous degrees of strength *below the cut-off for belief*. There isn't just a single "unopinionated" state; there is an entire *range* of such states, which differ from each other in the exact same way that they differ from the states of belief.

In order to drive this point home, it will help to make the plausible assumption that the scale of strength for perceptions is linear, and, for simplicity's sake, to pretend that there are just ten different degrees of strength. On this assumption, the strength difference between the first and the third degree is the same as the strength difference between the fifth and the seventh. So, if the cut-off for belief were between, say, degrees three and four, a conception of degree three would differ from a conception of degree two the same way, and in the same amount that it would differ from a conception of degree four. But, somehow, that same difference would produce a significant difference between conceptions of degree three and four, but not between conceptions of degree two and three (or four and five, for that matter).⁹

While there is no indication that considerations like that are part of the underlying basis for Reid's worry, I still consider this to be a version of his challenge, as it is driven by the notion that it is inadequate to invoke only differences of degree, and, as it gives us additional reason to question the adequacy of thinking about the "off" setting as a degree of brightness in the slider case (which is structurally analogous to the worry Reid explicitly presents for Hume's view).

Another way to emphasize the force of this objection is to think about the basis for treating the belief and conception as different kinds of mental states. Some plausible candidate differences between imagining something and believing it would be: differences in the influence they have on our actions, differences in our ability to enter the state electively, different norms on when it is permissible to be in the states, etc. To illustrate the first case, when I write a check to pay a bill, I make it out for the amount I believe I owe, which is not the case for the various amounts I sometimes imagine owing. To illustrate the second, I can ask you to imagine that you own a purple dog, and if you want, you can simply comply with my request, but this is not the case if I ask you to believe that you own a purple dog. Lastly, it seems to make sense (at least sometimes) to criticize someone for believing something on the basis of too little evidence, but it would be odd to criticize someone for imagining something on the basis of too little evidence.

But if the account offered by Hume maintains that believing is exactly like imagining, different only by possessing more of some feature imagination already possesses, it is hard to see how it could possibly explain all these differences. It doesn't seem like imagination is *weakly* regulated by evidential norms, or that imagining provides some (but not quite enough) push towards influencing our behavior. And, if the various particular differences between

imagining and believing aren't differences of degree, how can the difference between imagining and believing be a difference of degree?

The point from above, regarding the change in strength between adjacent degrees of vivacity, is really just a way of drawing out this point. If the difference between a pair of mere conceptions can be the same as the difference between a mere conception and a belief, and the latter difference is meant to explain why beliefs influence our behavior, why they are subject to evidential norms, and why acquiring them is involuntary (rather than elective), there should be similar effects when it comes to the pair of mere conceptions (since they differ in the same way). The objection, thus understood, is this:

- R1-1. Some differences between belief and mere conception involve a feature being wholly absent from conception, while being present (to various positive degrees) in belief.
- R1-2. If a difference between belief and mere conception involves some feature being wholly absent from conception, while being present (to various positive degrees) in belief, that difference is not explicable as a consequence of a difference in vivacity.
- R1-3. If belief and mere conception differ only by degree of vivacity, then for any difference between belief and mere conception, that difference is explicable as a consequence of the difference in vivacity.
- R1-4. So, it is not the case that belief and mere conception differ only by degree of vivacity.

While I find Reid's objection compelling, especially when understood in terms of the explanatory burdens on Hume's account of belief, Hume has the resources to resist the objection. The form of the worry is that some of the things to be explained *by* a difference

of degree are not *themselves* differences of degree, and that no such explanation is possible. Given this way of thinking about the worry, I do not think it makes sense to challenge R1-1. It is, essentially, the claim that some of the differences between belief and mere conception aren't differences of degree. Likewise, R1-3 should not be challenged, as it is simply a statement that Hume's account is tasked with explaining the differences between the two states. While there are some explanatory questions which Hume regards as unanswerable (or, at least, outside the purview of his theories), this is a principled position, and not some dodge to be arbitrarily invoked on Hume's behalf; by giving an account of the nature of belief and its relationship to mere conception, Hume has taken on the burden of explaining the differences between them. The only remaining way to avoid the objection, then, is to reject R1-2—the claim that a difference in degrees of vivacity cannot explain explain the non-degree differences between belief and mere conception. Fortunately for Hume, there are good reasons to reject R1-2.

To see that differences in degree can provide explanations for differences that are not themselves differences in degree, we can consider a large set of different slot machines, which are programmed to hit payouts at differing frequencies (frequencies of the form: payout exactly N times every M pulls). If we assume a constant prize for individual payouts, and constant cost for pulls, some of the machines will be profitable, and some will not be profitable.¹⁰ However, the only relevant difference between these machines will be a difference in degree: the frequency of payout.

We can also consider the following cases involving people pushing on a large boulder. In the first case, there are three people pushing on the boulder, and it does not move. In the second case, there are four people pushing on the boulder, and it does not move. In the third case, there are five people pushing on the boulder, and it does move. To simplify

things, we will assume that each individual is equally strong and pushes equally hard as well as that any physical details other than the mass of the boulder and the total amount of force exerted by people pushing — such as the shape of the boulder or the positioning of the people pushing — are irrelevant. It seems clear that reasons we would have for denying that the “off” setting for the light is a degree of brightness are also good reasons for denying that the “stationary” state of the boulder is a degree of movement. Further, the magnitude of the change in force on the boulder between the first two cases is the same as the magnitude of the change in force on the boulder between the second and third case. So, the differences among the cases are all differences of degree, and yet, the cases differ between some movement (case three) and no movement (cases one and two). And if we considered cases with more than five people, there would be further differences in the nature of the movement (such as differences in speed), also explained by these same differences in degree.

Both of these cases were designed to illustrate how a non-degree change can result from crossing a non-arbitrary threshold of degree in another feature. If a slot machine pays out the \$X prize less often than it takes in \$X in payment for pulls, it is profitable. Otherwise, it is not. The boulder case is similar, but with the additional benefit of better mirroring the structure present for the more challenging differences between mere conception and belief. With the case of profitability, one could resist the view that not being profitable is sufficiently like the light being in the “off” state, since we would be comfortable thinking of it in terms of something’s having a positive net effect on wealth, rather than a neutral or negative net effect. One might think of “profitable” as simply being a non-degree label for a specific range of degrees. It is harder to see a basis for resisting the adequacy of the boulder case, however. The degree of force increases by a fixed amount with the addition of each new person, with no impact on the degree of movement until some threshold is reached, at

which point the boulder moves, and additional force beyond the threshold produces differences of degree in features of the movement (like speed).

So, it is not in general the case that differences of degree are inadequate to produce or explain differences of the sort Reid would be inclined to think of as not being themselves differences of degree. This is crucial, since the main reason for accepting R1-2 would be the acceptance of a more general claim about these types of differences. As I have indicated in the previous chapter, I am not privileging an antecedent understanding of *vivacity*, and will favor whichever interpretation satisfies best the demands placed on vivacity by Hume's use of it. Thus, in my view, it bodes well for Hume that there are cases in which differences of degree explain on/off differences of the general sort that Reid is concerned about. At the same time, it is not enough to just undermine the assumed basis for accepting R1-2 (which says that such explanations are not to be had when it comes to belief and conception), rather, we will need to make sure that the particular differences between belief and conception can be accounted for in this sort of way.

The easiest one of the three features mentioned earlier to account for is the difference in influence on action. And this is because sometimes things we don't believe *do* have some influence on our actions, albeit a weaker influence than that of our beliefs. So, if I am waiting for someone to arrive, and they are running late, and I haven't heard from them, I may start to imagine that he or she got into a car accident. I don't believe that they have gotten into a car accident, but this act of imagining clearly does influence my behavior. I may begin to pace nervously, I may check my cell phone for a message more frequently, etc. So, while there is a difference in the way that imagining and believing influence my behavior, it seems easier to account for that difference in terms of the magnitude of the influence.

Were that the only difference between the two states, the foregoing discussion would have been largely superfluous.

On the other hand, the differences in norms for and voluntariness of the states seem to be more of what Reid would have in mind (though, as we saw, Reid's discussion does not contain specific description of the differences to be accounted for). The voluntariness issue is something that we have decently good grounds to think Hume would have wanted to capture. In fact, some of the arguments he offers against alternative accounts of belief depend on a difference in voluntariness between belief and mere conception.¹¹ The issue of norms on belief is more complicated. While such norms seem to provide a striking difference, it is dialectically awkward to present Hume with the challenge of capturing them, given the complex set of interpretive questions surrounding Hume's substantive views on normative epistemology. At the same time, accounting for the normative difference in terms of variations in strength is really the more difficult challenge, and so, when discussing it, I will set aside the question of whether Hume would reject the challenge itself, and instead, focus on whether the challenge, can, in principle, be met.

Difference in Voluntariness

Imagination is voluntary in a way that belief isn't.¹² The question we are concerned with is whether this fact can be explained by appeal to a difference in their respective degrees of vivacity. One element of the difference in voluntariness is that we can (often) stop imagining something at will, but we cannot simply stop believing something at will. Let's adapt the boulder analogy from above, so that we are comparing cases of a single person pushing boulders of different masses. If the boulder had a sufficiently low mass, the person would be able to push it, while, if it had a high mass, the person would be unable to push it.

So, the person has an ability with respect to one boulder that they lack with respect to the other. So, if the vivacity of an idea, whatever it ultimately winds up being, is relevantly analogous to the mass of a boulder, we could see how the difference in voluntariness between dismissing a mere conception and dismissing a belief could be explained by the difference in vivacity. What this really requires is a background ability to “push” ideas away, and an account of vivacity on which higher vivacity makes ideas more resistant to being “pushed”.

Another element of the difference in voluntariness is that we can commence imagining things at will, but are not able to commence believing things at will. The analogy of pushing away a boulder is slightly less applicable here, but the same basic point can be made. If we complicate the case by imagining that there is a circular region marked off near the person, we can then distinguish between pushing boulders out of the circle, and pushing boulders into the circle. This would render the boulder case more closely analogous to a story about the mind on which it has the power to summon mental states as well as dismiss them. And, conveniently, no new constraints are put on vivacity through this tweak.¹³ It would simply be a feature such that, the more of it some idea has, the more difficult that idea is for us to “move”.

My discussion so far has been highly metaphorical, and one may be worried that no account of vivacity can successfully cash out these metaphors and *really* explain how differing in vivacity can effect voluntariness. I think this challenge goes beyond Hume’s explanatory ambitions in important ways. Hume’s project is to produce an account that has minimized the number of general principles and maximized their breadth of applicability, while encompassing all (or almost all) of the phenomena in question. I have discussed this understanding of the explanatory burdens in the previous chapter, but it is important to

stress it again here. If the feature Hume means by ‘vivacity’ is such that when a mental state has less of it, our control over that state is greater, and vice versa, and there is no broader generalization about mental states that could subsume that generalization, then Hume will be content that he has explained as much as he can. Any request for a further story about *why* a state’s vivacity is conversely correlated with our ability to control that state, will be a request for something Hume had no intention of offering. Thus, my metaphors and analogies are intended purely to illustrate why to think that there can be features of an object that exhibit the sort of inverse relationship with the existence and extent of our ability to control that object as needed to answer Reid’s challenge.

Norms on Belief

Belief is subject to norms of evidence in a way that imagination is not. The question we are concerned with is whether this can be explained by a difference in their respective degrees of vivacity. As noted, I am bracketing the issue of whether Hume would have any interest in responding to this challenge and/or accepting its presupposition that belief is subject to such norms. I am simply going to investigate whether there is some way, in principle, to employ Hume’s resources towards this task. I will also attempt to be brief, since many of the details will be irrelevant to my actual interpretive concerns.

Evidential norms on belief are norms that we violate when our evidence, on balance, requires/recommends believing P, and we do not believe P, or when our evidence requires/recommends not believing P, and we do believe P. There are difficult questions about when a body of evidence generates such recommendations or requirements, but we can set those questions aside. Suppose Joe believes P, but Joe’s body of evidence requires him not to believe that P. It seems clear that Joe is not enjoined to refrain from *imagining* P, or from

merely contemplating P. Were he to do either of those instead of believing, we wouldn't be doing just a little bit better at obeying the evidential norm against believing P, he'd be satisfying it completely. How could this be explained if belief is just like conception, except stronger in its degree of vivacity?

A useful analogy to explain how this can occur would be to consider speed limits. On a highway with a speed limit of 65 miles per hour, there is a legal norm that one violates by traveling faster than 65 miles per hour, and which is not violated at lower speeds. Violations of the norm can even be ranked as lesser or greater based on how much the speed of travel exceeds the speed limit. But, traveling at 70 miles per hour clearly differs from traveling at 60 miles per hour only by degree. While it may be the case that speed limits were instituted to promote the safety on the road, and further, that, in general, someone traveling at 55 miles per hour does more than someone traveling 65 miles per hour to promote safety on the roads, the driver traveling at 55 miles per hour is not doing any better, legally speaking, at obeying the speed limit. Put another way, we can make perfect sense of a norm against *traveling too fast*, while recognizing *degrees of severity* for violations of the norm, and without the need to posit multiple *degrees of compliance* for cases of obedience to the norm. So, turning to the case of belief, it appears that we can make perfect sense of the idea that there is a norm against *having too much vivacity in a conception*, even if we want to avoid normatively distinguishing among the various degrees of vivacity below that limit. And, we do all of that while normatively distinguishing among degrees of vivacity above the limit.

One thing I have been taking for granted in this discussion is that the norms in question apply to belief, and don't apply to anything less than belief. For those familiar with Hume's discussion of probability, or with the strands of epistemology that use the probability calculus to model credences, it may well seem that this is a drastic oversimplification of the

issue. And, it is. Fortunately, acknowledging this simplification strengthens Hume's hand. There are a range of vivacities below the threshold for all-out belief which would be candidates for evaluation relative to evidential norms.¹⁴ It was still worth demonstrating that Hume has the resources to tackle this challenge, however, as it shows us how Hume's resources allow for a treatment of merely conceiving something that would fall below the threshold of the evidential norm, even if that evidential norm applies to "partial" beliefs or credences. The crucial lesson to draw is that, it is in pretty easy to understand how there could be norms that apply to beliefs (or credences) but which, as a rule, couldn't be violated by simple imagination/mere conception, even if the two states differ only by degree. In a sense, this places constraints on the account of the norms that can be given, but, the constraint is merely that such norms need to be translated into the terms of the analysis of belief. If the norm is not to believe P when your evidence is such-and-such, the constraint is simply that one must accept an analysis of the norm on which it says not to conceive P with too much vivacity when your evidence is such-and-such. As noted above, I am not taking a stance on whether or not Hume adopts *any* such norms, merely pointing out that his resources could, in principle, be used to explain such a normative difference.

While I think that Reid's worry about differences of kind vs. differences of degree ultimately fails, it is important to see *why* it fails, as there is something highly appealing about the thought that Hume hasn't really captured the distinction between belief and imagination.¹⁵ However, when we attempt to enumerate the particular differences that Hume's story doesn't capture (or isn't able to capture), we see that Hume's limited resources are a lot more powerful than they seem at first.

Section 3. Another Reid Objection: The Objects of Belief

I will now consider another objection from Reid, before turning (in section 4) to my discussion of what Hume actually has to say about the differences between conception and belief. This objection from Reid concerns the *contents* of belief, rather than the use of vivacity to account for the difference in *activity*. So far, I have been giving examples that employ beliefs (and conceptions) with propositional or predicative contents. But, I have also identified Hume's project as an attempt to reduce all cognitive activities to states of *objectual conception*: i.e., acts of imagining or conceiving of objects. And this is where Reid's other objection comes in.

In the sixth essay—"Of Judgment"—Reid criticizes Locke and Hume, claiming they are both unable to account for one of his "first principles of contingent truths" (specifically, the existence of the objects of consciousness). The criticism of Hume concerns both a worry about whether we judge all our own mental operations as existing (which I will not discuss here) as well as the objection we will focus on, concerning the contents of belief:

Neither can I reconcile [this first principle] with Mr HUME's theory, that to believe the existence of any thing, is nothing else than to have a strong and lively conception of it; or, at most, that belief is only some modification of the idea which is the object of belief. For not to mention, that propositions, not ideas, are the objects of belief; in all that variety of thoughts and passions, of which we are conscious, we believe the existence of the weak as well as of the strong, the faint as well as the lively. No modification of the operations of our minds disposes us to the least doubt of their real existence.

EIP 6.5, p. 471

I will not address Reid's complaint that Hume's system fails to produce belief in the existence of our own conceptions.¹⁶ The aside, however, regarding the contents of belief, is worth discussing, as it is a particularly salient example of the sort of worry that faces Hume's account. Let us set aside the issue of whether, on Hume's view, it is *ideas* that wind

up being the objects of belief, and, instead, focus on the fact that *propositions* do not appear to be the objects of belief. While Reid is no doubt worried that Hume involves mental particulars (ideas) in his account of belief, there is a larger worry for Hume here. Beliefs are truth-evaluable. On a typical account, beliefs are assessable as true or false derivative on the truth or falsity of their objects. This is the standard contemporary picture of belief as a propositional attitude. This precise picture was not as prevalent in Hume's day, but even among those figures who didn't treat belief or judgment as a propositional attitude embraced the view that ideas are not assessable as true or false.¹⁷ Here is a first attempt at spelling out this objection from Reid:

- R2-1. The objects of conception are not assessable as true or false.
- R2-2. So, if belief differs from conception only by degree, then the objects of belief are not assessable as true or false.
- R2-3. The objects of belief are assessable as true or false.
- R2-4. So, it is not the case that belief differs from conception only by degree.

The argument is straightforward enough, understood in this fashion, but other passages from Reid make it quite clear that this cannot be the objection he has in mind. Elsewhere in the *Essays*, Reid makes it clear that the objects of belief—propositions—can also be the objects of mere conception/apprehension:

Yet it may be observed that even a proposition may be simply apprehended without forming any judgment of its truth or falsehood: For it is one thing to conceive the meaning of a proposition; it is another thing to judge it to be true or false.
EIP 1.1, p. 25

As we can see from this quote, Reid's concern is not adequately captured by argument R2. However, mere paragraphs earlier, Reid clearly maintains the point that conception—taken “in the proper sense”—is “an act of the mind by which nothing is affirmed or denied,

and which therefore can neither be true nor false” (EIP 1.1, p. 11). This both suggests a needed amendment to the view I earlier described as the “standard contemporary picture” as well as a better understanding of Reid’s argument.

The view outlined above indicated that an operation of mind is truth assessable in virtue of being a propositional attitude. The passages just quoted from Reid don’t undermine the basic idea behind this picture, but do highlight the need for a complication. We don’t call conceptions true or false, even when we, with Reid, allow them to have propositional objects. So, if the picture above is taken to be the view that a mental state M is true (false) if and only if the object of M is a proposition that is true (false), we’d get the bad result that various acts of conception are true or false. And similarly for a variety of popular views about desires, hopes, and intentions. The real thrust of the picture can be retained, however, if we take it to simply provide a necessary condition on whether a mental state is truth assessable: A mental state M is truth assessable only if the object of M is a proposition.

I noted that this observation will also permit us to recast the objection in a form that Reid could intelligibly offer:

- R2’-1. Acts of mind are truth assessable only if the object of the act is a proposition.
- R2’-2. If two acts of mind differ only by degree, then the object of one is a proposition if and only if the object of the other is a proposition.
- R2’-3. The object of the act of conceiving of the sun is not a proposition.
- R2’-4. So, if the belief that the sun exists differs only by degree from the act of conceiving of the sun the belief that the sun exists is not truth assessable.
- R2’-5. The belief that the sun exists is truth assessable.

R2'-6. So, it is not the case that the belief that the sun exists differs only by degree from the act of conceiving of the sun.

Taking (2) and (5) for granted, the substantive premises in the argument are (1) and (3). To deny (1) is to allow non-propositional acts to be truth assessable, whereas to deny (3) is to regard objectual conception as a propositional act. One produces a fundamentally similar view either way, but it is important not to cloud the issues that are in play. For this reason, I will explain Hume's position as a denial of (1), though there are ways to understand this view on which it amounts to a denial of (3), instead.

On the view that I've been calling the "standard contemporary picture", a subset of our mental states are truth assessable because they have propositions as objects. As noted, this cannot be the whole story, however, as the standard contemporary picture does not maintain that every mental state whose object is a proposition can be assessed as true or false. So, there is some further condition on mental states—besides having to have the right kind of object—that helps explain why they can be assessed for truth. The picture is still straightforward: mental states that are truth assessable wind up inheriting their truth/falsity from the truth/falsity of their objects, provided they have this additional feature. A naive take on this additional feature could be something like the act itself having representational purport. But, the more propositional attitudes we allow for that *don't* get assessed as true or false, the less clear it is how much work is being done by the object of the act being of the right sort. Suppose we allow for believing, imagining, desiring, intending, hoping, and fearing as propositional attitudes. It is clear that, of these, belief is a special case, insofar as we can ask whether Tom's belief that P is true, but we can't ask whether Tom's desire that P is true, or whether his hope that P is true, etc. The more acts we have to account for which have propositions as objects, but which are not truth assessable, the more more our

explanation will depend on the second factor. The thesis of propositionalism (i.e. the view that the object of every mental act is a proposition) draws this out nicely: if every mental act can be analyzed as a propositional attitude, we have said nothing interesting towards explaining the ability to assess acts of belief for truth and falsity when we identify belief as a propositional attitude.

My aim is not to disparage the view that belief is a propositional attitude, or that only propositional attitudes are truth assessable. Rather, my goal is to help us see how premise (1) could plausibly be challenged. The less work premise (1) is doing in the standard contemporary picture, the more appealing it should be to consider views which abandon it.

We saw above that, on Hume's view, the belief that the sun exists is of a kind with the conception of the sun. In fact, the view is that the belief that the sun exists just is a lively instance of the conception of the sun. In order to explain what makes these lively conceptions of the sun truth assessable, we will need to appeal to something in the object (i.e. the sun, or the idea of the sun), and something in the act (e.g. the liveliness of the conception). Note, however, that this is the same structure of explanation that we need to offer on the standard contemporary picture: part of the explanation comes from the object (i.e. the proposition that the sun exists), and part of the explanation comes from the nature of the act (i.e. the representative purport of belief). Considering the issue in this way, the problem is not the non-propositional nature of existential belief, for Hume. Rather, it is the apparent shallowness of a difference in liveliness as an explanation of the marked difference in the act itself.

It is worth noting that propositions possess *truth-conditions*, and this could be helpful, if nothing else, in providing the proponent of propositional objects with an account of the truth-assessability of certain mental activities. Of course, there is nothing to stop Hume

from assigning truth-conditions to ideas. In fact, it is an ongoing challenge for theories of propositions to explain why the entities that are propositions possess the truth-conditions they do.¹⁸ It would be interesting to explore whether these challenges are compounded for Hume's case, or perhaps even lessened, but to carefully evaluate the force of these challenges for defenders of ordinary propositions would take us somewhat far afield of our present interests.

Nevertheless, it remains the case that one of the most striking features of Hume's account of belief is the fundamentally non-predicative nature of the contents of judgments. In order to mitigate the pessimism that arises from this feature, we should note that not all beliefs are expressed predicatively.

While the most familiar locutions for describing judgments involve "that"-clauses with their own subject-predicate structure in the grammar, usually taken to indicate a similar subject-predicate structure to the mental state expressed or described, it is a fact (useful for Hume) that we also possess ways of talking about judgments that do not involve predicative structure. Specifically, we have locutions like "Tom believes in ghosts", which seem to say the same thing as corresponding locutions like "Tom believes that ghosts exist".¹⁹ The contemporary response to this pair of locutions is to treat the former as abbreviating the latter. The "belief-that" locution is taken to be more fundamental, or to better reflect the underlying structure of the mental state in question. Such a strategy makes sense if one thinks that anything which can be said with "belief in" locutions can also be said with "belief that" locutions, but not vice versa. In principle, though, one could reverse the proposal, and reduce *belief that o exists* to *belief in o*.

Since Hume is insistent that for central cases of judgment (in fact, the only cases for which we are given the explicit account of the content), there is nothing like a predicative

structure to be found, and in fact, Hume's specific proposal is that the content of an existential belief is exhausted by the idea of the thing believed to exist, the proposal just described precisely embodies Hume's view. A conception of *o*, when suitably vivacious, becomes a belief in *o*. Of course, for this story to be plausible, we'd need to think that every belief whatsoever can be understood in terms of believing in some object or objects. Here's one reason to think that this proposal has potential: most subject-predicate sentences can be rephrased in a superficially existential form: For example, "Fido is happy" would become "Fido's happiness exists". The locution is odd-sounding, but it seems to preserve the truth-conditions. If such rephrasings are generally available, then we would have a procedure for converting beliefs-that to beliefs-in (i.e. first, rephrase the belief-that as an existential belief, then rephrase the existential belief as a belief-in). I say that this is a reason to think the proposal has potential, and it is important to note that we haven't done the work yet of showing that the proposal is viable. For instance, the strategy looks like it commits us to believing in entities like Fido's happiness, and there may be good reasons to worry about commitment to such entities.

The important upshots of this observation about "belief in" are that a) it provides us with a framework for making sense of non-propositional judgment in the first place, and b) it tells us what Hume needs, in order to account for the range of belief-ascriptions we make: he needs to provide plausible "belief in" variants which appropriately correspond to the various "belief that" ascriptions we want to endorse.

One final note to make about "belief in" is that it draws out something interesting about truth-assessability. Suppose, as is plausible, that "Tom believes in ghosts" and "Tom believes that ghosts exist" are equivalent. It seems that we can also make sense of the phrase "Tom's belief in ghosts" and "Tom's belief that ghosts exist", and that those two descriptions

should designate the same belief. But, “Tom’s belief in ghosts is true” sounds distinctively off, while “Tom’s belief that ghosts exist is true” does not. This gives us good reason not to worry too much about the fact that ideas of objects aren’t the sorts of things that can be called true or false, since the appropriateness of calling a belief true depends on whether it is described predicatively or nominatively. Rather than a deep fact about the structure of the belief, it would appear that this is a fact about which sorts of grammatical expressions can be joined with the predicate “is true”.

Conclusion

Belief, on Hume’s view, is a medium between sensation and mere imagining. Importantly, it is not merely a medium with respect to its share of vivacity, but also with respect to a number of other features. For instance, memorial beliefs provide a temporal medium between the occurrence of sensations and the possession of mere imaginings. More importantly, beliefs provide a medium between those two extremes in terms of impact on one’s behavior. If I am afraid of tigers, and I see a tiger, my inclination to run away will be stronger than if I believe that there is a tiger about, which would in turn provide a stronger inclination to run than if I merely suspected that a tiger was about, or (at the far extreme) merely imagined that a tiger was about.

What explains the larger share of influence on behavior for belief? Well, on Hume’s view, this would result from the ways in which beliefs are more like sensation than mere imaginings are. In other words, we can generalize about perceptions *simpliciter*, that the degree of influence on behavior (when the content is relevant) is in proportion to the attendant vivacity. This is exactly the sort of explanatory principle that Hume is after (cf. chapter 1). It is as general as possible (it ranges over all perceptions, and all degrees of

vivacity), is validated by the experiences of seeing, believing, and imagining. To explain why vivacity has this effect would require us to postulate something about the nature of vivacity; something forbidden by Hume's methodology. So, we get the following explanatory chain: We explain why beliefs (imaginings, sensings) have the influence on behavior that they do by reference to their vivacity (or lack thereof, in the case of mere imaginings). This fact about belief is explained by a more general fact about perceptions. The fact about perceptions is inexplicable, for Hume.

One thing that is worth noting about this account is that, divorced from specific phenomenological predictions about the introspective experience of vivacity, it is actually a somewhat promising approach for explaining the nature of belief. Belief has a cluster of behaviors that situate it in between mere imagination and outright sensation, and the explanation is that some one feature controls for these behaviors, and the effects occur in proportion to the intensity with which this feature is possessed. We might challenge the claim that beliefs have behaviors with such a relative situation, but, methodologically, if Hume thinks that beliefs do have a cluster of such behaviors, it is a perfect deployment of his method to invoke this unifying generalization as an explanation.

Or, as Hume puts the point:

An idea assented to *feels* different from a fictitious idea, that the fancy alone presents to us: And this different feeling I endeavor to explain by calling it a superior *force*, or *vivacity*, or *solidity*, or *firmness*, or *steadiness*. This variety of terms, which may seem so unphilosophical, is intended only to express that act of the mind, which renders realities more present to us than fictions, causes them to weigh more heavily in the thought, and gives them a superior influence on the passions and imagination.[...] I confess, that 'tis impossible to explain perfectly this feeling or manner of conception. We may make use of words, that express something near it. But its true and proper name is *belief*, which is a term that every one sufficiently understands in common life. And in philosophy we can go no farther, than assert, that it is something *felt* by

the mind, which distinguishes the ideas of the judgment from the fictions of the imagination. It gives them more force and influence; makes them appear of greater importance; infixes them in the mind; and renders them the governing principles of all our actions.

T, p. 629

Though the normative element discussed earlier isn't among the features mentioned here, it should be clear that the various features produced by a higher vivacity can, in principle, be evaluated along normative dimensions. For instance, if higher vivacity renders one idea more influential than another, we can ask whether that idea *should* be more influential. I don't mean to suggest any particular account of the norms in play, but simply to point out that the commitments Hume has regarding vivacity clearly leave room for a proposal regarding the normative evaluation of belief.

CHAPTER 2 ENDNOTES

¹ For more extensive discussion of the oddity of this question, see Owen [2002] and Smalligan Marusic [*manuscript*].

² One element of the view that does seem to shift, is the role of vivacity in differentiating the manner. In the Appendix, in particular, Hume seems to back away from a commitment to changes in vivacity as the only survivable variations for a given impression/idea. For reasons explained in the previous chapter, I set aside Hume's apparent reversal about this issue.

³ It is easier to understand the significance of this condition if we think about static/synchronic questions about mental states separately from dynamic/diachronic questions. What makes a conception count as belief or opinion is a matter of its present vivacity; a static issue. If, on the other hand, we want to know how such high vivacity conceptions are produced — a question of mental dynamics — then we need to invoke associative propensities of the mind, as Hume does in explaining our causally inferred beliefs.

⁴ My restriction here to impressions and ideas of sensation (excluding impressions and ideas of reflection), is not because I definitively take a stand that this account does *not* apply to impressions and ideas of reflection, but rather as an attempt to remain neutral on whether the account applies across the board. The question of whether anything said here applies to the passions is an interesting one, but not one that can be adequately addressed and resolved in my dissertation.

⁵ Though I do not spend much time in this work discussing Hume's associative mechanics, it should be noted that it is a central element of Hume's account of the mind, and represents the fundamental resources available to Hume for explaining all, or nearly all, transitions between mental states.

⁶ All citations from Reid's *Inquiry* and *Essays* are from Reid [2003] and [2002] respectively, and will be cited in a manner parallel to the citations from Hume's *Treatise* (with "Inq" and "EIP" in the place of "T").

⁷ Intuitable and demonstrable contents provide a possible exception/complication here, as the sorts of belief mentioned by Hume and Reid concern belief arising from the senses, memory, and/or probably inference. The question of belief for demonstrable/intuitive contents is raised explicitly in chapter 5, and my discussion here can be taken as implicitly restricted to beliefs with contingent/empirical contents, in light of this.

⁸ Reid presents a different objection in between the passage already quoted and the objection I am investigating here. The objection that I am omitting discussion of here concerns Hume's ability to account for the mental state of denial, and the objection (which, in modified form, is also present in the *Essays*) is the principal focus of chapter 2.

⁹ Note that to make sense of a non-linear scale (e.g. a scale where the change in strength between 'adjacent' degrees increases as one ascends the scale), one would need both a) an underlying notion of strength that is linear, just to make sense of the foregoing *description* of the scale, and b) an explanation of the absence of the degrees of vivacity that would produce, instead, a linear scale.

¹⁰ I am also abstracting away from considerations of whether a sufficient number of customers would purchase pulls, and whether or not the rate of payout would influence decisions about which slot machine to play.

¹¹ See Hume's objection to the view that belief involves the addition of new ideas, articulated in both the Appendix (T p. 623-4) and in the Abstract (T p. 653).

¹² Two notes: 1) The difference required here is intended to be one that would not automatically rule out doxastic voluntarism, though it would rule out views suggesting that our ability to believe (or not) at will is on a par with our ability to raise an arm (or not) at will. 2) There is some room to argue that imagination is not fully voluntary, in that we sometimes imagine unbidden, and cannot always stop ourselves from imagining something. If one accepts this, the difference in voluntariness, much like the difference in influence on action, will appear to be much more readily explained as a difference of degree.

¹³ The model I just described may seem to require that any such account requires that we can dismiss a mental state we have iff we could summon it when it is not present. However, there are various additional tweaks one can propose, that would allow for differences in the ease of summoning and dismissing mental states.

¹⁴ My earlier discussion of worrying about a possible car accident is relevant here as well.

¹⁵ Also for the distinction between sensing and thinking. Much of this discussion could be recast in terms of the distinction between impressions and ideas. Note that the points in Hume's favor would carry over.

¹⁶ Reid's point here involves a misreading of Hume, even on the assumption that Hume is a skeptical anti-realist. At the outset of the *Treatise*, Hume posits a category of ideas ("secondary ideas"), which would be relevant to judgments about the existence of our mental operations, contra Reid's interpretation on which Hume regards our mental operations as self-referential (T 1.1.1, p. 6).

¹⁷ On some natural interpretations of Locke [1975], and Arnauld and Nicole [1996], beliefs are truth-assessable in virtue of being a mental act of affirmation (or denial) relating two ideas, not in virtue of being a mental act with a proposition as its object. However, Locke, with Reid, regards ideas themselves as not assessable for truth or falsity. Locke outright declares to us that ideas are, strictly speaking, neither true nor false (Locke [1975], 2.32).

¹⁸ See, for example, King [2007] and Soames [2010], among many others.

¹⁹ There are other uses of the "belief in" locution, such as "Tom believes in honesty" and "Tom believes in his brother" which seem to express e.g. dedication to an ideal or trust/faith in an individual, but these uses can be set aside for our purposes.

CHAPTER 3: BELIEF AND DENIAL

Introduction

Pessimism about Hume's theory of belief has persisted long past Reid's original complaints. For instance, Donald Davidson offers a striking example of the pessimism surrounding David Hume's theory of belief, when, in the middle of a paper on Hume's theory of pride, he remarks without explanation or argument that Hume's official solution to a puzzle is "necessarily inadequate because his psychological apparatus cannot yield a serious account of judgment or belief" (Davidson [1976]). Since providing a serious account of judgment and belief in terms of his version of the theory of ideas is one of Hume's central aims in the *Treatise of Human Nature*, this is a bold charge. However, we can make sense of this pessimism in light of the constraints on theorizing that Hume adopted (cf. Chapter 1). While we have already seen that some of these worries can be mitigated (cf. Chapter 2), there is an important worry about Hume's view that has stuck around for 300 years. In this chapter, we will examine a pair of objections (revolving around a single worry) from Hume's contemporary Thomas Reid, as well as a closely related objection presented more recently by Barry Stroud. All three objections argue that the account of belief Hume offers is incompatible with an adequate treatment of denial. My three-fold goal in this chapter is to argue i) that there is a position which offers a way for Hume to avoid this objection, ii) that such a position is compatible with Hume's other views, and iii) that Hume in fact held this position.

In the first section of the chapter, I briefly recapitulate Hume's account of belief as a lively species of conception and present Reid's objection that this account permits Hume to distinguish only two states for a given content (belief and suspension of judgment), missing a crucial third state (denial).¹ There I argue that there are two ways one might respond to

the challenge—one appealing to additional ways of mentally interacting with contents, the other appealing to additional contents to mentally interact with—each of which has the *prima facie* appearance of defusing Reid’s objection.

In the second section of the chapter, I develop one of the concerns underlying the other objection from Reid, and the objection from Stroud, both of which rest on the premise that Hume’s position is to avoid the original worry by appealing to additional activities. There I argue that Reid and Stroud are correct to think that an appeal to additional ways of interacting with contents fails.

In the third section of this chapter, I examine potential concerns about whether the other strategy—appealing to additional contents—is open to Hume, given his other commitments and constraints. There I argue that none of Hume’s commitments or constraints prevent him from positing the additional contents needed to adopt this strategy.

In the fourth section of the chapter, I defend the interpretation of Hume on which he did, in fact, posit such additional contents. There I use a variety of textual evidence from the *Treatise* to provide clear textual support for this interpretation, support which is strengthened by the philosophical superiority of this reply to Reid.

Though this chapter addresses only one element of the pessimism surrounding Hume’s theory of judgment, the element it does address is a natural first step towards a more robust defense of Hume’s views. By showing that Hume can explain what it is for a pair of beliefs to be contradictory, we are in a much better position to appreciate the prospects for him to capture the full range of logical relationships among beliefs. One issue not addressed in this chapter (or, indeed, in the dissertation itself) is the problem of ordinary predicative belief for Hume. It is worth highlighting that this is an intentional omission, not an oversight. Given Hume’s resources for dealing with abstract representation, it is important for us to first get

clear on the logical relations among the non-abstract ideas, before attempting to assess Hume's best options for modeling predicative (i.e. non-existential) judgments.

Section 1. Hume's Account, Reid's Challenge, and Stroud's Dilemma

I've previously argued that a central goal of the first book of the *Treatise* is to provide an account of that portion of the mind concerned with thinking, judging, and reasoning—i.e. what Hume and other early modern philosophers called “the understanding”. The account takes the form of a reductive analysis of the acts of the understanding in terms of perceptions, Hume's fundamental mental entities.

Hume is also constrained by a commitment with respect to the way in which aspects of ideational states can figure in explanations of the various mental states. For instance, Hume commits himself to using the ideational composition of the state only in the role of fixing/explaining the content of the state, while the other element of ideational states, attendant degree of force and vivacity, must do all of the work to distinguish among different mental states with a common content.² Hume is aware of and embraces these constraints, as can be seen in the discussions of the difference between conception and belief that were previously examined. Essentially, Hume accepts that conceiving that Julius Caesar exists has the same content as believing that Julius Caesar exists, and concludes (as is required by his system) that the states can only differ with respect to their attendant force and vivacity. Hume's considered position is that belief is a lively species of conception, or in other words, that states of believing a given content are a particular lively subset of states of conceiving that content.

With this understanding of Hume's account of belief and the fundamental constraints that arise from the commitments of his theory of ideas, we are in a position to introduce

and consider an objection to Hume's account offered by Thomas Reid in his *Inquiry into the Human Mind on the Principles of Common Sense*:

And if no philosopher had endeavored to define and explain belief, some paradoxes in philosophy, more incredible than ever were brought forth by the most abject superstition, or the most frantic enthusiasm, had never seen the light. Of this kind surely is that modern discovery of the ideal philosophy, that sensation, memory, belief, and imagination, when they have the same object, are only different degrees of strength and vivacity in the idea. Suppose the idea to be that of a future state after death; one man believes it firmly; this means no more than that he hath a strong and lively idea of it: Another neither believes nor disbelieves; that is, he has a weak and faint idea. Suppose now a third person believes firmly that there is no such thing; I am at a loss to know whether his idea be faint or lively: If it is faint, then there may be a firm belief where the idea is faint; if the idea is lively, then the belief of a future state and the belief of no future state must be one and the same.

Inq, p. 30

Though Reid uses the terms "belief" and "disbelief", I will, as noted above, refer to the states in question as "affirmation" and "denial" in my discussion. It seems as though Reid's objection can most naturally be understood as an attempt to show that the different mental states Hume must account for outnumber the different ideational states his theory allows:

- R1-1. For any content C, in Hume's system, the range of ideational states with content C are exhausted by those assigned to affirming C and those assigned to suspending judgment with respect to C.
- R1-2. For any content C, the states of affirming C, denying C, and suspending judgment with respect to C are distinct states with the same content.
- R1-3. If (1) and (2), then Hume's system cannot account for denying C.
- R1-4. So, Hume's system cannot account for denying C.

Supposing that we intend to accept 3 (as I think we should), there are two ways to challenge this argument on behalf of Hume: deny premise 1, or deny premise 2.³ Denying premise 1 involves arguing that some subset of the ideational states with content C are assigned to the state of denial. Further, it requires explaining the conflict between belief and cognitive denial in terms of some contrariety in the ranges of force and vivacity assigned to the contrary states. Premise 2 may be denied in a number of ways, but the most natural and straightforward is to claim that the state of denying C does *not* have C as content, despite the grammatical form of this particular description of the state. We can better understand what these options amount to in light of a discussion from Barry Stroud of Hume's account of belief. Stroud criticizes Hume for failing to treat the full range of manners of conceiving a given content, stating that "[o]ne 'manner of conceiving' an idea that Hume should have considered is denial". He continues:

Although he speaks of disagreement, disbelief, and dissent, he never tries to say what they are, perhaps because he thinks his theory of belief, such as it is, accounts for them. But that is not so.

If assent or belief is just a matter of having a lively idea before the mind, what is dissent or denial? It would seem to be either a matter of having that idea before the mind in some different 'manner', or else assenting to or believing the opposite of the original idea.

Stroud [1977], p. 75

Stroud goes on to suggest that neither horn of the dilemma is a viable option for Hume, but all we need to observe for the time being is that the two horns of Stroud's dilemma map neatly onto the options we saw for resisting Reid's objection: we can either interpret Hume as maintaining that believing and denying involve contrary activities toward a common content, or that believing and disbelieving involve occurrences of the *same* activity toward *contrary* contents. Approaches of the first sort can be understood as Act-Contrary (AC) approaches, while those of the second sort are Content-Contrary (CC) approaches.⁴ One

way to understand what is at stake in the choice between the two accounts is this: Given that, for any content C, the state of denying C is equivalent to the state of affirming the negation of C, which description of the state is a better reflection of the underlying psychological facts?

To draw this out with a crude analogy, the AC account posits something akin to a cognitive thumbs-up and something akin to a cognitive thumbs-down. If I believe C and you disagree with me, I mentally give C the thumbs-up, and you mentally give C the thumbs-down. On the CC account, there are not two basic mental activities, there is only the mental thumbs up, but in addition to C, there is a further content, opposed to C, and while I give C the thumbs up, you do not, and instead you give C's opposite the thumbs up. The crucial theoretical commitment of the AC account is that the denial cannot be reduced to affirmation of the contrary; the theory requires both affirmation and denial, while the crucial theoretical commitment of the CC account is that contents themselves exhibit logical relationships like inconsistency or contrariness (which can then be inherited by states of assenting to those contents).

In the next section of this chapter, I will endeavor to show that, insofar as Reid and Stroud are concerned to argue against the viability of AC accounts, they are correct; such accounts are untenable in general (and especially so for Hume).

Section 2. Hume Should Endorse Contrary Contents

The goal for the present section is to argue that AC accounts are not viable in general, and especially not for Hume. Consequently, in light of Stroud's dilemma, Hume should endorse a CC account. I begin by demonstrating some very general issues that arise on any AC account, arguing that they are sufficiently problematic so as to render AC accounts

largely untenable. Then, by considering a second objection from Reid, and the objection from Stroud, I will show how the prospects for the AC interpretation of Hume are even less viable.

The original form of our worry was that, for a given content *C*, there are three mental states that need to be distinguished: *affirming C*, *suspending judgment as to whether C*, and *denying C*. The AC approach to resolving the worry involves positing a distinct way of engaging with *C*, *denial*, which cannot be reduced to an affirmation. In other words, this approach requires that denial and affirmation are equally fundamental/basic.⁵ One could then define suspension of judgment as the state of having conceived of *C*, but neither affirming nor denying it. We can say that such a system has two basic acts of cognitive commitment.

If the main complaint against the Act-Contrary account was that it has two basic acts of cognitive commitment instead of one, it would not be in much trouble. After all, merely positing two basic acts of cognitive commitment is, if anything, a more parsimonious maneuver than doubling the number of contents (i.e. adding a contrary content for each positive content, as on the Content-Contrary approach). The main complaint against Act-Contrary accounts is that they are saddled with (far) more than two basic acts of cognitive commitment. Let's start by considering four different mental states:

- &1. The belief that God and Satan exist.
- &2. The belief that God exists and Satan does not.
- &3. The belief that God does not exist and Satan does.
- &4. The belief that God and Satan do not exist.

Just as the belief that God exists and the belief that God does not exist share the same content on the AC approach, these four beliefs share their contents. If one accepts a plausible principle of compositionality for conjunctive contents (i.e. if one accepts that the

content of a conjunctive belief is a function of the contents of the conjuncts), it follows that since the first conjunct of each of &1-&4 has the idea of God as the content of one conjunct, and the idea of Satan as the content of the other conjunct, that such a principle would require each conjunctive belief to have the same content.⁶ At best, one of the four can be subsumed under the original act of affirmation (presumably &1) and one of the four can be subsumed under the original act of denial (presumably &4). This leaves two further states to account for. The worry is that doing so will require the postulation of two additional mental activities, which are each *equally* basic with affirmation and denial.

In this case, it is not entirely implausible to suggest that the result can be avoided by denying that the states exhibit genuine logical complexity.⁷ Suppose I deny that there is genuinely conjunctive belief. Instead, I wish to offer the following account of apparently conjunctive beliefs:

&B: Someone believes C and C' iff i) she believes C and ii) she believes C'.

First, note that this analysis has the somewhat strong commitment that belief is closed under conjunction. Just to illustrate how this eliminates substantive positions: consider the difference between maintaining that no one ever believes a contradiction, and the view that everyone's beliefs are always consistent. The former view states that no individual belief of mine is every contradictory, but the latter places a global consistency constraint on my beliefs. Even though Hume notoriously maintains both that contradictions are inconceivable (and thus, unbelievable) as well as that no one can have contradictory beliefs, the view is still worse for not permitting us to distinguish the positions.⁸ While this may not be an additional cost of the view as a matter of Hume interpretation, it is an additional cost of the view as a matter of fact.

Second, there is a much larger problem with the view, which is that the analogous strategies simply can't be employed for other logically complex beliefs. Consider:

- v1. The belief that either God or Satan exists.
- v2. The belief that either God exists or Satan doesn't.
- v3. The belief that either God doesn't exist or Satan does.
- v4. The belief that either God or Satan doesn't exist.

Assuming a similar principle of compositionality for disjunction, we are forced to treat each of v1-v4 as having the same content.⁹ And, though we might have allowed that believing C&C' just is believing C and believing C', it is indisputable that believing a disjunction is distinct from simply believing either of the conjuncts. There is simply no hope to eliminate these disjunctive beliefs as disjunctions of more basic states of affirmation and denial.

Is there another plausible way to construct the disjunctive beliefs out of affirmations or denials? It is safe to say that we cannot. Affirming a disjunctive content does not require affirming or denying any more basic content at all. There is something equivalent to affirming a disjunction, but this state would be the denial of a conjunction of negations. Since a conjunction of negations, on the present approach, is simply being analyzed as a pair of negative beliefs, there is no content whose denial is equivalent to the affirmation of a disjunction.

The revised challenge—in light of v1-v4—is that there are at least 4 states to account for, given any two basic contents. To avoid the postulation of further basic acts of cognitive commitment, we would need to somehow assemble the already postulated basic acts into complex arrangements. There is not really any sense to be made of spatial arrangements of said acts, and temporal arrangements will fail for other reasons.¹⁰ Insofar as one can have

simultaneous non-spatial arrangements of basic acts, one would need to invoke the view that they are “arranged” with respect to the content, but this view differs little from the treatment proposed for &1-&4, which, as noted, cannot be adapted for affirming a disjunction, since affirming a disjunction is not analyzable into multiple component acts of affirmations and denials.

We would need to post additional basic mental activities, which can only be described as things like *disjoining-the-affirmation-of-the-first-with-the-denial-of-the-second* (or something else equally cumbersome). It does matter, for the plausibility of this view, that we don’t tend to think about this as a discrete mental activity taken towards a pair of contents, and instead, would think of the states it purports to describe as affirming a disjunction.

The initial challenge (to Hume) was that there are more basic states of cognitive commitment to account for than can be distinguished in his framework (two times as many, in fact). By positing a second basic act of cognitive commitment, the advocate of AC has doubled the available number of basic states of the understanding, thus producing a view that meets the demands of the initial challenge. To make it especially clear why this further worry targets the same aspect of the view, we need only consider the beliefs that directly contradict v1-v4. None of v1-v4 contradict each other. But, our original account of denial is simply inapplicable to v1-v4. So, to employ the same strategy of response as we did when facing the original challenge, we would need to introduce an additional opposing act for each of the acts introduced to account for v1-v4.

At this juncture, it is worth briefly noting why there is not a similar problem for Content-Contrary approaches. On CC approaches, there is a single act of cognitive commitment, affirmation, whose objects stand in logical relations. Provided one accepts that, in general, for every content C there is a contrary content, $\sim C$, and for any two contents C and C’ there

is a conjunctive content $C \& C'$, one can a) distinguish the contents of $G \& S$, $G \& \sim S$, $\sim G \& S$, and $\sim G \& \sim S$ — *and* also distinguish the contents of v_1 - v_4 without further augmenting the range of contents — in general, the disjunction of C and C' is equivalent to $\sim(\sim C \& \sim C')$ so negation and conjunction are sufficient to account for disjunction. Similar points can be made for the material conditional (both as criticisms of the Act-Contrary account and as benefits of the Content-Contrary account).

So, no one embracing an AC account will simply be positing two basic acts of cognitive commitment, if they are to account for logically complex beliefs. As we have seen, they will need to posit at least four such acts. The sheer increase in number of posited acts is a concern, but the real problems for the view are that a) these acts are supposed to be on a par with affirmation and denial as basic acts of cognitive commitment, but do not seem to be, and b) this is not the end of act multiplication. Considering disjunctions with three disjuncts, or disjunctions of conjunctions, etc., suggests that the problem will recur. Limiting our attention to disjunctions alone, to treat a construction of complexity n (where n is the number of logically simple disjuncts permitted), the account will require, at minimum, 2^n basic acts of cognitive commitment.

So, AC involves a multitude of acts, each of which needs to be basic, but whose basicness is suspect at best, and, now, AC, which did not originally seem worse off than CC with respect to considerations of parsimony, actually has to posit exponentially more basic attitudes in order to account for ordinary logically complex beliefs (that is, beliefs with logical complexity, not beliefs about logical complexity).¹¹ Last, and perhaps most importantly, the account does not successfully explain the nature of denial. It explains, at best, denials of logically atomic contents. It will simply be a primitive fact about the acts of

disjoining-the-affirmation-of-the-first-with-the-denial-of-the-second, that it is incompatible with denying the first and affirming the second.¹²

Still, one might hope to mitigate some of these concerns.¹³ Or one might suspect that some of this trouble is illusory, since the objection only demonstrates that the plethora of additional states are basic relative to affirmation and denial. One might think that someone who aims to reduce all of these states in some further manner—Hume, perhaps—could avoid the trouble.

However, examining Humean versions of this approach reveal that, if anything, the trouble is worse on a Humean reduction than if one were to simply stop the story here. First, Hume's sole resource for distinguishing these basic acts of cognitive commitment as different species of conception is in terms of their degree of force and vivacity, meaning that a Humean version of this approach would posit a huge number of species of conception, all differentiated by degree of strength.¹⁴ Second, as Reid and Stroud point out, the nature of the differences between these species of conception do not predict or explain the nature of the differences between the acts in question. In what follows I will present the basic model of a Humean Act-Contrary account, and show how it runs into trouble with both the number of theoretically significant distinctions it predicts as well as with the predictions and explanations it offers for the relationships among the states.

As noted, to treat constructions of complexity n , the view requires us to have at least 2^n basic acts, which means, if we are offering a reduction, 2^n significant distinctions among underlying states. Initially, it appeared that Hume's states could be modeled as ordered pairs $\langle i, s \rangle$ where i is an idea, and s is a degree of strength. In order to capture conjunctions of complexity four, we would require the ability to distinguish among at least 16 different degrees of vivacity. While there may be a limit to the complexity of contents we can, as a

matter of psychological fact, engage with, it does not seem as though we have particular trouble entertaining contents that would be factored into five or six different disjuncts. However, such states require 32 to 64 different theoretically significant distinctions among degrees of vivacity.¹⁵ It seems clear then that invoking Hume's underlying mechanisms do not assist us in mitigating the problematic multiplication of basic cognitive acts, as Hume's view would require 32 to 64 different levels of vivacity at which the nature of the state switches in such a way as to shift whether the embodied judgment is positive or negative with respect to a given component of the content.

There is an even larger problem looming however, which can be brought out by consideration of the second objection Reid offered against Hume's account, and Stroud's discussion of a similar point. Though Reid was satisfied, in the *Inquiry*, that he had refuted Hume's account of belief, in his later *Essays On the Intellectual Powers of Man*, he seems to have modified his understanding of Hume's position, and reworked his objection as one that specifically targets the Act Contrary approach to accounting for Cognitive Denial:

Every proposition that may be the object of belief, has a contrary proposition that may be the object of a contrary belief. The ideas of both, according to Mr. HUME, are the same, and differ only in degrees of vivacity. That is, contraries differ only in degree; and so pleasure may be a degree of pain, and hatred a degree of love. But it is to no purpose to trace the absurdities that follow from this doctrine, for none of them can be more absurd than the doctrine itself.

EIP, p. 291-2¹⁶

Unlike Reid, I think there is some purpose in tracing the absurdities that follow from this doctrine before dismissing it as hopeless. To begin, Reid's analogy to the view about hatred and love is misplaced: The proposed Act-Contrary interpretation of Hume's view does not say that denial is a degree of affirmation, but rather, that denial and affirmation are both degrees of (the strength of) conception. This is more analogous to the view that love and

hatred are both degrees of, for instance, concern. Whether or not that is an appealing view, it is not patently absurd. To further see that this is not a *generally* problematic position, consider what one might say about heat and coldness. There is a relatively large difference between the view that heat is a degree of coldness (or vice versa) and the view that heat and coldness are degrees of temperature.

However, there is something importantly correct about Reid's objection, and again this can be brought out by turning our attention to an illuminating discussion offered by Barry Stroud. Here is Stroud's framing of the Act-Contrary account:

On [the Act-Contrary] view we have only the one idea, that of God, or of God as existing, and we can conceive it either by assenting and thereby believing that God exists, or by denying, and there by believing that God does not exist. And both of those 'attitudes' are to be distinguished from simple conception, in which one need not have an opinion one way or another.

Stroud [1977], p. 75

Recognizing that Hume has very few basic resources for distinguishing mental states, and specifically that the only resource available for Hume to use in distinguishing among states with the same content is the attendant degree of vivacity, Stroud explains the only position he takes to be available to Hume:

But if denial is to be a completely different 'manner of conceiving' from both belief and mere conception, and if all differences among 'manners of conceiving' are just differences in degrees of force and vivacity, then denial will be just a matter of having an idea before the mind with yet a third degree of force and vivacity. Will [denial] be stronger, or weaker, than belief? And how will it differ from a belief held with less than the highest degree of conviction? Will there be no difference between an atheist and a man who fairly strongly believes that God exists?

Stroud [1977], p. 75

It will help to frame the basis for Stroud's worry. While the initial objection (i.e. Reid's *Inquiry* objection) was framed as a problem about the number of different states, there is

more to the challenge than simply producing the correct number of distinctions on one's view. The view should also get the right relationships among the states. For instance, suppose we only have to worry about the acts of commitment underlying v1-v4:

- v1. The belief that either God or Satan exists.
- v2. The belief that either God exists or Satan doesn't.
- v3. The belief that either God doesn't exist or Satan does.
- v4. The belief that either God or Satan doesn't exist.

The underlying states in question can all be modeled as pairs $\langle \text{GOD} \circ \text{SATAN}, s \rangle$, where ' $\dots \circ \dots$ ' stands in for whatever function on basic contents takes us to a disjunctive content.¹⁷ For any two distinct such states, Hume's framework requires that either the former will be stronger than the latter, or that the latter will be stronger than the former. But consider the states underlying v2 and v3. Neither state seems to be, in general, stronger or weaker than the other.¹⁸ Even if we were tempted to consider affirmation to be stronger than denial or vice versa, the 'mixed' states are clearly on a par with each other. But, Hume has only one axis along which the different ideational states for a single content can vary, and, consequently, all variations are variations in strength. Ultimately, insofar as acts of denial or assent can be weak or strong, it seems like the same range of strengths seems to be available to each. Can this problem be at all addressed?

The best one can do to avoid this charge of arbitrariness involves getting rid of the commitment to distinguish acts of cognitive commitment by ordering them along a scale of strength. And the best way to accomplish this involves two changes to the view: The first is to make finer grained distinctions among ideational states of with a given content of a given strength. To illustrate it may be helpful to think about flavors. A peppermint tea may have the same intensity of flavor as a nutmeg tea, but are obviously still different flavors. If the

element of vivacity that was relevant to whether the act was cognitively committing was intensity, but we allowed for multiple “flavors” of equally intense acts, we could avoid the initial arbitrariness worry. For example, let’s say the flavors are peppermint and nutmeg, and signify them by ‘p’ and ‘n’ respectively.¹⁹ Now, if strength comes in values ranging from 0 to 1, then, where we had previously only had a single ideational state, <GOD, .6>, we would now have two, <GOD, .6p> and <GOD, .6n>. Strength itself would then be the distance from some zero point, while the ‘flavor’ of the state would distinguish the positive from the negative. This addresses the fundamental arbitrariness worry, but runs into a separate problem dealing with the complex states. Can the of believing that God exists and Satan does not have more than one flavor? If not, it would, barring revision of the view, have to be either a peppermint state or a nutmeg flavored state. This too could be fixed by getting rid of the assumption that complex ideas have a single degree of force and vivacity, and instead adopting a model on which a complex idea has (or can have) a complex arrangement of force and vivacity, such that some parts may have a strength of .4p and some may have a strength of .8n. Perhaps the best version of this view would be one that required the entire state to have the same degree of intensity, but permitted variation of flavor for different simple parts.

This, I think, is (structurally) the best version of a Act-Contrary account in the neighborhood of Humean views. However, there is no textual support for attributing such a view to Hume himself. Thus, this is much more likely to be something one would defend as a reconstructive project. Furthermore, while it may begin to address some of the worries, it really doesn’t do anything to tackle the fundamental challenge of providing a general and recursive account of logical relations among mental states. Fundamentally, the advantage of a CC view is that negation does the same thing everywhere. Give it a simple content, or a

complex content, and its negation is a content which is inconsistent with it, and denying some claim is simply believing its negation. Now, even on the best versions of the AC view, negation is one thing when it comes to simple contents (i.e. the opposite of believing C is for C to have a strong nutmeg flavor instead of a strong peppermint flavor) and something different for conjunctions. The account cannot be extended to the negation of a conjunction or disjunction. Shifting all the peppermint flavor of a positive disjunctive belief to nutmeg flavor would produce the disjunction of denials, not the denial of a disjunction. That is, the same operation used for negation in the basic case, applied to $C \vee C'$, would produce $(\sim C \vee \sim C')$, rather than $\sim(C \vee C')$.

So, every version of the Act-Contrary approach is saddled with a variety of unwelcome and unacceptable consequences, in order just to handle disjunctions. It does not improve the view to couple it with any of the distinctly Humean commitments regarding the nature of variations in the underlying states. Consequently, anyone wishing to address cognitive denial, and in particular Hume, should address it by embracing a Content-Contrary view. Which leads us to the question of whether Hume *can* endorse such contents. After all, if the only way to account for denial is with contrary contents, and Hume's other views preclude him from endorsing contrary contents, this would provide us with a strong argument against the viability of Hume's views on the makeup of the mind (incidentally, this seems to be the stance that Stroud adopts, whereas Reid, as far as I can tell, simply does not consider the possibility of Hume's taking a Content-Contrary approach). In the next section I will argue that Hume can endorse such contents.

Section 3. Hume Can Endorse Contrary Contents

In this section, I will argue that Hume can consistently endorse a Content-Contrary account. However, the only way to exhaustively demonstrate that contrary contents are compatible with the rest of Hume's views would require, at the very least, a complete enumeration of Hume's views. So, I will instead focus on a set of features that have, or seem to have, the potential to make trouble for contrary contents, and assume that if anything makes trouble for Hume in endorsing contrary contents, it is one or more of the obvious potential troublemakers. Thus, the actual structure of the section is to demonstrate, for each of these potential troublemakers, that it makes no trouble. The first troublemaker I consider is one invoked by Stroud in his argument that Hume cannot endorse contrary contents. I show how the Stroud objection relies on an incorrect reading of Hume's principle that thinking of an object is the same as thinking of the object as existing, and show that Hume's actual principle does not make any trouble. This leads into a broader discussion of whether Hume's allowance of non-predicative contents for belief causes any trouble. I show that, though it complicates things for Hume somewhat, ultimately, it does not preclude him from endorsing contrary contents. I then consider whether either of the potentially troublesome constraints (previously discussed in chapters 1 and 2) actually make trouble. Specifically, I consider whether either Hume's exclusive, exhaustive division of ideas into those that are simple and those that are complex or Hume's commitment to the copy principle make trouble for him endorsing contrary contents. Arguing that none of these elements of Hume's philosophy preclude contrary contents, I conclude that Hume can consistently endorse a Contrary Content view.

As mentioned, Stroud's diagnosis of the problem is that Hume rejects a predicative model of belief, referring to the fact that Hume analyzes the state of believing that God

exists, for example, as being a lively conception of God, rather than as having a lively conception with both an idea of God and a separate idea of existence. I can offer qualified agreement with Stroud's point here: Hume does reject predicative structure for the objects of existential belief, and this does present him with some additional problems.²⁰ On the other hand, I do not agree with Stroud that there is an insurmountable problem raised by this aspect of Hume's view. To see what is at stake, and why Stroud thinks it causes such problems for Hume, we should look at Stroud's objection, as he states it. Limiting his discussion to the case of 'existential beliefs', Stroud tells us:

[I]t makes no sense to Hume to talk of 'the opposite of the original idea'. If to think of God is to think of God as existing, or as He would be if He existed, then it is not possible to have the idea of God's not existing. And therefore it is not possible to have the idea of God's not existing. And therefore it is not possible to have the belief that God does not exist by having 'in the assenting manner' the idea of God's non-existence.

Stroud, p. 75

The principle of Hume's alluded to in this passage, as Hume expresses it, is this: "to reflect on any thing simply, and to reflect on it as existent are nothing different from each other".²¹ Treating "reflecting" and "thinking" as synonymous for present purposes, Stroud's objection looks like this:

- S-1. Necessarily, to reflect on God is to reflect on God as existing.
- S-2. If it is possible to have an idea of God as not existing, then it would be possible to reflect on God without reflecting on God as existing.
- S-3. So, it is not possible to have an idea of God as not existing.

The support for S-2 is, presumably, the thought that reflection involving the idea of God as not existing would not be reflection on God as existing, but would still be reflection on God. S-1 precludes this possibility, and thus, precludes the possibility of the idea of God as

not existing. Stroud's diagnosis is that Hume has painted himself into a corner by endorsing S-1 (and thereby precluding a predicative treatment of belief as involving a distinct idea of existence). But, as compelling as Stroud's case may seem, I do not think the objection causes problems for Hume.

S-1, as stated, is stronger than Hume's principle. Hume's principle would be:

S-1*. Necessarily, to reflect on God simply is to reflect on God as existing.

This subtle distinction in formulations is the difference between the view that all thinking about God is thinking about God as existing, and the view that a thought whose sole content is the idea of God is a thought about God as existing. S-1*, as stated, does not even get us the result that thinking of God as loving involves thinking of God as existing. And it is important to note that we need a principle with the strength of S-1 get the conclusion. S-1* is not strong enough.

That Hume doesn't intend the principle to be as strong as Stroud suggests can be seen pretty clearly by his arguments for it. Hume is concerned (both at T. 1.2.6 and T. 1.3.7) to deny that existential belief is predicative. Hume wants to argue that you don't need to add anything to the idea of an object to get the idea of that object as existing. In other words, Hume thinks that *imagining o* and *imagining o as existing* (and also *imagining the existence of o*) are the same state, and further, that the underlying psychological structure of the state is better reflected by the "imagining o" locution than the others, and likewise for *conceiving of o*, *believing in o*, *remembering o*, etc.

If we are concerned with a state like *imagining the non-existence of o*, then the 'object' in question, would be, not o, but the non-existence of o: o's absence. And the application of Hume's principle would be that imagining o's absence is the same as imagining the existence of o's absence. We would not be forced to think of the idea of the non-existence of God as

the idea of the existence and non-existence of God (which would be a troublesome idea), but instead as the idea of the existence of the non-existence of God.

So, when Hume tells us that “any idea we please to form is the idea of a being, and the idea of a being is any idea we please to form” (T p. 67), this is equivalent to telling us that every idea we have can be understood as the idea of the existence of something.²² In other words, all ideas are object ideas. If we are content to think of absences as objects (or object-like in the relevant sense), this causes no problems for Hume’s ability to embrace absences.

What other reasons might we have for thinking Hume is unable to endorse contrary contents? The two largest constraints on what ideas Hume can posit come from his commitment regarding the exhaustive, exclusive division of ideas into those that are complex and those that are simple, and his commitment to the copy principle. I will now consider whether these commitments make trouble for Hume’s ability to endorse ideas of absences.

For instance, if the proposal in question was that, in general, the idea of the absence of an object *o* was composed from the idea of *o* and the idea of absence, one could then object that the copy principle would cause problems, since there is no simple impression of absence from which the idea of absence could be copied. There are actually three specific problems for endorsing this particular account: First, it would require Hume to have (at his disposal) a mode of composing ideas in which the contents of one could operate on the contents of another as some sort of function, rather than only permitting composition into some conglomeration or amalgam of the two ideas.²³ Second, it would involve an idea of absence (full stop), which is, *prima facie*, an abstract idea. Hume’s model of abstract ideas requires the possession of particular instances to precede the possession of the abstract idea; this model reverses that (cf T 1.1.7). Third, it would require the possibility of a lonely

absence impression (i.e. of the idea of absence all by itself), which is difficult to make sense of. While it would be possible to claim that the idea of absence is itself complex to avoid this last worry, it is a fair challenge, in Hume's system, to demand the make-up of that idea as well.

In light of these problems with treating ideas of absences as complex, I will concede that the idea of, for instance, God's absence, must be simple, if Hume's view is to work. I do not claim to have considered every possible way of proposing that the idea of the absence of an object is a complex idea, but I am hard-pressed to see how to give a workable account of complex negative ideas.²⁴ It is worth noting that, if there are ways to make such an account work that I am overlooking, they would only serve to bolster the main thesis of this section, rather than undermine it. From here on out, however, I will simply be assuming that if Hume adopts a CC view, there are simple negative ideas.

Suppose then that Hume must treat all ideas of absences as simple. It may then be objected that a) it is straightforwardly implausible to regard an idea of an absence as a simple idea, and b) that we do not have simple impressions of absences from which to copy said ideas. The remainder of this section takes up this pair of concerns.

Concern (a) is that it is implausible to treat the ideas of absences as simple. It is important, first, to note that, unless we attribute to Hume a very simpleminded view of the workings of language, the linguistic complexity of a phrase will not necessarily map directly to the complexity of the ideas involved. It is also easy to see that we should not attribute that sort of simpleminded view to Hume, since Hume wants "God exists" to designate the same idea as "God". Hume denies that linguistic structures and mental structures mirror each other. He does not endorse anything like the language of thought hypothesis, let alone a specific version of LOTH according to which we have a mentalistic language that is always

reflected adequately by natural public language. This is one of the most important things to keep in mind when interpreting Hume, as many of the basic concerns relate to this mismatch between linguistic structure and ideational structures. For instance, it is evident from Hume's non-predicative treatment of singular positive existential belief that grammatical structure of the complement clause ("that Susan B. Anthony exists") does not track ideational structure of the belief content (in this case, the idea of Susan B. Anthony). We should thus be careful to avoid objecting to Hume in a way that presupposes such mirroring between the two.²⁵

However, one might offer concern (a) not motivated by the linguistic complexity, but simply by considering what it is to think about the absence of some object, and concluding that it does not seem to involve a simple idea. With respect to this issue, I can offer just the following on behalf of simple ideas of absences: absences don't seem to have parts. Contrast this with a small stack of 3 wooden blocks, which we can call 'Blocky'. Blocky is composed of three parts (arranged in a certain way). If we imagine that Blocky is annihilated, then we'd have a situation without Blocky, and without each of the three parts. But Blocky's absence is not built out of the three other absences. It is not part of Blocky's absence that block 1 is absent, because Blocky could be absent while block 1 was present. In fact, Blocky is absent just in case any of the three block parts are absent (or perhaps even if they are just not arranged appropriately). While Blocky has conjunctive composition (in the sense that Blocky is present just in case block 1 and block 2 and block 3 are present), Blocky's absence is disjunctive (in the sense that Blocky is absent just in case block 1 or block 2 or block 3 is absent).²⁶

Concern (b) was that we don't have simple impressions from which to copy these ideas of absences. However, I think that this concern can be countered as well. Looking around

my room right now, I can see that Pegasus is not here. The position Hume would need to take is not just that Pegasus is not among the things I see; he must say that I can see the absence of Pegasus. Now, it may be the case that I can only see the absence of Pegasus once I *already* have the idea of Pegasus (in which case, someone who has thought of Pegasus can see more in a given room than someone who hasn't). I suppose it may be objected that absences are not literally seen, but it is pretty clear that there is some room to defend a difference between inferring that something is absent from a visual inspection, and a more immediate sort of seeing its absence.²⁷ It may also be objected that the absences are seen but are not simple impressions. While I am not entirely unsympathetic to the view that Pegasus's absence from the room as a whole may be made up of Pegasus absences at each subregion of the room, this is not a problem for the view under discussion, so long as any one of the proposed Pegasus absences is not complex.

What's more, it is important to note that these last concerns do not raise *consistency* problems for Hume, but, rather, they are simply objections to the view. While they obviously bear on the question of whether Hume's view is correct, they only bear on the question of whether Hume's view is coherent and/or consistent insofar as they purport to show that Hume has conflicting commitments. I grant that one might have serious doubts as to whether this is a good view of ideas of absences, but it seems to be logically consistent for Hume to adopt the view that ideas of absences are, all of them, simple ideas, even though our descriptions of them are usually complex, and that we derive simple negative ideas from simple negative impressions.

At this point, I think I have shown that none of the obvious potential trouble makers causes a problem for Hume's ability to consistently endorse a Content-Contrary account. All Hume needs to do is endorse simple impressions of absences, and he can have an account

of ideas of absence that does not run afoul of the copy principle or the division of ideas into simple and complex.

To consider one final worry: it may be objected that, since ideas of absences are simple, one cannot have the idea of any absence without first having the impression of that absence. This is in contrast to positive ideas, at least some of which can be had without a corresponding impression (Hume's example is New Jerusalem). Note, however, that once one has the idea of New Jerusalem, the present view would make it very easy to come by the impression of its absence. Everywhere I look, I see the absence of New Jerusalem.²⁸

So, we have now established that not only is a Content-Contrary account the right way to resolve the problem of Cognitive Denial, it is a way that is in fact available to Hume. In the next section, I will demonstrate that Hume does opt for this approach.

Section 4. Hume Does Endorse Contrary Contents

In the previous sections, I established that the correct resolution to the problem of cognitive denial is to embrace a CC account, and I showed that Hume is able to consistently endorse such an account. In this section, I argue that Hume does endorse such an account. I start by presenting my positive textual evidence (i.e. the passage from the *Treatise* in which Hume clearly commits himself to contrary contents). I then present the neutral textual evidence (i.e. the other passages which involve discussion of denial or disagreement, which are compatible with either interpretation). I then discuss the “negative” textual evidence (i.e. I argue that, the relative lack of discussion of denial/disagreement counts in favor of my interpretation). When these considerations are combined with the fact that they support interpreting Hume as holding the philosophically superior view, I argue that my

interpretation has very strong support. These considerations, on balance, strongly favor my interpretation.

To begin with my positive textual evidence, Hume tells us that contrariety is included among the seven types of philosophical relations among ideas.²⁹ He says:

The relation of *contrariety* may at first sight be regarded as an exception to the rule, *that no relation of any kind can subsist without some degree of resemblance*. But let us consider that no two ideas are in themselves contrary except those of existence and non-existence, which are plainly resembling, as implying both of them an idea of the object; tho the latter excludes the object from all times and places, in which it is supposed not to exist.

T, p. 15

This is a relatively condensed passage, in the sense that Hume tells us an awful lot about contrary ideas in the space of a few sentences. For present purposes, though, it is enough to note that, given Hume's views rejecting treating the idea of existence as a distinct idea, we cannot regard the present passage as maintaining that there is a general idea EXISTENCE which has, as its contrary, another general idea, NON-EXISTENCE. Rather, it seems that Hume is positing that the only ideas standing in the relation of contrariety are those of particular existents and particular non-existents (i.e. absences). At face value, the passage is a straightforward commitment to contrary contents that includes some further details of the account of contrary contents Hume has in mind. I should also note now, that I will (a bit later in this section) address the apparent commitment to the complexity negative ideas in this passage.

The neutral textual evidence amounts to this: Apart from this discussion of contrariety, a few paragraphs leading into his account of belief in section 1.3.7, "Of the nature of the idea, or belief", and a very brief mention in the Abstract, the *Treatise* contains nothing

resembling a discussion of the mechanics of denial or disagreement. The passage leading into his account of belief reads:

Suppose a person present with me, who advances propositions to which I do not assent, *that Caesar dy'd in his bed, that silver is more fusible than lead, or mercury heavier than gold*; 'tis evident, that notwithstanding my incredulity, I clearly understand his meaning and form all the same ideas, which he forms. My imagination is endow'd with the same powers as his ; nor is it possible for him to conceive any idea, which I cannot conceive ; or conjoin any, which I cannot conjoin. I therefore ask, wherein consists the difference between believing and disbelieving any proposition? [...]
'Twill not be a satisfactory answer to say, that a person who does not assent to a proposition you advance; after having conceived the idea in the same manner with you ; immediately conceives it in a different manner, and has different ideas of it. This answer is unsatisfactory ; not because it contains any falsehood, but because it discovers not all the truth. 'Tis confess, that in all cases, wherein we dissent from any person; we conceive both sides of the question ; but as we can believe only one, it evidently follows that belief must make some difference betwixt that conception to which we assent, and that from which we dissent.

T, p. 95-6

This passage is, in certain ways, equally compatible with AC or CC interpretations. In fact, in the account of disagreement that Hume regards as accurate but incomplete, he refers to both conceiving the same ideas in a “different manner” and to having “different ideas” of the proposition.³⁰ It is also important to note that Hume’s completion of the account simply involves the importance of invoking belief in the explanation of the difference, and not simply discussing the acts of conceiving. In other words, Hume isn’t really giving his account of disagreement here; he is using disagreement as a way to illustrate the role of belief.

As to the ‘negative’ textual evidence: What does the sparsity of Hume’s discussion of disagreement show? I maintain that it is support for the Content-Contrary interpretation. Here’s why: In general, Cognitive Denial is nothing special on a CC view. If one has an

account of belief, denials are just the subset of those beliefs with negative contents. There is not much to say about the negative activity (though there may be a fair amount to say about the negative contents). On the other hand, as we saw in section 2, if Hume has an Act-Contrary account in mind, there are a lot of questions to answer about how it works, what this contrary activity is, and how it relates to the original activity. If that were what Hume had in mind, it would be very natural for him to explicitly claim that there are multiple ways for the idea of God to possess belief levels of strength, and that those different ways give rise to contrary judgments. Instead, Hume's commitments on the nature and variety of ideational states precludes anything like a decently sophisticated version of the Act-Contrary account, and failing to discuss denial would be philosophically delinquent behavior. This is both an uncharitable and unfavorable reading of Hume's position.

So, when we consider that the clearest statement bearing on the matter expresses a commitment to a Content-Contrary approach, that Hume's relative lack of discussion of the issue is substantially more appropriate if he endorses CC, and that, as I demonstrated at length in section 2, Hume is philosophically much better off if he endorses Contrary Contents, charity would seem to require us to interpret Hume in accordance with the straightforward reading of the text: he endorses Contrary Contents.

In what remains of this section, I intend to explain how the CC account I sketched in Section 3 is compatible with the positive textual evidence I offered.³¹ Now, Hume, in the definition of contrariety, tells us that the idea of a given existent and its contrary existence are "plainly resembling, as implying both of them an idea of the object" while also noting that the negative idea "excludes the object from all times and places, in which it is supposed not to exist".

First, it may be thought that the resemblance commitment prevents simplicity of the negative ideas. But it is evident that two ideas resembling cannot, in and of itself, require complexity of ideas, since Hume (in laying out the missing shade of blue case) tells us:

I believe it will readily be allow'd, that the several distinct ideas of colors which enter by the eyes, or those of sounds, which are convey'd by the hearing, are really different from each other, tho' at the same time resembling.

T, p. 5-6

This passage may only seem to commit Hume to the view that different color ideas resemble, but given that the context is in setting up the missing shade of blue counterexample to the copy principle — a purported case of producing a simple idea without a correspondent simple impression — Hume's discussion here is only relevant insofar as the ideas of each specific shade of blue are a) simple, and b) resembling. So, Hume permits the resemblance of distinct simple ideas, and thus, the mere fact that he describes negative ideas as resembling their positive counterparts does not run afoul of interpreting Hume as adopting the section 3 reading.

Second, it may be thought that, for the negative idea to “imply [...] an idea of the object” would require it to be complex. However, the positive idea also has this feature, and presumably may be simple. So, the objection must be that the positive idea can have this feature trivially (by virtue of being identical to the idea of the object), but the negative idea can only have this feature as a result of complexity. This means that, to avoid the worry, one is free to postulate a relation which a simple negative idea may stand in to the positive idea, provided that the positive idea trivially stands in that relationship to itself.

So, there are at least two options for reading this talk of “implying [...] an idea of the object”. Option 1 is to treat the positive idea as a part of the negative idea. Option 2 is to treat the positive idea as something that must be possessed in order to possess the negative

idea. Since the original text involves a somewhat bizarre use of “imply”, I think both readings seem a little bit strained. As I’ve already argued that there is no value for Hume in adopting the view that negative ideas have their positive correlates as parts (absent a pretty drastic revision of our understanding of Hume on the nature of representation), only the latter option seems to remain as a candidate interpretation. The ideas resemble in that neither can be had without possession of the positive idea.³²

There are no doubt questions I haven’t answered yet about Hume’s account, but I think it is clear from what I have established, that David Hume should, can, and does solve the problem of denial by appealing to negative contents. In the last section of the chapter, I will discuss some directions for further investigation, and potential upshots of this discussion.

Conclusion

In one sense, the results of this investigation are modest: we have seen only a) that Hume’s system has the resources to defuse one concern about his theory of judgment, the concern that he cannot provide an account of denial, and b) that Hume used his resources in the very manner required to defuse the objection. This leaves open any number of other sources of concern about the adequacy of Hume’s resources. In another sense, however, these results are quite significant. Hume’s view, despite its impoverished resources, is able to solve this challenge in the same manner as it is solved on leading contemporary theories. By showing that Hume’s account of this fundamental logical relation is content-driven, we know exactly which other logical relations among contents Hume needs to capture in order to have a view which is respectable, even by contemporary standards. And while I have not yet argued that Hume’s resources are adequate to address those logical relations, the path for further research on this issue is clear. For instance, if Hume possesses the resources to

handle content conjunction, his logic of belief will be demonstrably adequate to the standard set by propositional calculus. At the very least, we have seen that the prospects for Hume's account are substantially better than they are generally taken to be.

CHAPTER 3 ENDNOTES

¹ For consistency and clarity, I will try to use only the terms “believe”, “affirm”, and “deny” (and their cognates), rather than “disbelief” (which is popular in the texts I quote), or other terms (like “assent”, “dissent” etc.). My main reason for avoiding “disbelieve” is the potential confusion between “disbelief” in the sense of denial, and “disbelief” understood as skeptical lack of assent (including both suspension of judgment and full-fledged denial).

² On this point, as with many, many others, I follow Owen [1999].

³ This interpretation of the argument may seem to be at odds with Reid’s discussion in 6.24 of his [2003], in which Reid characterizes memory and expectation as involving distinct degrees of liveliness of conception, but that discussion makes it clear that Reid interprets Hume to treat memory and expectation as involving belief, and thus, as further divisions within the category of belief rather than as alternatives to it.

⁴ It is worth noting that one could posit contrariety of both activities and contents. However, a) none of Hume’s objectors take him to have done so and b) there is no reason to posit both for this particular theoretical task. Since, ultimately, my discussion could be recast simply to show the necessity of contrary contents, and the inadequacy of contrary activities alone, this possibility need not concern us here.

⁵ I say “equally fundamental” here since a Humean AC account would attempt to further reduce affirmation and denial to different species of conception. The important feature, for our purposes, is that denial is not a type of affirmation, nor is affirmation a type of denial, on the AC account.

⁶ I note here that I am neutral as to exactly what this content has to be, though obviously, there are severe constraints on what ideas it could be, for someone like Hume.

⁷ In reality, the approach that I am describing as a denial of logically complex states is really just a deflationary analysis of the logically complex states in terms of the more basic states, this is because a full-fledged denial of the complex states would embrace an absurd error theory with respect to our attributions of &1-&4 (and similar constructions).

⁸ For one example, Hume invokes the stronger principle in *Treatise* 1.2.4, when he says: “’Tis in vain to search for a contradiction in any thing distinctly conceived by the mind. Did it imply any contradiction, ’tis impossible it could ever be conceiv’d” (I, p. 43).

⁹ It is worth noting that the principles assumed so far do not require &1-&4 to have the same content as v1-v4. This is simply because I did not frame the principles in such a way that the conjunctive content function is the same as the disjunctive content function. As a matter of plausible interpretation, it is hard to see how Hume would posit distinct functions here, but this matter need not be taken up here, as the objections will work even in the presence of the weaker assumption.

¹⁰ The problems with temporal arrangements of the acts are as follows: i) what are properly synchronic mental states will be classified as diachronic mental states, ii) increasing logical complexity will require increasingly large temporal intervals to distinguish the various states, iii) the solution is eminently ad hoc, iv) it is difficult to make sense of the temporal arrangements of the states without abandoning the original view that the basic state of affirmation, combined with content C, is the belief that C.

¹¹ Some may find this concern underwhelming, since the CC theorist has to posit larger and larger numbers of distinct contents. However, these contents need not generally be basic, and the types of contents can be limited to atomic positive contents, negations, and conjunctions. At any rate, even if this concern is not particularly moving, the other concerns are still fairly powerful.

¹² For discussion of how a very similar debate plays out with respect to expressivist views in metaethics, see Schroeder [2008]. My thinking about some of these issues in Hume has been strongly influenced by that paper.

¹³ This is not the case with Ramsey [1994]. In one paper from that volume, “Facts and Propositions”, Ramsey explicitly postulates a pair of contrary acts of cognitive commitment, in full recognition of the complications this brings about for contents that appear to be logically complex. In his discussion, the only nod in the direction of *dealing* with these issues indicates a plan to substitute a positive attitude towards complex sentences instead of adding additional attitudes towards the original propositions.

¹⁴ While I am investigating Hume’s ability to reply to this objection *without* retreating from this commitment, there is some textual evidence that by the time of the Appendix, Hume had in fact backed away from this constraint.

¹⁵ The real work here is being done by the fact that the view requires such large numbers of theoretically significant thresholds for vivacity. Hume’s account could posit continuum-many degrees without facing this objection (though Hume is actually limited to a finite number of degrees, given his finitist mathematical views); the problem is with having a large number of cutoffs at which something important about the state drastically changes.

¹⁶ It is worth noting that Reid is not here alleging that Hume has the view that hate is a degree of love, but rather that Hume’s view on denial is *as absurd as* the view that hate is a degree of love.

¹⁷ I am here co-opting the use of all-caps notation as it occurs in contemporary philosophy of mind, where a term occurring in all-caps designates the concept of the thing designated by ordinary occurrences of the term. In our context, terms occurring in all-caps should be taken to designate ideas rather than concepts (insofar as that makes a difference).

¹⁸ This could be brought out further if we consider the states in which the component ideas are reversed. The question arises whether the state which is truth functionally equivalent to v_2 , but has Satan as the first disjunct (and thus, the same order of affirmation and denial as v_3) is the same act (and therefore same degree of vivacity) as v_2 or as v_3 .

¹⁹ Calling them ‘flavors’ is metaphorical at best, and my choice of gustatory sensations is for purposes of illustration only. Someone seriously advocating such an account would want to give a more plausible account of the phenomenology and a more helpful explication of what such a view amounts to, but that is a separate concern from the structural worries discussed here.

²⁰ Since predicates can, more or less effectively, be modeled as sets, negation on a predicate is easily understood as an operation taking you from a set to its complement. Such an option is simply not available to Hume.

²¹ This formulation, and the surrounding discussion occur in section 1.2.6, “Of the idea of existence, and external existence” (T, p. 66).

²² Hume’s discussion here makes it evident that he regards *being* and *existing* as equivalent, despite the fact that this was a controversial issue in his day, just as it is now.

²³ Put another way, this maneuver requires us to assume that Hume’s contents represent like linguistic entities, not like pictorial entities. While one can clearly combine “tall” and “cow” to get something linguistic that represents tall cows, it is not possible to put ABSENCE with GOD to represent the absence of God unless ABSENCE does the same sort of representing as “absence”. Such interpretations of Hume on the nature of ideational representation are controversial, at best.

²⁴ An alternative approach to employing abstraction was suggested to me by Don Baxter and Don Garrett in response to a conference presentation of this material. They articulated a view on which certain maximal complex ideas exclude *o* (i.e. as pictures of the world with no room for *o* in them), and the idea of *o*'s absence is to be abstracted from the set of all such ideas. It is worth noting that the viability of such a position strengthens the argument of this section, insofar as it provides for an alternative route to negative contents. I am increasingly sympathetic to the Baxter/Garrett view, but I retain a worry (raised at that same session by Martha Bolton) as to whether the Baxter/Garrett line can preserve the appealing isomorphism to logic that my official interpretation captures. Finally, the Baxter/Garrett line substantively involves the account of abstraction presented in Garrett [1997]

²⁵ In this context, it is appropriate to note that I have been adopting the useful fiction in this regard, by assuming that the idea of God is simple, for Hume. Hume's treatment of our ideas of ordinary objects is a separate sticky interpretive issue, which I cannot engage with here, and which, fortunately, is orthogonal to the question of logical relations among beliefs about simple objects (whatever those simple objects turn out to be, on Hume's account).

²⁶ I am not claiming that our intuitions about ordinary objects involve this sort of essentiality of parthood. Right now, I am simply concerned to demonstrate that an object's complexity need not carry over to the absence of that object.

²⁷ It was brought to my attention that the view I advocate here is similar, in some ways to discussions in Sartre [1978] regarding Pierre's absence from a cafe. I make no claims to Sartre scholarship, and will not investigate any such similarities in the present work.

²⁸ A troubling case remains, however in the situation where someone is presented with a single sensation continuously, and thus, cannot acquire an impression of its absence. The point is easiest to see with sounds, rather than visual sensations. If there is a low background hum constantly presented to someone via sensation, the present account would not permit them the idea of the absence of that hum. I am somewhat sympathetic to the approach of biting the bullet on this objection, as it is not clear that Hume would have an interest in capturing the ability to cognize the absence of the hum in that scenario. Of course, if the hum became intermittent, the person would then be able to cognize it, on this account, and think about the absence of the hum, even when faced with its presence. Thanks to Gary Watson and Gideon Yaffe for raising this concern.

²⁹ I do not mean to conflate philosophical and natural relations of ideas here, and, in fact, mean to avoid discussion of natural relations of ideas altogether. I consider natural relations of ideas to be employed by Hume principally for explaining issues pertaining to dynamic/diachronic issues about the mind, while philosophical relations of ideas are simply one type of complex idea, employed by Hume in accounting for synchronic/static issues about the mind. Thanks to Eric Schliesser for helping me to see what is at stake with this distinction.

³⁰ Insofar as this discussion might weigh in one direction or the other, CC appears to have the advantage: if there are two contents, *C* and *#C*, then, the parties to the dispute both conceive both *C* and *#C*, and differ in the manner of conceiving each. If there is only one idea, it is harder to make sense of this notion of "having different ideas".

³¹ I note again, however, that if there are other positive accounts of negative ideas on offer, Hume's position is stronger. In other words, I articulate and defend this view because it is the one I take to be suggested by the text, but the main point of this section is to establish that Hume explicitly commits himself to negative ideas. Disputes about whether I have developed the best understanding of Hume's negative ideas are, in many ways, secondary to the question of whether Hume offers a view of the type that avoids the Reid objections.

³² For what it is worth, if we consider the closest parallel discussion in Hume [1975], (Hume's *Enquiry Concerning Human Understanding*) we find (in a footnote toward the end of section III): "For instance, contrast or contrariety may be considered as a mixture of *Causation* and *Resemblance*. Where two object are contrary, the one destroys the other; that is the cause of its annihilation, and the idea of the annihilation of an object implies the idea of its former existence." (Hume [1975], p. 24). I don't think this cross-textual consideration is especially strong evidence in support of my view (since the understanding of contrariety seems to have shifted in some ways, but the phrasing is remarkable similar (down to the perplexing use of "implies").

CHAPTER 4: CONCEIVABILITY AND POSSIBILITY (I)

Introduction

In his *Essays on the Intellectual Powers of Man*, Thomas Reid offers several objections to the principle that conceivability implies possibility. Though David Hume is not the only target of this assault, he is the main figure that Reid criticizes in presenting these objections. In this chapter, I defend Hume from the first two of these objections, and briefly indicate how my proposed solution to the first pair paves the way for adequate resolution of the remaining pair. I argue that Reid's criticisms—insofar as Hume is an intended target—rely on an inaccurate reading of the Humean account of conception, and conflate issues pertaining to Hume's account of the understanding with those pertaining to accounts of the workings of language. Examining Reid's objections helps to illuminate some important features of Hume's account of conception that, ultimately, bear directly on his account of demonstrative reason.

It is to Reid's credit that he identified an array of powerful challenges facing defenders of the maxim that conceivability implies possibility. In section one, I present Reid's first objection, which is that we can understand—and can therefore conceive—impossibilities. I distinguish the question of understanding meaningful linguistic items from the question of what conceptions we can have, and argue that Reid's objection rests on a conflation of these two issues. To defend Hume, who did not offer a detailed or systematic account of the workings of language, I isolate the view about linguistic understanding on which the objection rests, and show that Hume need not be committed to it.

In section two, I present Reid's second objection, which is that we can form judgments *about*—and can therefore conceive—impossibilities. While this objection is more clearly a challenge to Hume's philosophy of mind, I argue that it too, relies on assumptions about the

workings of language. In this case, the force of the objection arises from an assumption that the structures and contents of our judgments mirror the structure and meanings of locutions describing those judgments. Hume, however, has a thoroughgoing denial of such views. I show how Hume can account for the judgments used by Reid to raise the objection, without running afoul of his commitment to the maxim.

As noted, Reid has targets in mind besides Hume, and offers these objections as challenges to the maxim itself, rather than to the specific systems of those targets. Nevertheless, it is worth observing that these objections have special force against Hume, as he couples a commitment to the maxim with the view that all activities of the understanding can be analyzed in terms of conception.¹

Section 1. Understanding Impossibilities

We begin with Reid's statement of the first objection:

1. Whatever is said to be possible or impossible is expressed by a proposition. Now, What is it to conceive a proposition? I think it is no more than to understand distinctly its meaning. I know no more that can be meant by simple apprehension or conception, when applied to a proposition. The axiom, therefore amounts to this: Every proposition, of which you understand the meaning distinctly, is possible. I am persuaded, that I understand as distinctly the meaning of this proposition, *Any two sides of a triangle are together equal to the third*, as of this, *Any two sides of a triangle are together greater than the third*; yet the first of these is impossible.

EIP 4.3, p. 330

Reid's thought is that there are some obvious counterexamples to the maxim, and he intends the objection to provide a proposition that is conceivable without being possible.²

More formally, the objection runs:

- R1-1. For any proposition P, understanding the meaning of P is sufficient for conceiving P.

- R1-2. We understand the meaning of the proposition that any two sides of a triangle are together equal to the third.
- R1-3. So, if conceivability implies possibility, then it is possible that any two sides of a triangle are together equal to the third.
- R1-4. It is not possible that any two sides of a triangle are together equal to the third.
- R1-5. So, conceivability does not imply possibility.

According to Reid, (1) is a simple consequence of the only plausible account of “conceiving a proposition”. While it would be possible to challenge (2), this is a rather hefty bullet to bite. Lastly, (4) can be taken for granted, as anyone seriously doubting the truth of (4) should substitute some proposition they regard as a genuine impossibility, and consider the analogous objection for that proposition.

So, it is clear that the place to resist the argument, on Hume’s behalf, is premise (1). Of course, defending Hume from the objection requires us to provide a Humean basis for denying that premise (or, at the very least, for us to establish that there isn’t sufficient reason to regard Hume as committed to it). It will help to consider a passage in which Hume presents the view being Reid is attacking. Reid, in establishing that Hume is among the proponents of this conceivability maxim, quotes the following passage (though not in its entirety):

‘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., p. 32

The maxim described here does appear to be that conceivability implies possibility. It is worth observing that Hume treats conception and imagination as equivalent in this passage. Even between the two statements of the maxim, the formulation in terms of imagination is decidedly clearer. This equivalence is just the sort of thing we need to see why Hume would reject (1). To get an intuitive grip on the Humean reply I intend to develop, it will be helpful for us to compare the following three questions:

- Q1. Can you understand the meaning of the proposition that there is a round square?
- Q2. Can you imagine that there is a round square?
- Q3. Can you imagine a round square?

My own answers to these questions are “yes”, “no”, and “no” (though I feel more strongly about Q3 than Q2).³ Reid and Hume clearly diverge on which question they would think relevant for determining whether it is conceivable that there is a round square. Reid would clearly think that it is conceivable in the event that one answers yes to Q1, while Hume would clearly think that it is conceivable in the event that one answers yes to Q2 (or perhaps Q3). Contemplation of the questions seems to reveal that our answers to them may come apart. At this point, one may be tempted to view this as a merely verbal disagreement between Reid and Hume. Surely Reid does not think we can mentally depict a round square, and surely Hume means to link possibility with mental depiction. This, however, is not fair to Reid, and it misses the substantive force of his objection.

There is a worry underlying the objection, and this reply doesn't address that worry. Recall that Reid talks about “understand[ing] distinctly the meaning of a proposition”, and also indicates that the bearers of possibility and impossibility are “expressed” by propositions. When one describes propositions as *expressing* things and thinks of them as

possessing meanings, especially during the early modern period, it is indicative that they are talking about verbal propositions (i.e. something linguistic like a sentence or an utterance). There is additional support in the *Essays* for taking Reid to use “proposition” for something linguistic.⁴ And, since, on Reid’s view, it is the meanings of propositions (and not the propositions themselves) that are principally identified as bearers of possibility and impossibility, it is natural to think that Reid has something “worldly” like states of affairs or situations in mind as the meanings of these verbal propositions. I will use the term “circumstance” as a label for the meanings of/things expressed by verbal propositions, and I will use the term “sentence” in lieu of “proposition”. The circumstances expressed by a sentence should be the ones that intuitively conform to their truth conditions.⁵ This allows us to reformulate the objection so as to draw out Reid’s underlying worry about understanding sentences that express impossible circumstances.

- R1’-1. For any sentence S and circumstance C, if C is expressed by S, then understanding S is sufficient for conceiving C.
- R1’- 2. We understand the sentence “Any two sides of a triangle are together equal to the third”.
- R1’- 3. So, if conceivability implies possibility, then the circumstance expressed by the sentence “Any two sides of a triangle are together equal to the third” is possible.
- R1’- 4. The circumstance expressed by the sentence “Any two sides of a triangle are together equal to the third” is not possible.
- R1’- 5. So, conceivability does not imply possibility.

On this construal of the worry, the challenge doesn’t depend on Reid’s definition of “conceiving a proposition”, but instead relies on the independent (and plausible) view that

understanding a sentence requires us to conceive the circumstance of its truth. On this view, if we can't conceive impossible circumstances, we can't understand the sentences that express them.

Premises (2) and (4) are, in my view, unassailable. Thus, the response I advocate involves denying that Hume is committed to premise (1). Given that Hume never systematically proposes a theory of language, it is unsurprising that Hume never explicitly formulates something like (1) as an account of sentential understanding (or even as an element of such an account). So the real question we need to ask, in order to ascertain whether Hume's system commits him to (1), is whether there is a viable way to analyze sentential understanding that avoids commitment to (1). If Hume's system requires him to adopt (1), then, Reid's objection would provide a serious challenge to the conceivability maxim *as Hume intends it*. Recall that Hume has coupled the conceivability maxim with a commitment to reduce all other cognitive operations to acts of conception. This objection thus places special pressure on Hume, who needs to account for sentence understanding in terms of conception.

Fortunately for Hume, his system does not require him to adopt (1). Now, according to (1), a necessary condition for our being able to understand a sentence is our being able to conceive or imagine the circumstance of its truth. While this is one way to deploy Humean conception in a theory of sentential understanding, it is hardly the only way. Consider the following alternative proposal for a necessary condition on sentential understanding, inspired by the thought that a sentence's meaning is composed from the meanings of its parts:

COMP. For any sentence S, if S consists of terms T1 through Tn in arrangement A, then, one understands S only if one conceives the meanings of T1 through Tn and understands arrangement A.

For simplicity, I have formulated COMP in a way that assumes every term in a sentence is meaningful and COMP does not help us distinguish sentences a speaker understands from sentences a speaker is merely in a position to understand. These details aside, COMP is adequate for our present purposes. Crucially, COMP demonstrates a way to reduce sentential understanding to an understanding of individual terms and grammatical structures. Neither COMP nor (1) is actually a reduction of sentential understanding to the resources of Hume's system. This is because each is simply a necessary condition on sentential understanding, rather than a proposed analysis of it. However, in order to see how COMP can help Hume avoid commitment to (1), we need not go through the process of constructing possible analyses. COMP is a weaker condition on understanding than (1) is. So, various analyses of sentential understanding can be weakened by replacing (1) with COMP. In other words, rather than adopting an account of sentential understanding on which we would need to conceive a single thing corresponding to the impossible scenario described by the sentence, Hume could offer an account that only requires conceiving (the meanings of) the parts of the sentence, and the sentence's grammatical structure.⁶ And, as noted, COMP-based views can still reduce sentence understanding to conception, provided they offer a conception-based analysis of term-understanding and arrangement-understanding.

This discussion has been abstract so far, but my point is easy to illustrate. I'll use the example of a phrase occurring within a sentence, for simplicity. Let's consider the phrase "round square". The phrasal analogue of COMP would make it a necessary condition on being able to understand the phrase "round square" is to understand the term "round", the term "square", and the structure of the phrase. Or, in other words, you have to know what

“round” means, what “square” means, and what happens when you put a word like “round” in front of a word like “square”. It does not require us to conceive a round square.

I certainly don’t mean to defend either of the toy theory I’ve presented, either on its own merits or as a matter of Hume interpretation. The point is simply this: Hume’s system is compatible with a range of compositional accounts of sentential understanding, and such accounts are compatible with maintaining the maxim while allowing that we understand sentences expressing impossibilities. Reid’s objection concerns a position about linguistic understanding that Hume did not explicitly endorse. The objection presents a threat to Hume, however, because it shows how Hume’s commitments eliminate a plausible and straightforward way of accounting for linguistic understanding. My reply was to show that this was not the only plausible or viable account.

I have not argued in favor of attributing COMP to Hume as a component of an account of sentence-understanding or sentence-meaning, largely because Hume does not explicitly lay out a theory of language.⁷ However, insofar as this objection is based on an inability to explain how we can understand sentences representing impossibilities, it should suffice to demonstrate that substantive assumptions about the form of Hume’s theory are required in order for the objection to work, and that there are perfectly comprehensible views about sentence-understanding that deny those assumptions.

Section 2. Beliefs About Impossibilities

Turning to Reid’s second worry, it again appears to be a straightforward counterexample to the maxim:

2. Every proposition, that is necessarily true, stands opposed to a contradictory proposition that is impossible; and he that conceives one, conceives both: Thus, a man who believes that two and three necessarily make five, must believe it to be

impossible that two and three should not make five. He conceives both propositions when he believes one.

EIP 4.3, p. 331

On the face of it, this is simply a way to establish that we conceive some impossibilities via a general principle about conceiving contradictory propositions. Here is how the objection goes, on that interpretation.

- R2-1. For any proposition P, there is a proposition $\sim P$ such that one conceives P iff one conceives $\sim P$.
- R2-2. For any proposition P, if P is necessary, then $\sim P$ is impossible.
- R2-3. So, if conceivability implies possibility, we don't conceive any necessary propositions.
- R2-4. We do conceive some necessary propositions.
- R2-5. So, conceivability does not imply possibility.

Obviously, the same issues surrounding the notion of propositional conception arise here as were already discussed, so I will leave those to one side. Instead, I will consider what Reid says by way of attributing (1) to Hume:

Every proposition carries its contradictory in its bosom, and both are conceived at the same time. "It is confessed, says Mr HUME, that in all cases where we dissent from any person, we conceive both sides of the question, but we can believe only one." From this it certainly follows that when we dissent from any person about a necessary proposition, we conceive one that is impossible; yet I know no Philosopher who has made so much use of the maxim, that whatever we conceive is possible, as Mr HUME. A great part of his peculiar tenets is built upon it; and if it is true, they must be true. But he did not perceive, that in the passage now quoted, the truth of which is evident, he contradicts it himself.

EIP 4.3, p. 331-2

This occurs immediately after the objection itself, but the quote from Hume is taken out of context, and omits a particularly salient aspect of Hume's claim. The passage Reid quotes

from Hume comes in Treatise 1.3.7 (“Of the nature of the idea or belief”), in a discussion of disagreement/dissent/disbelief. Here is what Hume says, with the portion I consider especially crucial underlined:

Suppose a person present with me, who advances propositions, to which I do not assent, *that Caesar dy'd in his bed, that silver is more fusible than lead, or mercury heavier than gold*; 'tis evident, that notwithstanding my incredulity, I clearly understand his meaning, and form all the same ideas, which he forms. My imagination is endow'd with the same powers as his; nor is it possible for him to conceive any idea, which I cannot conceive; or conjoin any, which I cannot conjoin. I therefore ask, Wherein consists the difference betwixt believing and disbelieving any proposition? 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 determined to conceive them in that particular manner, either immediately or by the interposition of other ideas. Whatever is absurd is unintelligible; nor is it possible for the imagination to conceive any thing contrary to a demonstration. But as in reasonings from causation, and concerning matters of fact, this absolute necessity cannot take place, and the imagination is free to conceive both sides of the question, I still ask, *Wherein consists the deference betwixt incredulity and belief?* since in both cases the conception of the idea is equally possible and requisite.

"Twill not be a satisfactory answer to say, that a person, who does not assent to a proposition you advance; after having conceiv'd the object in the same manner with you; immediately conceives it in a different manner, and has different ideas of it. This answer is unsatisfactory; not because it contains any falsehood, but because it discovers not all the truth. 'Tis confest, that in all cases, wherein we dissent from any person, we conceive both sides of the question; but as we can believe only one, it evidently follows, that the belief must make some difference betwixt that conception to which we assent, and that from which we dissent.

T 1.3.7, p. 95-6

One reason I quote this is simply to recognize that Reid is wrong (and unfair) to charge Hume with contradicting himself here. Without a doubt, Hume's statement about always conceiving "both sides of the question" is restricted to what Hume terms here "matters of

fact” (i.e. propositions that are neither demonstrable nor intuitive). In fact, Hume is appealing to this very difference between demonstrable and non-demonstrable propositions to illustrate the need for the account of belief he is proposing in this section. Active dissent—i.e. denial—is not possible with respect to demonstrable propositions, because the imagination is determined to conceive them with conviction. All that can occur is lack of belief in the demonstrable proposition, not belief in its denial. This is related to the fact that there is no idea corresponding to the denial of an intuitive or demonstrable proposition. So one can lack the idea appropriate for some necessary claim (perhaps because that idea is fairly complex and the person has not gone about constructing it), but one cannot have an idea appropriate to the impossible claim.

If this objection simply amounts to the reasoning outlined in R2, not much more would need to be said about it. However, the objection has much more to it than R2 suggests. In fact, there is something curious about Reid’s objection that does not come out in the R2 formulation. The propositions invoked by Reid in his example don’t quite fit the format for the objection that I gave above. Or, at least, they make the illustration unnecessarily complicated, given the R2 formulation. R2 could work perfectly well with the claim $2+3=5$ and premise (1). All that R2 requires is that there is a necessary claim, like $2+3=5$, where we can conceive that claim. Reid’s example, however, is more interesting than this:

[A] man who believes that two and three necessarily make five, must believe it to be impossible that two and three should not make five. He conceives both propositions when he believes one.

EIP 4.3, p. 331

Reid’s illustration invokes a pair of *non*-contradictory beliefs—in fact the beliefs in question are logically equivalent—in order to motivate his objection. The first is the belief that two and three necessarily make five, which I will formalize with ‘ $\Box(2+3=5)$ ’. The

second is the belief that it is impossible that two and three not make five, which I will formalize as $\neg\Diamond(2+3\neq 5)$.⁸ Why invoke these beliefs, when conceiving or believing the claim that $2+3=5$ is already sufficient (with the first premise of R2) to present the objection? Whether or not Reid intended this feature to play an important role in the objection, there is a powerful objection to be raised on the basis of this pair of beliefs. While I am inclined to credit Reid with the objection I will now present, the important thing is that Reid's example sentences give rise to an especially interesting objection, if we reformulate things in a way that actually involves beliefs like $\Box(2+3=5)$ and $\neg\Diamond(2+3\neq 5)$.

What makes Reid's example particularly interesting is that these beliefs are judgments *about* necessities and impossibilities. In other words, in addition to their status as modal judgments—judgments predicating necessity and impossibility—they appear to have other propositions as constituents. Importantly, the latter seems to have an impossibility as a constituent. It is natural to think that in order to possess a belief, one must conceive of all the constituents of that belief (especially if one defines belief as a species of conception, as Hume does). Let's consider a more formal presentation of this version of the objection. Note that, unlike the pair of arguments presented for the first objection, there is no intended correlation between the premises of this formulation and those of the original R2 argument.

- R2'-1. $2+3\neq 5$ is a constituent of the belief $\neg\Diamond(2+3\neq 5)$.
- R2'- 2. For any constituent C of a given belief B, if one possesses B, then one also conceives C.
- R2'- 3. We possess the belief $\neg\Diamond(2+3\neq 5)$.
- R2'- 4. So, if conceivability implies possibility, then it is possible that $2+3\neq 5$.
- R2'- 5. It is not the case that it is possible that $2+3\neq 5$.
- R2'- 6. So, conceivability does not imply possibility.

Let's define the constituents of a belief as the things one needs to conceive in order to possess that belief, and render (2) trivially true. While for some views, this would run the risk of permitting beliefs that have no constituents, Hume's definition of belief as a species of conception guarantees that every belief has at least one constituent. (3) is not a promising premise to challenge. It was no part of the intention in formalizing the description of the belief to undermine the intuitive appeal of the ascription. And it is perfectly natural to say that we believe it to be impossible that two and three not equal five. Lastly, given that Hume regards the truths of arithmetic to be demonstrable and necessary, we shouldn't reject (5). This leaves the rejection of premise (1) as the only possible avenue of reply, and (1) seems to be pretty appealing.

Something seems sort of obvious about (1). If the claim $2+3 \neq 5$ isn't a constituent of the judgment that $\neg \diamond(2+3 \neq 5)$, it is hard to know what would be. It seems like the belief in question attributes impossibility to the claim $2+3 \neq 5$. It would thus be pretty natural to think that this claim—the very one the judgment is *about*—is a constituent of the judgment. How could you have a complete thought about something that you can't even contemplate by itself?

As compelling as this line of thought is, the ways to avoid it are clear. We can either take the position that *aboutness* is not a good guide to constituency or we can deny that the thought is really about the claim $2+3 \neq 5$. I don't actually see the two replies as substantively different, and think the issue is more about what one wishes to build into their use of "aboutness". As it is easier to clearly articulate the latter approach, I will simply present that one, though it should not be hard to see how to recast the basic idea as a version of the former.

Even after describing the possible strategies, it remains hard to see how we might go about rejecting (1). Partially, this is because I stacked the deck against myself in my choice of formalization. I follow Reid in using a natural language locution that involves treating the phrase “it is impossible” as operation on “that two plus three does not make five”. I even reflected this in the formalization I chose, where “ $2+3\neq 5$ ” occurs as a proper part of the label for the judgment: $\neg\Diamond(2+3\neq 5)$. But, we can observe that there are natural language locutions in which the modal occurs in the middle of the proposition. The phrasing seems tortured for “Two and three can’t not make five” but if we take some other impossibility, such as the claim that two and three make six, we would get “Two and three can’t make six” as the analog. It is less obvious that $2+3=6$ is a constituent of that sentence, but it is also plausible that the sentence has the same constituents as “it can’t be that two and three make six”.⁹

Let me put this point a little bit more graphically (and also in a fashion that is suggestive of the line I will argue on Hume’s behalf for this sort of case). Instead of this way of representing the two claims:

$$2+3\neq 5 \qquad \neg\Diamond(2+3\neq 5)$$

I could easily have opted for:

$$\neg(2+3=5) \qquad \neg\Diamond\neg(2+3=5)$$

But note that the claim $\neg\Diamond\neg(2+3=5)$ need not be divided up in a way that produces, as a constituent, $\neg(2+3=5)$. That is, we could split it into the constituent $2+3=5$ and the constituent $\neg\Diamond\neg$. Since $\neg\Diamond\neg$ is equivalent to \Box , we might identify this with the claim that it is necessary that two and three make five. Thought of this way, $2+3\neq 5$ isn’t a constituent of the judgment at all, because it is simply the same judgment as the judgment that two and three necessarily make five.¹⁰ I have not tried to argue that this is an especially plausible

view, but that is fine, as the aim of the discussion is to articulate a *workable* view, show that it is available to Hume, and demonstrate that it would enable Hume to evade Reid's objection.

However, there are some things that can be said in defense of the identification, and, at the very least, provide additional reasons to think it is a natural view for Hume to adopt, so I will briefly discuss some of them. The alternative being pressed by Reid is that there are two beliefs, which a) are necessarily co-occurrent and b) possess necessarily equivalent contents. When I indicated that the major problem for identifying beliefs that have necessarily equivalent contents, the easy way to show *why* it goes wrong was to point out that there are beliefs I possess whose content is necessarily equivalent to the contents of some beliefs that I lack. And since I believe some obvious mathematical truths, but not many really complicated mathematical truths, it is pretty easy to see why we would want multiple mathematical beliefs, which can be possessed or not independently of each other.

As a last point on this issue: if we think about individuating beliefs by independence of occurrence, then there is no good reason (by Hume's lights or by Reid's) to distinguish these two beliefs. If, on the other hand, we think about individuating by composition, we need to either have an antecedent understanding of their respective compositions, or, barring that, an account of how to recover the composition of a mental state from the grammatical composition of a phrase like "the belief that [X]". For Hume at least, we know that the relationship between linguistic and mental composition is not one of straightforward parallelism, and so, absent a specific account of the relationship, we cannot assume the two states will differ compositionally.

It is important to highlight this point, as much of the pessimism surrounding Hume's views on the mind result from objections that assume a sort of parallelism between the structure of linguistic expressions or descriptions of mental activity, and the structure of the

mental activity itself. But Hume's system simply does not aim to capture this parallel, and the assumption is not explicitly argued for, when Hume is under attack. For example, Hume's denial of an independent idea of existence leads him to adopt a reistic/objectual account of existential beliefs. As a consequence of this, even though assertive sentences expressing beliefs require a term like "exists" as a predicate, the belief expressed need not have a parallel structure. The mental state that makes an utterance of "Fido exists" sincere does not feature structural complexity in which the idea of existence is affirmed of the idea of Fido. Similarly, the fact that a mental state is aptly described by the phrase "the belief that Fido exists" does not entail that that mental state has a constituent corresponding to Fido and a constituent corresponding to existence. Hume has a thoroughgoing denial of such structural parallelisms, and as we see here, this is to his distinct advantage, give his other views.

Once we buck the assumption of such a parallelism, we can see that many of the objections to Hume's theory of the understanding are, at best, concerns about the use of his theory of mind to account for the workings of language. As Hume did not tell us his precise views on how language works, it is imperative that we separate concerns that depend on natural or plausible assumptions of how to connect the psychological with the linguistic from genuinely problematic consequences of Hume's view of the understanding.

Section 3. The Nature of Modal Judgment For Hume

One issue that has been raised by this discussion, but not discussed, is a positive story about the composition of modal judgments, and in particular, a question about what the modal components of these judgments are. In the previous section, I argued against the proposal that the belief that it is impossible that 2 and 3 not equal 5 is built from the

conception of impossibility and the conception of 2 and 3 not equalling 5. My concern, however, was to argue that the conception of 2 and 3 not equalling 5 *wasn't* a component of the judgment. But, even if we agree that the components of the judgment are better reflected by describing it as the judgment that it is necessary that 2 and 3 equal 5 (as per the proposal above) we are still left without an account of the modal elements of the judgments; the conceptions of necessity and of possibility. In this section of the chapter, I intend to present and defend a Humean account of modal contents. First, however, I should rule out some views of modal contents, which are unavailable to Hume.

Recalling the lessons drawn out in the previous chapter, the ideal way to account for belief in the possibility of some object, *prima facie*, would be to treat it as involving the *same* activity as ordinary belief in that object, while differing from such a belief in its content. The task then would be to extend our account of relations among contents in a manner that captures the relationship among believing in *o*, believing in the possibility of *o*, believing in the possibility of the opposite of *o*, etc. The reason I qualify the preference for such an account as merely "*prima facie*" is because, before we can use the results of the previous chapter to rule out accounts that treat the two states as different activities towards the same content, we would need to establish that the challenges for multiple-activity accounts of denial actually generalize to multiple activity accounts of modality.

Let's begin our investigation of Hume's views with a now-familiar passage, in which Hume describes the relationship between imagining a golden mountain and believing a golden mountain to be possible:

'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., p. 32

At one end of the process Hume describes, there is the act of conceiving a golden mountain. At the other end, there is the act of believing a golden mountain to be possible. There are four different positions one could take on the relationship between the contents of these two states. Only one of the four options — option (3) — runs afoul of our *prima facie* preference for distinguishing the contents of the two acts, while the other three all distinguish the contents:

1. The content of the former act is a proper part of the content of the latter (i.e. the idea of a golden mountain is a proper part of the idea of the possibility of a golden mountain).
2. The content of the latter act is a proper part of the content of the former (i.e. the idea of the possibility of a golden mountain is a proper part of the idea of a golden mountain).
3. The contents of the two acts are identical (i.e. the idea of a golden mountain and the idea of its possibility are parts of each other).
4. The contents of the two acts are compositionally distinct, but the two contents are still *a priori* related (i.e. neither the idea of a golden mountain nor the idea of its possibility is part of the other).

Option (1), though appealing from a contemporary perspective, is at odds with Hume's passage. Hume's formulation of the maxim suggests that the latter idea—the idea of the possibility of a golden mountain—is included in the former—the idea of a golden mountain. This is not to say that the statement of the maxim requires us to go along with option (2), as Hume's talk of inclusion need not be interpreted as a straightforward

commitment regarding parthood. That is to say, the problem for option (1) is not that Hume takes a clear stand on the parthood here, but, rather, that option (1) commits one to the whole being included in one of its proper parts. So, while option (1) is philosophically promising (after all, it mirrors one fairly popular contemporary approach), I am rejecting it as a viable interpretation of Hume.

Option (2), on the other hand, is a natural fit with Hume's statement of the position, but presents a philosophical problem for Hume: Let "GM" designate the idea of a golden mountain, and let " \diamond GM" designate the idea of the possibility of a golden mountain. According to option (2), \diamond GM is a proper part of GM, and so, GM is complex, and, therefore, it is constructed from \diamond GM and some other idea X (or, perhaps, some set of ideas $\{X_1, \dots, X_n\}$). But, there is no good answer to the question of what idea(s) could be combined with \diamond GM to produce GM. The main aspects of this worry that I will discuss are the difficulty in accounting for the origins of some such X, and the implausibility of there having been an act of construction in which \diamond GM and X could be combined to produce GM.¹¹

The two problems are tightly connected. On option (2), for any object o, the idea of o has to be composed from the idea of the possibility of o, $\diamond o$, and some additional idea, X_o . However, this would mean that for any object o, the idea of o was constructed out of temporally prior ideas — $\diamond o$ and X_o . This means that $\diamond o$ must have been acquired prior to the idea of o. But, this means that $\diamond o$ either is, or is constructed from, simple ideas of sensation. If it is a simple idea of sensation, then it need not be inferred, and *cannot* be an instance of demonstrative knowledge. However, since, we can conclude that a golden mountain is possible solely from the idea of a golden mountain, it is clear that this inference is demonstrative, being one that "depend[s] entirely on the ideas that we compare

together” (T 1.3.1, p. 69).¹² However, the view is problematic even if we regard \diamond_o as constructed from simple ideas of sensation. The problem with this route is that it would require us to say that \diamond_o is itself an idea of an object, since “any idea we please to form is the idea of a being, and the idea of a being is any idea we please to form” (T 1.2.6, p. 67). And, this would mean that it includes an idea of its possibility, meaning that our ideas of objects would be infinitely divisible. Option (2), then, would make every complex idea infinitely divisible, something that Hume explicitly denies (see T 1.2.1), as well as being a philosophically problematic infinite regress.

Option (3) identifies the idea of an object with the idea of the possibility of that object, and, setting aside worries that such a view faces similar philosophical problems as the ones facing a Act-Contrary view of denial, it is worth noting that this view is textually problematic as well. First, note that there are two ways of pursuing this view. One way to go is to identify the state of conceiving some object with the state of believing that object to be possible. The other way to go is to treat the belief in its possibility as a distinct species of conceiving the object, different from both mere conception and existential belief.

The problem facing the former option is that the process we were investigating is some sort of inference. But if the beginning state and ending state are identical, then, the “process” could, at best, qualify as some sort of degenerate case of inference. Note that, this option produces a broad class of inferences involving only a single idea, contrary to Hume’s claims about the minimum number of ideas required for inference (T 1.3.7, p. 96-7*m*).¹³

There is a slightly different challenge facing the latter way of approaching option (3). If the transition is from the mere conception of the idea to a specific way of conceiving that idea, then, given Hume’s limited resources for distinguishing among species of conception,

the species in question will have to either be weaker or stronger than mere conception. It cannot be weaker, both because judgment is marked, in general, by superior vivacity, as well as because it is hard to see how mere conception could require *more* strength than any other species of conception. However, it cannot be stronger, given the inference we are modeling. On the inference, we move directly from the state of conception to the state of judgment regarding possibility. However, the mere conception of an idea of an object is not the sort of thing that can augment its own force and vivacity.¹⁴

What's more, both options involve retreating from the appealing division of labor on which a state's *content* is determined by its ideational composition and a state's *type* is determined by its attendant force and vivacity.

We are left, then, with option (4), according to which the idea of the possibility of some object is distinct from the idea of that object, but some a priori relationship remains between them. In pursuing this option, it will help to observe that there is a potential ambiguity in what inference is really going on. The passage seems to suggest that we move directly from imagining an object to judging the object to be possible. However, the stated maxim is that nothing we imagine is absolutely impossible, which is equivalent to the claim that anything we imagine is possible, and which, for purposes of argument, requires a premise like "we imagine o" (or, more likely for an individual person: "I imagine o"). In other words, if the maxim is invoked in the inference, we need to do more than simply imagine o, we need to also recognize that we imagine o. Otherwise, we are not in a position to recognize the applicability of the maxim.

Now, it is possible that this is an actual ambiguity in the text, remaining indecisive between i) a direct transition from a state of conceiving o to a state of judging that o is possible, and ii) a transition that, because it invokes the principle "if o is conceivable, then o

is possible” (or something like it), requires some intermediate state of judging *o* to be conceivable. Alternately, if judging *o* to be conceivable is identified *either* with conceiving *o*, or with judging *o* to be possible, we would avoid the need to posit any such ambiguity.

While the former may have some textual appeal (given some of Hume’s remarks on our awareness of our own mental lives), it runs into the problem of permitting low-vivacity judgments. The more interesting option here, is the latter: judging *o* to be conceivable just is judging *o* to be possible. However, I think we can do more than an argument by elimination by way of defending option (4).

Conclusion

The view in question is an implication of other views Hume has, and so I should first present and defend the general argumentative strategy that I will employ in drawing out these implications: Hume’s view that something is conceivable if and only if it is possible, when combined with his view that things are distinct if and only if they are separable in imagination, produces extremely strong commitments for Hume. Specifically, for any *F* and any *G*, if it is necessary that something is *F* if and only if it is *G*, it will follow for Hume that the judgment that something is *F* is identical to the judgment that it is *G*.

Here’s how this result is achieved: suppose *F* and *G* are necessarily coextensive. For this to be true, it must be the case that there is no possible circumstance in which something is *F* but not *G* (or vice versa), just from the definition of necessary co-extension. But, given that something is conceivable if and only if it is possible, this would mean that one could not conceive of a situation in which something is *F* but not *G* (or vice versa). But if it is impossible to conceive of something’s being *F* but not *G* (or vice versa), then the conception of something as *F* and the conception of it as *G* are not separable in

imagination. If they are not separable in imagination, then they are not distinct. But if the conception that something is F is not distinct from the conception that it is G, then the judgment that something is F is not distinct from the judgment that it is G. So, the judgments are identical.¹⁵ What do these result tells us about the composition of modal judgments in Hume's system?

To begin with necessity, we know that Hume thinks we can divide relations into two types (outlined in T 1.3.1.1): those that depend entirely upon the ideas under comparison, and those that can be changed without any change in the ideas. All intuitable or demonstrable contents (and therefore all necessities) fall under the former class. Consequently, the judgment that something is necessary must be the same as the judgment that it is a relation of ideas depending entirely on the ideas compared, since being necessary and being a relation of ideas depending entirely on the ideas compared are necessarily co-extensive.

Turning our attention to possibility, we know that it is necessarily coextensive with conceivability. Since, necessarily, a content is conceivable if and only if it is possible, we know that the judgment that something is possible must be the same judgment as the judgment that something is conceivable.

For both of these cases note that we have secured the identity of the modal judgment (i.e. the judgment of necessity or possibility) with a judgment about conceptions/ideas. If Hume had an explicit account of what it is to think about our ideas, this would, essentially, determine Hume's account of modal thought.

Interestingly, Hume does have an explicit account of what it is to think about our ideas. Immediately after discussing the missing shade of blue as a counterexample to the copy principle, Hume tells us:

But besides this exception, it may not be amiss to remark on this head, that the principle of the priority of impressions to ideas must be understood with another limitation, *viz.* that as our ideas are the images of impressions, so we can form secondary ideas, which are images of the primary; as appears from this very reasoning concerning them. This is not, properly speaking, an exception to the rule so much as an explanation of it. Ideas produce the images of themselves in new ideas; but as the first ideas are supposed to be derived from impressions, it still remains true that all our simple ideas proceed either mediately or immediately, from their correspondent impressions.

T 1.1.1, p. 6-7

As the underlined portion of the passage makes clear, the fact that we can reason concerning ideas shows that we have ideas of ideas. This is consonant with Hume's general guideline for the content of thought: to conceive of X is to possess an idea of X. So, to think about *the idea of red* is to possess an idea of *the idea of red*. And these are the ideas Hume is here discussing. Crucially, Hume ends the passage by telling us that all our simple ideas "proceed either mediately or immediately" from impressions. Which simple ideas are the ones that proceed indirectly from impressions? Secondary ideas of simple impressions. This means that some secondary ideas of sensation (e.g. the idea of the idea of red) are simple. Nevertheless, they bear a clear resemblance to the primary ideas that they are ideas of, and to the impressions that they are indirectly copied from.

Hume does not seem to ever mention secondary ideas again in the *Treatise*. This is unfortunately limiting for us in generating a full-fledged story about higher-order thought in Hume. Additionally, we are faced with interesting questions about the status of these secondary ideas. For instance, should we judge that necessarily, a golden mountain is possible? It is difficult to know precisely what to say, given the paucity of the textual evidence. At the same time, it seems clear that Hume's principles commit him to a certain type of account of modal contents, namely one involving secondary ideas. I will not

endeavor to extrapolate a full account of higher-order thought and modal judgment, as doing so would require us to stray far afield of clear-cut interpretive questions for Hume's system.

CHAPTER 4 ENDNOTES

¹ This is stated most clearly in a footnote (T 1.3.7, p. 96-7*fn*) where Hume rejects the traditional analyses of conception, judgment, and reasoning—the three operations of the understanding—claiming that “taking them in a proper light, they all resolve themselves into the first, and are nothing but particular ways of conceiving our objects.

² Reid’s example is ill-chosen, as Hume’s position on the status of the theorems of standard Euclidian geometry is complex. It is clear, at least, that according to his views in the *Treatise*, the certainty attainable in geometry is distinctively inferior to that for arithmetic (T 1.3.1, p. 70-71). However, as the use of geometry (rather than arithmetic) is entirely inessential to Reid’s objection and my reply, I will simply ignore this complication.

³ It is worth noting that Hume’s examples in the quoted passage are presented in a reistic or objectual manner, rather than in a predicative or propositional manner. At the same time, Hume also deploys the principle with respect to propositional constructions, so the importance of this point should not be overstated.

⁴ See EIP, p. 25, 65-6 for two among many instances of Reid’s explicit use of “proposition” to stand for something linguistic.

⁵ I am aware of a variety of issues concerning the formulation of this argument (such as the domain of the quantifiers, issues of whether or not non-existent/impossible states of affairs can stand in relations, etc.). I am skirting these issues for simplicity and clarity.

⁶ This strategy is similar to one endorsed in Casullo [1979]. With one major and one minor caveat, I can say that I agree with Casullo’s position in that work. The minor caveat is that there are a number of minute (perhaps terminological) differences between Casullo’s view and mine regarding the objections which he takes to fail. The major caveat is that Casullo thinks one of the objections succeeds and recommends a restricted or weakened version of the maxim. It would not be fruitful to put our positions side-by-side for comparison here, but the major divergence is that I do not believe that any of Reid’s objections succeed against Hume’s maxim.

⁷ For an interpretation of Hume’s views on language that is more ambitious, while remaining textually grounded, see Ott [2006].

⁸ The convention chosen here—representing possibility and necessity as operators—was somewhat arbitrary, but nothing in the discussion turns on the decision. The only substantive alternative to treating necessity and possibility as something like propositional operators would be to deny that necessity and possibility modify the proposition, which, as we will see, is incompatible with the reconstructed objection.

⁹ With the usual caveats about anachronism: the point I make here is essentially akin to linking constituency to something like a sentence’s deep structure or a proposition’s logical form. The point really just requires that we regard as comprehensible the view that “It can’t be that *o* is *F*” and “*o* can’t be *F*” are genuinely synonymous.

¹⁰ This view requires there not to be any cases in which someone has one belief but lacks the other, but does not require the (less plausible) view that any time a pair of beliefs have equivalent contents, they are identical. This is fortunate as it means we can think that one believes some, but not all, the truths of arithmetic. Further, it is clear that Hume does *not* endorse that principle of belief individuation, since he thinks beliefs are individuated from each other by their ideational compositions (which permits the belief $1+1=2$ to differ from the belief $4*4=16$).

¹¹ I will not discuss the related *semantic* worry, which concerns the question of what X could possibly be an idea of. This worry is an interesting parallel to one raised by David Lewis in *On the Plurality of Worlds* (p. 172-4). There, Lewis introduces the notion of *vim* as a place-holder for an account of what distinguishes the actual world from merely possible ones on the pictorial ersatz picture. On option (2), because of the mysterious X idea, Hume winds up facing ideational analogues of the worries Lewis raises for *vim*.

¹² Hume sometimes distinguishes the realm of knowledge-producing reasoning into “demonstrative” and “intuitive”. Since Hume does not provide a convenient label for the broader category which includes both demonstrative and intuitive reasoning, and since it is often a useful category to discuss, I will generally use “demonstrative” as a blanket term for both, and will indicate any time I intend to be talking about Hume’s distinction between the demonstrative and the intuitive.

¹³ The context of this footnote is that Hume, because he denies that judgment always requires two ideas, in turn denies that all inference requires three or more. Strictly speaking, this objection also applies to the latter approach for option (3), but the point is sharper for this approach.

¹⁴ That we cannot voluntarily augment the force and vivacity of our own ideas come through most clearly in the discussion of how ideas are enlivened through habituation of causal inference (T 1.3.6-8), and reinforced by the rejection of a certain account of belief because of its consequence that, on that account, we could believe at will (see Appendix, 623-4, 628-9)

¹⁵ I have used a case in which the full story would also involve the theory of abstraction, and I have not discussed the potential for Hume to salvage something of the apparent distinction between the two judgments by appeal to distinctions of reason. Both topics are interesting, but somewhat tangential to our present investigation.

CHAPTER 5: CONCEIVABILITY AND POSSIBILITY (II)

Introduction

As we saw in the previous chapter, David Hume endorsed the thesis that conceivability implies possibility, and, in his *Essays on the Intellectual Powers of Man*, Thomas Reid contested it. Reid's first two objections concerned *linguistic understanding* and *judgments of impossibility*. In reply to the former, I argued that the challenge only succeeds if we attribute to Hume a substantive view on the nature of linguistic understanding, one for which there is no textual support.

In reply to the latter, I argued that Hume can evade the objection by denying the "mirror thesis", i.e. the thesis that the grammatical constituents of a sentence expressing (or describing) a given belief straightforwardly reflect the conceptual constituents of that belief. Reid has an additional pair of worries, both of which focus on mathematical reasoning. The first of these is the objection that adopting the maxim incorrectly legitimates the practice of proof by imagination, while the latter of these is the objection that adopting the maxim regards as illegitimate (and, indeed, impossible) the practice of proof by reductio.

Reid maintains that these are serious problems for proponents of the view that conceivability implies possibility, as i) proof by imagination is not accepted mathematical practice, and ii) proof by reductio is. These challenges have a special force against Hume, who is committed to analyzing all activities of the understanding in terms of conception, and who relies heavily on the maxim of conceivability. In this chapter, I show how Hume can address these concerns and, in the process, I explicate some foundational elements of Hume's account of demonstrative/intuitive reasoning.

Section 1. Mathematical Reasoning and Proof By Imagination

Let's begin by looking at Thomas Reid's statement of his third objection to the maxim of conceivability:

3. Mathematicians have, in many cases, proved some things to be possible, and others to be impossible; which, without demonstration, would not have been believed: Yet I have never found, that any Mathematician has attempted to prove a thing to be possible, because it can be conceived; or impossible, because it cannot be conceived. Why is not this maxim applied to determine whether it is possible to square the circle? a point about which very eminent mathematicians have differed. It is easy to conceive, that in the infinite series of numbers, and intermediate fractions, some one number, integral or fractional, may bear the same ratio to another, as the side of a square bears to its diagonal; yet, however conceivable this may be, it may be demonstrated to be impossible.

EIP, 4.3, p. 332

On one way of reading this objection, the complaint is simply that the maxim of conceivability entails that certain mathematical falsehoods are true:

- R1-1. We can conceive that the ratio of the side of a square to its diagonal is a rational number.
- R1-2. So, if conceivability implies possibility, then it is possible that the ratio of the side of a square to its diagonal is a rational number.
- R1-3. It is not possible that the ratio of the side of a square to its diagonal is a rational number.
- R1-4. So, conceivability does not imply possibility.

Understood this way, the objection appears strikingly similar to the first objection we saw from Reid to this principle.¹ In fact, whereas the first objection used the notion of understanding a proposition to support the premise which claims, of a mathematical impossibility, that we can conceive it, this way of understanding the present objection

involves a bald assertion, about some impossibility, that we can conceive it. Hume's position would simply be to reject premise (1). One complication arising in this particular case is that, in the *Treatise*, Hume's stance on geometry is nuanced (a fact I have alluded to in previous chapters). In short, Hume is, at times, willing to substantively challenge widely accepted views in geometry. This renders things a bit less clear for an objection like the one we have here, but need not interfere with our investigation of Reid's objection. Reid's objection would work just as well with an example like conceiving that there is a greatest prime number. So, rather than explore the details of Hume's geometric views here, we can simply consider the argument with an arithmetic (rather than geometric) example. With examples of clear-cut arithmetic impossibilities, Hume would simply reject the first premise. For Hume, to conceive that there is a greatest prime, for example, or that there is an even prime other than two, one must actually conceive of a number that possesses the feature in question. To conceive that there is an even prime other than two, one must conceive of a prime number that is both even as well as distinct from two. Despite Reid's claim to possess such a conception, Hume doesn't allow for it, and would thus deny (the analog of) the first premise.

There are two things to note here. First, this is an unsurprising reply, insofar as one who wishes to maintain the maxim of conceivability, when faced with such challenges, will typically claim that we are not able to conceive the impossibility under discussion. The second thing to note is that, insofar as this way of taking the argument renders it a weaker version of the first objection, there is some reason to think that a better objection is intended than the one reproduced above.

When we consider the quote, it is apparent that the challenge is about the relationship of the maxim to mathematical practice, and should not be taken as simply a disagreement about

the possibility of certain particular conceptions. Understood this way, the objection runs something more like the following:

- R1'-1. Proof by imagination is not legitimate in mathematics.
- R1'-2. If conceivability implies possibility, then proof by imagination would be legitimate in mathematics.
- R1'-3. So, conceivability does not imply possibility.

Note that, as Hume talks about the maxim, it is clear that he would be committed to (2):

'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., p. 32

Whatever specific inferential process Hume has in mind here, it is clear that he thinks, somehow, our conceiving of a golden mountain licenses us in concluding that a golden mountain may exist. Or, in other words, that Hume accepts some inference rule of the sort that Reid is worried about, in relation to premise (2). This version of the objection is much stronger than the previous version, particularly given that Hume clearly endorses the second premise. So, if Hume is to evade the worry, then he had better be able to deny the first premise. But, it is hard to see room for Hume to argue that mathematicians actually do reason in that way.

One could try to wriggle out of this position, by noting that Hume could defend the mathematical legitimacy of the practice without having to defend the view that mathematicians do, in fact, employ it. However, I think Hume is clearly on more solid ground if he could feasibly attribute this process of reasoning to the mathematicians.

Fortunately, there is good reason to think such an attribution would be feasible, despite the appearance of mathematical illegitimacy.

In order to see how it could be feasible to attribute such a process to mathematicians, it will be helpful to examine what the practice really amounts to. To take an especially simple example; suppose that I have, before my mind, a group of 20 discrete elements. For me to conceive that this group is divisible by five without remainder is for me conceive of these elements being apportioned into groups of five, with no elements left over. In doing this, I wind up conceiving of four groups of five elements each. Thus, the bar for conceiving a substantive mathematical claim, such as that 20 is divisible by 5, is somewhat higher than we might have expected. It requires me to imagine 20 things being divided into five-element groupings. This is very much like a mental version of a constructive mathematical proof. To prove that 20 is divisible by five, one must actually come up with a division of 20 things into four groups of five elements each. This helps us secure one crucial feature of the procedure: it won't license willy-nilly proofs of the sort Reid is concerned about. In order to conceive Reid's example; that in the infinite series of numbers, there is an integer ratio between the side of a square and its diagonal, one would need to conceive of a square with side length l , and diagonal length d , and some rational number x such that $x \cdot l = d$.

There is no such rational number, however, and so, no one can imagine that rational number. The pythagorean theorem guarantees that for any right triangle, the length of the hypotenuse squared is equal to the sum of the squares of the other sides. For the case at hand, this would mean that l squared plus l squared equals d squared. This fixes an irrational relationship between l and d (as can be seen by considering the case where l equals 1, which results in d being the square root of 2).²

This ties in to something I said above: on Hume's view, to imagine that there is a prime number other than two, one needs to have a prime number other than two that is being imagined. But, since there is no such number, and one cannot combine ideas to produce a depiction of such a number, one cannot imagine it. If the relevant mathematical laws constrain our ability to compose ideas, then to form the idea [some number satisfying mathematical description D] is a legitimate proof that description D is legitimately satisfied.

It seems as though a mathematician would permit things like mentally dividing twenty into four groups of five as a sort of proof that twenty is divisible by five. Reid might come back, however, that this is not a very common mathematical technique, and that mathematicians more frequently carry out their proofs with pencil and paper calculations than with mental manipulations of this sort. On this point, however, there is already an adequate reply in Hume's own words:

I observe that when we mention any great number, such as a thousand, the mind generally has no adequate idea of it, but only a power of producing such an idea, by its adequate idea of the decimals, under which the number is comprehended. This imperfection, however, in our ideas, is never felt in our reasonings ; which seems to be an instance parallel to the present one of universal ideas.

T 1.1.7, p. 22

From Hume's perspective, it is obvious that, though these sorts of concrete arithmetic imaginings are the foundation of our mathematical reasoning, the artifice of decimal representation is more commonly used, given how much more convenient it is (especially when it comes to larger numbers that the mind would have difficulty keeping track of and manipulating).

In my view, these considerations are sufficient to answer Reid's challenge. While it is true that a mathematician would not accept another mathematician's claim to have done the work in their head, and to have seen the truth of some mathematical claim at face value, this

is true of any reasoning process that can be carried out within one's own mind, whether axiomatic deduction, proof by cases, etc. Thus, the test for whether it is an acceptable method of proof, for mathematicians, is simply whether such proofs are accepted when one 'shows their work'. In the case of axiomatic deduction, showing one's work involves laying out the deduction in numbered steps according to certain rules. For the case of the sort of proofs by imagination under discussion, showing one's work would amount to producing the relevant images or diagrams which correspond to the mental images used in the relevant acts of imagination. Perhaps simply drawing twenty dots in four rows of five would suffice. And, presumably, such a demonstration of the claim that twenty is evenly divisible by five would be straightforwardly accepted by mathematicians.

Of course, with Reid's approach to thinking about conceivability, one need not form a mental picture of the relevant state of affairs in order to conceive it. And thus, the fact that one cannot mentally picture twenty-one units being divided into groups of five without remainder would not prevent it from being the case that one can conceive of twenty-one as being divisible by five without remainder. So, we can see why Reid is unable to endorse proofs by conception; at the same time, there is nothing about Hume's take on conceivability that would license any problematic conclusions (in mathematics) from allowing them. So, if we take Hume's principle on the terms that Hume offers it, Reid's challenge does not present any problems for Hume.

Section 2. Mathematical Reasoning and Proof By Reductio

I think that the next objection is the most significant of Reid's objections for Hume to address. The objection is that there is an important (perhaps essential) mathematical practice, i.e. reasoning by *reductio ad absurdum*, which Hume's theory precludes. The objection is weighty in several regards. First, such proofs are taken to be legitimate, and Hume's

theory appears unable to legitimate them. Second, such proofs are performed, legitimacy aside, but Hume's theory appears unable to countenance them. Third, Hume himself employs this mode of reasoning, meaning that he tacitly acknowledges their possibility and legitimacy. Here is how Reid presents the worry:

4. Mathematicians often require us to conceive things that are impossible, in order to prove them to be so. This is the case in all their demonstrations, *ad absurdum*, Conceive, says EUCLID, a right line drawn from one point of the circumference of a circle to another, to fall without the circle; I conceive this, I reason from it, until I come to a consequence that is manifestly absurd; and from thence conclude that the thing which I conceived is impossible.

EIP 4.3, p. 332

Reid's statement frames this in terms of the first of the three sources of worry enumerated above, but nothing crucial hangs on this. Put more formally, I take Reid's objection to be this:

- R2-1. If one can prove, by *reductio ad absurdum*, that it is impossible for a line connecting two points on the circumference of a circle to fall outside the circle, then one can conceive that a line connecting two points on the circumference of a circle falls outside the circle.
- R2-2. So, if conceivability implies possibility, then one cannot prove, by *reductio ad absurdum*, that it is impossible for a line connecting two points on the circumference of a circle to fall outside the circle.
- R2-3. One can prove, by *reductio ad absurdum*, that it is impossible for a line connecting two points on the circumference of a circle to fall outside the circle.
- R2-4. So, conceivability does not imply possibility.

Reid regards premise (1) as a consequence of the correct account of proof by *reductio ad absurdum*, and, taking “prove” as factive, we can see that premise (2) follows from premise (1), insofar as proving P impossible by *reductio* involves conceiving of P. Premise (3) is the substantive premise based on mathematical practice, and from these, the conclusion follows. The fact that much progress has been made in mathematics on the basis of *reductio* arguments is ground for accepting a general principle about *reductio* arguments that would license us to accept (3).³ So, insofar as Hume has a plausible way out of this argument, he would be committed to challenging Reid’s account of what is involved in a *reductio*.

So, turning our attention to back to premise (1), it is worth noting that, on Reid’s description of the procedure for carrying out a *reductio*, the first step just is to conceive the proposition one aims to disprove. This is odd, however, as, normally, we think of the first step in a *reductio* as *assuming* or *supposing* that proposition. Thus, one might be tempted to deny (1), on the grounds that Reid is simply confused about the procedure for *reductio* arguments.

Despite this appearance, I do not think Reid is making this mistake here. Later in the *Essays*, Reid explicitly reiterates this objection when discussing Hobbes, Berkeley and Hume’s arguments against abstract ideas, clearly acknowledging the role of supposition in *reductio* arguments, and revealing his basis for accepting (1):

As to the principle here assumed [by those arguing for nominalism about universals], that nothing of which we can form a clear and distinct idea is absurd or impossible, I refer to what was said upon it, chap. 3. Essay 4. It is evident, that in every mathematical demonstration, *ad absurdum*, of which kind almost one half of mathematics consists, we are required to suppose, and consequently to conceive a thing that is impossible. From that supposition we reason, until we come to a conclusion that is not only impossible but absurd. From this we infer, that the proposition supposed at first is impossible, and therefore that its contradictory is true.

EIP 5.6, p. 401-2

Reid's basis for accepting (1), then, is that the first step in the *reductio* is to suppose the proposition to be disproved, and that supposing a proposition involves conceiving it. Reid takes conception (sometimes called 'simple apprehension') to be an ingredient in all other mental operations.⁴ But, we cannot simply charge Reid with importing his own assumptions about the architecture of the mind, at least insofar as he is objecting to Hume, as Hume appears to go in for a relevantly analogous commitment:

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, 96-7*fn*

As we saw in the first chapter, Hume takes this commitment seriously and it plays a major role in determining his analysis of judgment/belief. So, it appears that Hume is committed to analyzing acts of reasoning—such as the act of supposing—as a way of conceiving. This means that Reid's objection can be recast to avoid some of these worries, and clarify what is at stake. The objection starts with these two commitments of Hume's:

HS. For any content C, to suppose C is to conceive C in some particular way.

HM. For any content C, if C is conceivable, then C is possible.

However, from HS and HM, we can derive this:

HI. For any content C, if C is impossible, then C is not supposable.

HM clearly entails that if C is impossible, then it is inconceivable. And, if C cannot be conceived, then C cannot be conceived in the particular way that constitutes supposition (whatever that is). It may be helpful to give an illustration of how this derivation goes in a

slightly different case. The following principles about singing seem sufficiently plausible for our purposes:

Sing-1. For any song S, to croon S is to sing S in some particular way.

Sing-2. For any song S, if S can be sung, then S has lyrics.

And, it is easy to see that Sing-1 and Sing-2 entail:

Sing-3. For any song S, if S does not have lyrics, S is not croonable.

Since HI would mean that one cannot carry out *reductio ad absurdum* arguments (which we clearly can), one ought not accept both HS and HM. Further, it is possible to seriously weaken HS and still derive HI. For instance, instead of a reductive analysis of supposition, identifying it with a particular manner of conception, HI could be derived from necessary concomitance of supposing C and conceiving C (i.e. from the principle that necessarily, anyone who supposes C also conceives C).

And recall that this is worrisome for Hume in multiple ways: If the worry is well-founded, it gives rise to the substantive problem of a clear inadequacy in Hume's system: Hume purports to offer an analysis of mathematical reasoning. If his system cannot capture an integral component of mathematical reasoning, it falls far short of its aims. It would also produce two methodological problems: First, setting to one side the skeptical considerations discussed in *Treatise* I.iv, Hume frequently extolls the virtues of mathematical reasoning and mathematicians, describing their field as capable of the utmost certainty and precision. This is a suspect maneuver if Hume is prepared to discard enormous portions of well-established results, such as anything that had been proven by *reductio*.⁵ Perhaps more damaging is the fact that Hume himself employs *reductio* reasoning throughout the *Treatise*. Hume can hardly seek to establish his account of the mind (and particularly the analysis of reasoning), by employing a method of argument that, according to the system itself, cannot occur.⁶ Recall,

it isn't just that Hume's system fails to legitimate *reductio* arguments, but that it fails to even permit their existence.

So, if Hume is indeed committed to both HS and HM, his system is in serious trouble. Further, Hume is committed to HM, as evidenced by this passage (which we have examined previously):

'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. p. 32

While this quote may appear to leave open the possibility that Hume is simply describing the popularity of the maxim, and not endorsing it himself, it is evident that he does endorse HM, from other passages, such as the one (quoted also by Reid in EIP 5.6), in which Hume concurs in Berkeley's rejection of Lockean abstract ideas:

[Tis] a principle generally receiv'd in philosophy, that every thing in nature is individual; and that 'tis utterly absurd to suppose a triangle really existent, which has no precise proportion of sides and angles. If this, therefore, be absurd in *fact and reality*, it must also be absurd *in idea*; since nothing of which we can form a clear and distinct idea is absurd and impossible.

T 1.1.7, p. 19-20

Here, Hume offers an argument against abstract ideas which requires him to endorse HM.⁷ We should return our attention, then, to HS.

The basis for accepting HS was: a) Hume's claim that all the other acts of the understanding — i.e. acts of judgment and reasoning — “resolve themselves into” conception and “are nothing but particular ways of conceiving our objects” (T 1.3.7, 96-7fn) alongside b) the plausible categorization of supposition as an act of the understanding. For

Hume, if supposition is a mental act, it will either be an act of the understanding or an act of the will. Note that willful control over a mental activity does not mean that the activity itself is an act of will—for instance, Hume points out “*the liberty of the imagination to transpose and change its ideas*” (T 1.1.3, p. 10), but imagination is treated in Book 1, “Of the Understanding”.⁸ The fact that supposition is a component of theoretical reasoning suggests that it is properly classified as an act of the understanding, and so, I will continue to take (b) for granted.⁹

Conveniently, there is a way to make good on Hume’s claim, without committing him to HS. There are two crucial things to observe about the general program of reducing other mental operations to conception which will allow us to see why the program does not require a commitment to HS: First, the reductive commitment, in and of itself, does not require content-agreement between the state being reduced and the state it is being reduced to. Second, the reductive commitment, in and of itself, does not require a 1-1 correspondence between the operations being reduced and the operations they are being reduced to.

To illustrate both features at once, we can consider belief-desire analyses of intentions: If one is pursuing a belief-desire analysis of intention, it is *not* essential for their proposal to invoke any belief or desire with the same content as the intention being reduced, nor does it require that each intention is identical to a particular belief or a particular desire. While the following analysis of intention is not especially plausible (for other reasons) it certainly qualifies as a legitimate belief-desire analysis:

INT. To intend to bake a cake just is to desire cake, and believe that baking a cake is the necessary means to acquiring cake.

Note that neither the content of the intention (that one bake a cake) is neither the content of the belief involved, nor the content of the desire, on this account. Nevertheless, the account's reductivist credentials remain intact. Similarly, multiple mental states occur in the analysis, but we might still say that, on such an account, intentions resolve into beliefs and desires.

Now turning to Hume, let's consider a paradigm act of reasoning: causal inference. It seems pretty plausible that inferring X from Y does not require having a conception with the content of "X from Y" (whatever that would even be). Rather, it seems to be permissible to analyze inferring X from Y as occurring whenever one's belief that X is properly related to their belief that Y (for instance, by the belief that X being subsequent to the belief that Y and accompanied by the feeling of the mind's determination in so-transitioning). Since beliefs are just special instances of conceptions, this account would satisfy the requirement to reduce inference to ways of conceiving things, even though there is no individual act of conception that corresponds to the act of inference itself.¹⁰

That this is plausible regarding an act like inference is unsurprising. Inferences, after all, are commonly understood as some sort of transition between states, and thus, it is unsurprising that they would be analyzed in terms of a pair of properly related acts. The case for employing a similar maneuver with respect to the act of supposition is somewhat harder to see, but I think it can be made reasonably compelling.

It will help to make the case in general first, setting aside various details and constraints imposed by Hume's account. Let's consider a straightforward example of a *reductio ad absurdum*, a proof that there cannot be an even prime number other than 2:

Suppose (for reductio) that there is some number n, such that n is even, prime, and not equal to 2. Since n is even, n divides by 2 without remainder. Since n is prime, n can be divided without remainder only by 1

or by itself. So, n equals 2. But, ex hypothesi, n does not equal 2. So, n equals 2 and n does not equal 2. But this is a contradiction. So there is no number n , such that n is even, prime, and not equal to 2.

The impossibility that we here need to suppose for our above example is the conjunction n is even and n is prime and n is distinct from 2. But, we should note, the next step of the *reductio* uses only one conjunct, the claim that n is even. The subsequent step uses only the conjunct claiming that n is prime. We then put the consequence of n 's evenness together with the consequence of n 's primeness, and conclude that n is equal to 2. This conflicts with the third conjunct (the claim that n is distinct from 2), which is an evident impossibility (and thus, known by intuition, rather than demonstration). So, the *reductio* reasoning takes consequences of the individual conjuncts of that which we supposed, puts them together, and eventually constructs a situation in which we know through intuition that a pair of consequences cannot be put together. So, crucially, in *reductio* reasoning, the reason we have for supposing that something is F and G and H is that it puts us in a position i) to draw out the consequences of its being F, its being G, and its being H, and ii) to (attempt to) put those consequences together in various ways, which, in cases of a successful *reductio*, reveal a pair of consequences that cannot be conjoined.

One way to respond to this observation would be to say that we don't need to suppose the complex content, and instead, that we only need to coordinate our suppositions of the simple components. However, better for Hume, it would seem, is to offer a reductive account of supposing complex contents in terms of supposing simple contents:

Let's say that supposing a conjunction $C1 \& C2$ is defined as supposing $C1$ and supposing $C2$, together with a rule to the effect that the conjunction of any consequence of $C1$ with any consequence of $C2$ counts as a consequence of the original supposition. And let's say that supposing a simple content C gets straightforwardly analyzed as a particular way of

conceiving C. Obviously, there are a number of ways we could tweak these rules, and nothing in my discussion depends on the precise way we formulate them. The important element here is the idea that we coordinate our simple suppositions, and this is constitutive of a complex supposition.

Doing this would give us the following reduction of supposing that $Fa \& Ga \& Ha$: To suppose that $Fa \& Ga \& Ha$ just is to i) suppose that Fa ii) suppose that Ga , and iii) suppose that Ha , while iv) counting arbitrary conjunctions of consequences of these individual suppositions as consequences of the supposition that $Fa \& Ga \& Ha$.

What this means is that there is no reason to treat supposition of a complex content as involving a conception of that complex content. To see this, consider that nothing we needed to do in the foregoing *reductio* would have been hindered by writing out the three conjuncts individually, and having in place a rule that allowed us to freely conjoin their consequences. Instead of “ n is even and n is prime and n is distinct from 2”, we’d have written “ n is even” and “ n is prime” and “ n is distinct from 2”, but we’d still have been allowed to conclude that n can be divided into groups of two without remainder, etc.

If we only need to be able to conceive the contents of our simple suppositions, we get an account on which it is possible to suppose some contents that we do not (and cannot) conceive. What is required is that we can conceive each of the individual conjuncts. Since, for Hume, every simple content is possible, this system will allow us to reduce every supposition to conception, and preserve our ability to explain *reductio* reasoning.

Section 3. Demonstrative Contents, Reasoning and Judgment in Hume

While I hope that I was clear, in the previous section, that the view being propounded is intended to sit well with Hume’s overall commitments, it is important to observe that

Hume's (albeit limited) pronouncements on demonstrative contents and demonstrative reasoning sit well with the sort of account I have been proposing. To this end, it will be helpful to say a few words about the general nature of the demonstrative/non-demonstrative distinction in Hume (understood on the previously indicated use of "demonstrative" that also includes the intuitive). In the *Treatise* we find two ways of characterizing the demonstrative:

- D1: Something is demonstrable just in case its contrary is inconceivable.
- D2: Something is demonstrable just in case it is a relation of ideas which depends on the identity of the ideas alone (i.e. relations of resemblance, of degrees of some quality, of proportion in quantity/number, or of contrariety).

Perhaps the clearest statement supporting D1 can be found in the Abstract to the *Treatise*:

When a demonstration convinces me of any proposition, it not only makes me conceive the proposition, but also makes me sensible that 'tis impossible to conceive any thing contrary. What is demonstratively false implies a contradiction ; and what implies a contradiction cannot be conceived. But with regard to any matter of fact, however strong the proof may be from experience, I can always conceive the contrary, tho' I cannot always believe it.

T, p. 653

And, the clearest statement supporting D2 can be found in the beginning of part three of book one ("Of Knowledge and Probability"):

It appears, therefore, that of these seven philosophical relations, there remain only four, which depending solely on ideas, can be the objects of knowledge and certainty. These four are resemblance, contrariety, degrees in quality, and proportions in quantity or number.

T, p. 70

Hume goes on to indicate that the first three of those four are “discoverable at first sight, and fall more properly under the province of intuition than demonstration”.

D1 and D2 combine to produce some interesting consequences. For instance, since relations of ideas are classified by Hume as complex ideas, it follows from D2 that every demonstrable content is complex, and thus, D2 in combination with D1 informs us that the only ideas whose contraries are inconceivable, are relations of ideas. It also follows (though less directly) that Hume’s system requires at least two modes of composition among ideas.

To see this, consider two contrary ideas, *i* and *#i* (and recall that *i* and *#i* are compositionally distinct). There is a specific occurrence of the relation of contrariety between *i* and *#i*, or in other words, a specific complex idea that embodies the contrariety of *i* and *#i*. The complex idea in question is the specific then there must be a mode of composition involving *i* and *#i* that allows them to be put into the same complex idea, otherwise there would be no such complex idea as the contrariety of *i* and *#i*. Call such a complex idea a *comparative* idea, and call the mode of composition involved *comparative* composition. But now consider an idea of an extension. According to Hume, ideas of extension are composed of many ideas of atomic sensibilia. Call the mode of composition used in this case *constructive* composition, and call the idea resulting from this mode of composition a *constructive* idea. While *i* and *#i* admit of comparative composition, they do not admit of constructive composition. For, being contrary, any constructive idea with *i* and *#i* as parts would be an idea of something impossible. But, as we have seen throughout the last two chapters, Hume does not think we can conceive of impossible things, and thus, it cannot be that any ideas constructively combine *i* and *#i*. Thus, while contrary ideas can be combined comparatively, they cannot be combined constructively. One might be concerned that this does not establish the need for two modes of composition, but rather, different

classes of ideas resulting from a single mode of composition, depending on relations among the ingredient ideas. However, we can also conceive of various relations involving multiple ideas of atomic sensibilia (e.g. the resemblance of five colored minima), without needing to conceive of any extension, so it seems more plausible to think that there is a way of composing complex ideas that can be employed about any two ideas whatsoever, and another that cannot be employed to combine contrary ideas. While I will proceed for the time being as though Hume posits only these two modes of composition (comparison and construction), it may be that, ultimately, to adequately capture Hume's system, each of the seven types of philosophical relation indicated by Hume will correspond to a distinct mode of composition.

So, consider a simple content, the idea the object o , and its contrary idea. As above, we will label these ' i ' and ' $\#i$ '. The contrariety of these two ideas is the complex idea we get by comparative combination of i and $\#i$, $COMP(i, \#i)$. $COMP(i, \#i)$ is the particular relation of contrariety between o and the non-existence of o , and thus, whatever our account of intuition is, it ought to be the case that this complex idea constitutes the judgment that o and the non-existence of o are contrary. Ideally, this would mean that to judge o and $\sim o$ contrary just is to have a lively idea of their contrariety. So, it must be possible for the idea $COMP(i, \#i)$ to be lively without this entailing that i or $\#i$ is lively. I am forced to admit that, on the model we have been using up to this point, it is unclear how Hume could secure such a result. Remaining quiet about modes of composition for complex ideas is not sufficient to tell us how the complex idea constituted by these simple components, could be lively without these components being enlivened. One place to look for help is the account of secondary ideas. Perhaps the conclusion of intuitive/demonstrative reasoning is really the necessity of the contrariety of o and $\sim o$. This proposal accords well with Hume's claim that

intuition/demonstration make one sensible of the impossibility of contrary of the intuitable/demonstrable claim (e.g. the claim that o and $\sim o$ aren't contrary), but this would still leave us without an account of the judgment that o and $\sim o$ are contrary. Another way out would be to jettison some of the elements of this theory of relations. However, to do so would clearly be to revise the system of the *Treatise*, and thus, is not a part of my project.

One possibility for avoiding the result is to deny that judgments of necessities require vivacity. Though I am wary of the philosophical position this leaves Hume in (with a disjunctive account of judgment), it does help make sense of some repeated elements of the text. Looking again at the quote from the Abstract, we can see that Hume seems to think that he would not need to posit an account of assent, if all judgments were intuitive/demonstrable:

When a demonstration convinces me of any proposition, it not only makes me conceive the proposition, but also makes me sensible that 'tis impossible to conceive any thing contrary. What is demonstratively false implies a contradiction ; and what implies a contradiction cannot be conceived. But with regard to any matter of fact, however strong the proof may be from experience, I can always conceive the contrary, tho' I cannot always believe it. The belief, therefore, makes some difference betwixt the conception to which we assent, and that to which we do not assent.

T, p. 653

Similar language is used in the body of the *Treatise*, when the account of belief is being presented:

Suppose a person present with me, who advances propositions to which I do not assent, *that Caesar dy'd in his bed, that silver is more fusible than lead, or mercury heavier than gold*; 'tis evident, that notwithstanding my incredulity, I clearly understand his meaning and form all the same ideas, which he forms. My imagination is endow'd with the same powers as his ; nor is it possible for him to conceive any idea, which I cannot conceive ; or conjoin any, which I cannot conjoin. I

therefore ask, wherein consists the difference between believing and disbelieving any proposition? [...]
‘Twill not be a satisfactory answer to say, that a person who does not assent to a proposition you advance; after having conceived the idea in the same manner with you ; immediately conceives it in a different manner, and has different ideas of it. This answer is unsatisfactory ; not because it contains any falsehood, but because it discovers not all the truth. ‘Tis confess, that in all cases, wherein we dissent from any person; we conceive both sides of the question ; but as we can believe only one, it evidently follows that belief must make some difference betwixt that conception to which we assent, and that from which we dissent.

T, p. 95-6

We note again here that Hume contrasts the situation with demonstrable contents from non-demonstrable contents when motivating the view that liveliness makes the difference between the content believed and the content denied. While it is possible to take the comparison between them to be merely epistemic or expository (i.e. by seeing the contrast, we can come to appreciate the work that assent is doing, though it is present in both the case of demonstrative contents and the case of non-demonstrative contents), we might also take them to indicate that the actual account of judgment differs when we are talking about demonstrative contents versus when we are talking about non-demonstrative contents.¹¹ If demonstrative judgment doesn't require vivacity, we'd completely avoid the above puzzle. We would also avoid an additional puzzle, namely, the puzzle of where the vivacity originates for intuitive/demonstrative judgments.¹² The puzzle is relatively straightforward: in perceptual and memorial judgments, the vivacity of the judgment originates with an impression. In causal inference, the vivacity of the judgment is transferred from some impression. In demonstrative reasoning, there is no impression (of sensation or reflection) whose vivacity could be constituting the judgment, nor would there be any such impression that could transfer the vivacity to the idea. This problem is avoided on a view which regards

judgment as disjunctively defined, and which regards the mere conception of a demonstrable content as sufficient for assent.

Conclusion

Let me first briefly recapitulate the major results I have established, before situating them with respect to remaining issues and directions for future research. David Hume adopts a Newtonian/empiricist account of explanation, which means that explanations are provided by generalizations whose truth has been observationally confirmed. In a sense then, the explanations provided are shallow (they merely reflect the distribution of features provided by individual concrete observations). At the same time, this means that Hume's method provides a strict limit on the depths of inquiry/explanation. This should tell us that any time Hume seems to speak as though he is positing some unobservable cause underlying an element of his mental taxonomy, we should adopt the approach of "interpretive algebra", and treat the ostensibly occult notion as a technical term for some observable feature of the experiences being taxonomized. I have not sought to defend Hume's Newtonian approach to explanation, but Hume's project is clearly bound up with this approach, and so, full evaluation of Hume's views would require assessment of his explanatory aims.

A major theme of this work has been to draw out the ways in which undefended assumption of the Mirror Thesis rests in the background of the objections being offered. This is not to say that it is impossible to reframe these objections on grounds weaker than the Mirror Thesis, but the arguments offered against that we investigated do not generally contain even hints as to how to re-motivate the objection without the assumption of the Mirror Thesis. Note that one major concern which I did not engage with in this work, the question of how Hume could account for predicative judgments, is tightly related to the

Mirror Thesis as well. We call them predicative judgments because they are expressed in language with (non-existential) predication. But the structure of the sentence “Tom is human” will have to differ drastically from the structure of the judgment that Tom is human, since “Tom” is grammatically simple, but the idea of Tom is ideationally complex. This isn’t to say that Hume will have an easy time of accounting for predicative judgments, merely that, as with almost all of the worries assessed in this dissertation, the viability of Hume’s view will depend on the resources available to one who rejects the Mirror Thesis.

Importantly, there are also a host of questions remaining which I have not addressed at all. There are worries about the account of abstraction, about the bundle theory treatment of ideas of objects, further questions concerning modal contents, the theory of moral judgment, the relationship between these views and Hume’s discussion of skepticism regarding reason and regarding the senses, etc.¹³ However, in light of the very powerful worries we have examined, and the apparent success Hume has achieved in developing a system that can avoid or defuse those objections, I take the overarching lesson to be that Hume’s system is *vastly* more versatile than it appeared, and so, we can be optimistic that Hume’s system will address some or all of these concerns.

Most importantly, though, I want to stress that I think careful study and elucidation of Hume’s views is exceptionally valuable even if, the very next issue we turn to address, is conclusively fatal to Hume’s project. For example, if there is no way for Hume to get quantificational judgments to turn out correctly, and this is the insurmountable problem for Hume’s theory, then we will know exactly where we have made gains when we adopt a predicational/propositional framework of judgment rather than a reistic/objectual framework.¹⁴

CHAPTER 5 ENDNOTES

¹ Compare Reid's statement of his first objection, discussed in section 1 of chapter 4.

² Compare this discussion with Arnauld and Descartes on the pythagorean theorem in *Objections and Replies to the Meditations* (Descartes [1988]).

³ As with almost all of his specific examples, Reid's choice of a geometric example is rather unfortunate, given that, in the *Treatise*, Hume appears willing to denigrate (in some fashion or other) the status of geometric demonstrations as compared to algebraic/arithmetical demonstrations. I will continue to set this aside and simply adhere to Reid's example, though the consequences of Hume's nuanced opinions of geometry are worthy of attention.

⁴ There is some room to debate whether this includes mere sensations, but that point is orthogonal to the current debate.

⁵ These claims again need to be qualified (as above) with the note about Hume's apparent derogation of geometric reasoning. However, as *reductio* arguments are used also in arithmetic, and as Hume explicitly avoids derogating arithmetic when criticizing geometric reasoning, the point remains.

⁶ I suppose some Hume scholars who favor a skeptical reading of the *Treatise* might not be so concerned with a self-undermining style of argumentation.

⁷ In order to get from the explicit commitment of the final sentence of the passage to HM, one needs only recall that Hume adopts the orthodox account of conceiving something, on which it amounts simply to the possession (in the understanding) of an idea of that thing.

⁸ See also Hume's argument that the difference between conception and belief cannot be the addition of a separate idea: Since the arrangement and combination of ideas in the fancy is under our willful control, Hume observes that such an account of belief would predict that we can believe at will (T Appendix, p. 623-4, 629).

⁹ It would be interesting to explore the thought that supposition is not an act of the understanding, however, such an investigation would take us too far afield at present.

¹⁰ While I tried to give an example that is at least somewhat plausible as a matter of Hume interpretation, I do not here intend to be arguing that this is, in fact, Hume's account of inference.

¹¹ This view is defended in Smalligan Marusic [*manuscript*] on slightly different grounds. In communication with her, I argued very strenuously against a disjunctive reading of judgments in Hume, but it looks like I was wrong after all.

¹² Both Ed McCann and David Owen separately pressed me on this puzzle (in conversation) when I was defending a univocal account of judgment.

¹³ Or, to give another example, we have not examined whether special issues arise for the disjunctive account of judgment which I ultimately attribute to Hume in this chapter. I also have not shown that Hume's system can capture all the *reductio* arguments that we want captured for mathematics (I merely showed that Hume's system can, in fact, model at least one *reductio* argument).

¹⁴ Though, for grounds for (some) optimism on such a treatment of quantification, see van Fraassen [1982].

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