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Hume Studies Volume 33, Number 1, (2007) 21–40.
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Hume Studies
Volume 33, Number 1, April 2007, pp. 21–40

Hume on Resemblance, Relevance, and Representation

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Abstract: I consider a class of argument implying that Hume's position on general representation is irredeemably circular in that it presupposes what it is meant to explain. Arguments of this sort (the most famous being Sellars' "myth of the given") threaten to undermine any empiricist account of general representation by showing how they depend on the naïve assumption that the relevant resemblances required for the sorting of experience into concepts for use in reasoning are simply given in experience itself. My aim is to salvage Hume's account from this objection. To that end, I argue first for a "Goodmanesque" interpretation of Humean resemblance, and second for an alternative reading of Hume's account of general ideas offered at T 1.1.7 that avoids falling into "the given" trap.

> When any objects resemble each other, the resemblance will at first strike the eye, or rather the mind; and seldom requires a second examination.
> —(*Treatise* 1.3.1.2; SBN 70)[1]

> Of the three relations above-mention'd that of resemblance is the most fertile source of error; and indeed there are few mistakes in reasoning, which do not borrow largely from that origin.
> —(*Treatise* 1.2.5.21; SBN 61)

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The two passages from the *Treatise* appear to offer contradictory views on our cognitive dealings with resemblance. On the one hand, Hume contends that resemblance between two objects is one of those few things of which we can have intuitively certain knowledge; on the other, Hume fingers resemblance as the principal culprit in shoddy reasoning and the fallacious confounding of ideas. Humean resemblance encompasses a seemingly bewildering mix of the intuitively certain and the logically deceiving. Of course, to unravel this antinomy, resemblance must be placed in the context of Hume's distinction between philosophical and natural relations. Considered as a philosophical relation, the resemblance between ideas is determined by a mere comparison of ideas—an intuitive inspection of the content of ideas is sufficient to determine whether ideas of distinct objects resemble. However, when considered as one of the associative mechanisms of the imagination involved in the production of beliefs about objects beyond the testimony of current sensation, resemblance is capricious—the power of resemblances to influence our thinking is the most fertile source of error in reasoning beyond the testimony of current sensation.

In this paper I propose to examine the role of resemblance in Hume's philosophy of mind and reason. A preliminary question concerns whether we should interpret Humean resemblance reductively as implying that the relata must share some common attribute or quality. I argue that this interpretation should be rejected. Borrowing from Don Garrett's treatment of the issue in his *Cognition and Commitment in Hume's Philosophy*,[2] I offer grounds for interpreting Humean resemblance as polymorphous or coming in diverse kinds. This reading of Hume on resemblance sets the stage for the main question to be addressed in this paper: whether Hume depends on the naïve belief that the *relevant* resemblances required for the organization of experience into concepts for use in reasoning are simply *given* in experience itself. This problem compels examination of a contentious principle of Hume's cognitive philosophy: his notion that general representation is founded on resemblance. I argue that Hume's account of general ideas does not depend on the notion that *relevance* is a brute empirical given.

In the first section of the paper, I lay out the reasons for rejecting the common-attribute, reductive analysis of Humean resemblance and for adopting instead the pluralistic, polymorphous interpretation. With this point established, focus shifts in section 2 to consideration of the central question: whether Hume's account of general ideas requires that relevance be simply *given* in experience itself. I examine two strategies for extricating Hume from this result, but show that neither is successful. I then develop an alternative take on Hume's account of general ideas that, I contend, allows him to escape the charge that relevance is an empirical given. In section 3, I consider where my interpretation leaves our understanding of Hume on the relevance question, and examine the extent to which Hume's cognitive

theory (narrowly construed) may still be said to take relevance for granted (and why that might not be a bad thing).

1. Hume on Resemblance

In this section, I aim to defend a broadly "Goodmanesque" interpretation of Humean resemblance. In his "Seven Strictures on Similarity," Goodman says that "we must recognize that similarity is relative and variable, as undependable as indispensable. Clear enough when closely confined by context and circumstance in ordinary discourse, it is hopelessly ambiguous when torn loose."[3] I will argue that Hume's treatment of resemblance likewise recognizes its polymorphous and relative character.

If asked when two things, in general, resemble each other, our first response is likely to be "When they share at least one common attribute or property." If this first response is treated as an analysis of resemblance, we get the following definition:

$$\forall x\ \forall y\ [(x \text{ res } y) \leftrightarrow \exists P(Px \ \& \ Py)]$$

We can call this reductive view of resemblance the *common attribute* analysis, since it maintains that x resembles y if and only if there exists some common property or attribute held by both x and y. Goodman clearly rejected such a one-dimensional analysis of similarity: "Similarity cannot be equated with, or measured in terms of, possession of common characteristics."[4] In making the case for a "Goodmanesque" reading, I will argue that Hume likewise rejects the common attribute analysis of resemblance. In place of such a one-dimensional account, I will argue for a pluralistic, polymorphous interpretation of Humean resemblance whereby we can identify a number of diverse *ways* in which objects can resemble beyond sharing a common attribute.

Cases of resemblance where there is a distinct attribute or set of distinct attributes shared by the relata are clearly prominent in Hume's conception of that relation. When Hume first introduces resemblance as a relation in T 1.1.5, he claims that, while resemblance is a necessary component in any comparison of ideas, it is not the case that all resemblances become the basis for a connection or association of ideas, because in cases where "a quality becomes very general, and is common to a great many individuals, it leads not the mind directly to any one of them; but by presenting at once too great a choice, does thereby prevent the imagination from fixing on any single object" (T 1.1.5.3; SBN 14). In making this point, Hume talks of resemblance as a *quality* that is *common* to many individuals. Indeed, in *most* cases where Hume offers examples of resembling ideas, a straightforward shared-attribute or common-quality analysis of the relation is possible.

Granting common attribute resemblance a prominent place in Hume's account does nothing to establish its exclusivity. We must ask whether all cases of Humean resemblance require that the relata share some common attribute or quality and vice-versa. Before addressing this question, we should have some idea of the alternatives. What other senses of resemblance are there besides the common-attribute variety? One alternative is resemblance understood as *likeness*, whereby an object (a) may be said to be more like (b) than like (c), despite the fact that (a), (b), and (c) share no common attributes. In the case of resemblance as likeness, it is natural to imagine an attribute space where, though each point in the space is distinct, we can nonetheless compare the pairwise distance between the distinct attributes, and can thus base our assessments regarding which attributes are more resembling (i.e., more like). A second alternative to shared-attribute resemblances are *higher-order* resemblances involving abstract relations or causal-structural correspondences. So, the question as developed thus far is whether Hume countenances these alternatives as genuine species of resemblance, or rather adheres to the one-dimensional common attribute analysis.

What can be offered in favor of the pluralist interpretation of Humean resemblance? The most direct evidence in favor of this view is that Hume says it, explicitly. In the Appendix, Hume includes a note for insertion at T 1.1.7 that straightforwardly denies that resemblance in every circumstance involves shared attributes between the relata. Hume says the following:

> 'Tis evident, that even different simple ideas may have a similarity or resemblance to each other; nor is it necessary, that the point or circumstance of resemblance shou'd be distinct or separable from that in which they differ. *Blue* and *green* are different simple ideas, but are more resembling than *blue* and *scarlet*; tho' their perfect simplicity excludes all possibility of separation or distinction. 'Tis the same case with particular sounds, and tastes and smells. These admit of infinite resemblances upon the general appearance and comparison, without having any common circumstance the same. (T 1.1.7.7; SBN 637)

Distinct simple ideas clearly share no common attributes, yet Hume believes they might nonetheless resemble. We here find Hume simultaneously endorsing the view that *likeness* is a genuine basis for resemblance, and denying the reductive common attribute analysis of resemblance.

Hume's Appendix note on resemblance doesn't stop there. Continuing from the above quotation, Hume offers the following:

> And of this we may be certain, even from the very abstract terms *simple idea*. They comprehend all simple ideas under them. These resemble each

> other in their simplicity. And yet from their very nature, which excludes all composition, this circumstance, in which they resemble, is not distinguishable nor separable from the rest. 'Tis the same case with all the degrees in any quality. They are all resembling, and yet the quality, in any individual, is not distinct from the degree. (T 1.1.7.7; SBN 637)

In this passage, Hume provides a clear example of a higher-order, abstract resemblance that obtains despite a complete lack of "common circumstances." As Garrett says, Humean simplicity "must be an aspect of resemblance between perceptions that is not itself a distinct perception occurring as a component part of every simple perception—for simple perceptions cannot have any component parts."[5] In rejecting the common attribute analysis of resemblance, Hume offers explicit endorsements of the two alternative kinds of resemblance mentioned above.[6]

The Appendix note would seem to make for an open and shut case in favor of the polymorphous interpretation of Humean resemblance. But the fact that this explicit denial of the common attribute analysis comes as an amendment to T 1.1.7 raises important questions of interpretation. The Appendix is a notorious source of problems for Hume interpreters (viz. personal identity, belief). Does the amendment convey a change of mind about resemblance on Hume's part? Or is it a clarification of Hume's pre-existing views? Or does it introduce a substantially new thesis on the resemblance relation?

In my view, Hume's addition to T 1.1.7 is intended simply to clarify and make explicit his pre-existing understanding of resemblance, and thus marks neither a change of mind nor a substantially new thesis. But to support this interpretation, we must examine the role of the Appendix note in the context of Hume's arguments at T 1.1.7. As to the note's origin, it was concerns raised by Francis Hutcheson in their correspondence of 1739–1740 that motivated Hume to modify T 1.1.7. In Hume's letter to Hutcheson of March 16th, 1740 we find the following passage:

> I shall consider more carefully all the Particulars you mention to me; tho' with regard to *abstract Ideas*, 'tis with Difficulty I can entertain a Doubt on that head, notwithstanding your Authority. Our Conversation together has furnish'd me a hint, with which I shall augment the 2d Edition. 'Tis this. The Word, *simple Idea*, is an abstract Term comprehending different Individuals that are similar. Yet the point of their Similarity from the very Nature of such Ideas is not distinct nor separable from the rest. Is not this a Proof, among many others, that there may be a similarity without any possible Separation even in thought?[7]

The additions Hume here describes clearly correspond with the Appendix note quoted above, making as they do the same point regarding resembling simple ideas. But it is uncertain from this passage alone whether Hume sees the proposed augmentation of T 1.1.7 as merely a clarification of his established views on resemblance, a change of mind on that relation, or perhaps a novel proposal made in response to Hutcheson's objections.

Unfortunately, we lack Hutcheson's letter to Hume which might have served to clarify the nature of his objection to Hume's treatment of abstract ideas. Nonetheless, we can make progress by asking whether the material added in the Appendix note (a) contradicts Hume's position as espoused in the earlier version of T 1.1.7 (in which case we'd infer that Hume had likely changed his mind about resemblance), (b) finds no correlate in the earlier version (in which case we'd infer that Hutcheson's objections had likely prompted Hume to develop novel thoughts regarding resemblance), or (c) is already partially expressed or strongly implied by what Hume says in the first version of T 1.1.7 (in which case we'd be justified in inferring that the addition is a clarification of a position already held but "not sufficiently clear in the original text"[8]).

To support (c), we must find the multiplicity of resemblance thesis that is explicitly endorsed in the Appendix note strongly implied within T 1.1.7. I believe we find just that in Hume's account of "distinctions of reason" contained in the last two paragraphs of T 1.1.7. Hume introduces distinctions of reason to solve a problem that arises from two commitments: (i) *that all ideas, which are different, are separable* and (ii) *that figure and body-figured are neither separable nor different*. These two commitments seem to imply that it would be impossible for us to make certain judgments about difference and similarity that we in fact make all the time. Consider the example of colored spheres and cubes offered in the section on distinctions of reason at T 1.1.7. It is Hume's position that body and figure are really inseparable, such that it is a mistake to think that we are "able to separate and distinguish the colour from the form" (T 1.1.7.18; SBN 25). Hume's position is that a white cube and a black cube do not share any distinct attributes, since color is not distinguishable from shape. In each case, we have an inseparable unity: white-cubically-disposed, as it were, on the one hand; black-cubically-disposed on the other. Yet despite the fact that the white-cube and the black-cube share no common attributes, Hume maintains that they nonetheless resemble. As Hume puts it,

> we consider the figure and colour together, since they are in effect the same and undistinguishable; but still view them in different aspects, according to the resemblances, of which they are susceptible. (T 1.1.7.18; SBN 25)

Because resemblance does not require common attributes, we can notice the resemblance between the white-cube and the black-cube without violating Hume's

stricture that shape is inseparable from color. Noticing aspects in which objects resemble doesn't require identifying common attributes, but it does require that resemblance not be construed according to the one-dimensional common attribute analysis. Hume's argument concerning distinctions of reason relies implicitly yet clearly on the idea that resemblance does not require shared attributes—the argument doesn't get off the ground without it. Exceptions to common-attribute resemblance are already there in the *Treatise*; the Appendix provides official sanction to their status as genuine cases of resemblance.

If Hume's account of resemblance were unable to include these alternative senses of resemblance, that is, if it required that the objects share common attributes, then, for any pair of objects, there would either be no resemblance between them (if they shared no common circumstance), or there would be a finite number of resemblances.[9] Hume's position in the Appendix denies that resemblance can be confined to this logical structure. Lifting the common-attribute requirement has a liberating effect. When presented with a pair of objects, certain resemblances may stand out initially (perhaps we're naturally prone or conditioned to notice them), but on reflection we have little difficulty supplementing these initial similarity takings with further resemblances. We compare distinct tastes, colors, sounds, and so on, in terms of likeness and discover they "admit of infinite resemblances."[10] If we consider higher-order resemblances, we unveil a range of resemblances among seemingly disparate objects. Hume offers at least three distinct frameworks for resemblance, and it's likely that there exist further important kinds within those broad categories.[11] Given the polymorphous and relative nature of Humean resemblance, it seems plausible to say that, for any set of objects, there will be on reflection a plurality of resemblance relations instantiated. While Hume doesn't employ the common-sense-defying ingenuity of Goodman's gruesome predicates, his account of resemblance is, in an important sense, Goodmanesque.

2. Hume on Relevance and Representation

The problem of relevance is the challenge of picking out, among the innumerable resemblances that may exist among objects, the ones that are important, that matter, that count. So, is Hume committed to the notion that the distinction between relevant and irrelevant resemblances is something provided in the sense matter of experience? The short answer is no, but this will require explanation, since it seems to many that Hume falls for *the myth of the given* in a most dramatic way. The seminal account of the myth of the given comes from Wilfrid Sellars' *Empiricism and the Philosophy of Mind*, and, as even Sellars acknowledges, pinning down just what the myth is can be difficult: there are "various forms taken by the myth of the given . . . depending on the philosophical commitments."[12] Yet the relevant

sense of the myth in relation to Hume and other empiricists is as an answer to the following question: "How do we become aware of an immediate experience as of one sort, and of a simultaneous immediate experience as of another sort?"[13] According to Sellars, Locke, Berkeley, and Hume, despite other differences, provide the same answer to this question:

> But they all have in common the idea that the awareness of certain *sorts*—and by "sorts" I have in mind, in the first place, determinate sense repeatables—is a primordial, non-problematic feature of "immediate experience."[14]

Those who succumb to the myth of the given fail to mind the distinction between brute sensory experience on the one hand, and conceptualizations, categories, and classifications on the other—that is, they believe that the correct way to sort particulars into general categories (determinate repeatables) is something simply given to one's awareness as part of the materials of sense. In Hume's case, since general concepts for use in classification and categorization are founded on resemblances among particulars, falling for the myth of the given would imply that he treats relevant resemblance as something given to our awareness by brute experience.

However, I will argue that Hume does not treat relevance as something given to our awareness in the material of sense. First, it can be conceded up front that for Hume *resemblances* are simply given, but I contend that this concession does nothing to establish that Hume is guilty of falling for the myth. Recall the point made in the previous section: Humean resemblance is polymorphous and variable. And since Hume recognizes the ubiquity of resemblance relations presented to our awareness through sense experience, it cannot be this sensory faculty that does the job of distinguishing between the relevant and irrelevant ones for purposes of sorting particulars into categories of repeatables. If resemblance is to play an important role in Hume's cognitive theory, there must be something other than the intrinsic content of the ideas themselves that determines which resemblances are *relevant* (i.e., relevance can't be just a brute given provided in the empirical content of sense perception). Resemblances as such are cheap, but relevance is expensive, so there must be a source of constraints on the multiplicity of resemblance relations that will serve to distinguish the *relevant similarities* from the *irrelevant* ones.

Here lies the problem, however, since a natural place to search for an account of such constraints is at T 1.1.7, where Hume takes up the subject "*of abstract ideas*." Unfortunately, as what follows shows, this section offers no convincing positive grounds to acquit Hume of givenism. While I cannot refute the interpretation that construes Hume's theory of general ideas as falling for the myth of the given,

I will argue that this interpretation should be rejected. There is a more plausible way to understand what Hume is up to at T 1.1.7 that avoids falling into "the given" trap. This alternative take on Hume's account of general ideas at T 1.1.7, together with Hume's position concerning the multiplicity of resemblances presented to the senses, should suffice to provide a defense against the myth of the given charge.

First, a brief summary of Hume's (T 1.1.7) account of general ideas: Hume, like Berkeley before him, held that abstract or general ideas are fully determinate ideas of particular instances: "all general ideas are nothing but particular ones" (T 1.1.7.1; SBN 17). Hume's insistence on the particularity of general ideas raises two problems. First, any particular determinate idea is bound to have attributes that are completely irrelevant to the abstract idea it is meant to represent. For example, if the concept of "triangle" so happened to be represented by a particular idea of a blue triangle (it would have to have some determinate color), wouldn't blueness become perforce part of our abstract idea of "triangle"? Secondly, abstract ideas have open extensions; it's difficult to see how any one particular determinate idea could convey this fact.

Hume believed that he could solve these problems by showing how the determinate idea of a particular instance becomes general in its *representation* by being annexed to a linguistic term. The term serves to revive a custom or disposition to produce other *similar* determinate ideas that may be "prompted by a present design or necessity" (T 1.1.7.7; SBN 20). Garrett calls the collection of ideas of particular instances potentially present to the mind when employing an abstract idea the *revival* set.[15] The disposition to produce counter-examples from the *revival* set is especially important for the proper handling of concepts. Here's an example from the *Treatise* involving the abstract idea of triangularity:

> Thus shou'd we mention the word, triangle, and form the idea of a particular equilateral one to correspond to it, and shou'd we afterwards assert, *that the three angles of a triangle are equal to each other*, the other individuals of a scalenum and isosceles, which we overlook'd at first, immediately crowd in upon us, and make us perceive the falshood of this proposition, tho' it be true with relation to that idea, which we had form'd. If the mind suggests not always these ideas upon occasion, it proceeds from some imperfection in its faculties; and such a one as is often the source of false reasoning and sophistry. (T 1.1.7.8; SBN 21)

Further, Hume claims that the same determinate idea of a particular instance can be associated with multiple terms, and thus be a member in the revival set of numerous distinct abstract ideas:

> Thus the idea of an equilateral triangle of an inch perpendicular may serve us in talking of a figure, of a rectilineal figure, of a regular figure, of a triangle, and of an equilateral triangle. All these terms, therefore, are in this case attended with the same idea; but as they are wont to be apply'd in a greater or lesser compass, they excite their particular habits, and thereby keep the mind in a readiness to observe, that no conclusion be form'd contrary to any ideas, which are usually compriz'd under them. (T 1.1.7.9; SBN 21–2)

On Hume's account of the content of abstract ideas, collections of resembling particular ideas, together with custom and habit, are enlisted to do all the work that previous philosophers had ascribed to what Hume considered nonsensical mental entities.

Does Hume's account of general ideas in T 1.1.7 offer any plausible candidates to serve as constraints on resemblances? There are two: causal role and inferential role. Unfortunately, arguments to be considered below show that neither can work as a relevance constraint on resemblances: in both cases, the explanations fail. Where these results leave us will be addressed once the arguments have been considered.

At T 1.1.7, Hume claims that we develop a custom to produce similar determinate ideas when presented with a general term. Customs are causal associations for Hume; this suggests that the causal role of ideas could serve as a constraint on their resemblances. On the causal role version of the resemblance constraint, only resemblances that enter into stable and fixed causal relations will be considered *relevant*, while those superficial resemblances that play no role in stable causal frameworks will be dismissed as irrelevant. However, as Kemp Smith (1941) has argued, the causal role explanation is circular:

> In insisting that . . . apprehension [of resemblance] is antecedent to the process of naming, and therefore also antecedent to the operation of custom, Hume is cutting the ground from under his own theory. The associative machinery may play its part in supporting the processes of abstract thinking through a supply of appropriate imagery; it cannot be made to account for what it . . . presupposes.[16]

Under the causal role explanation, the mind has recourse to causal relations in order to distinguish relevant resemblances from irrelevant ones; however, the discovery of causal relations between objects requires the constant conjunction of tokens of the same type; and if the mind is to perceive tokens as instantiating types, it must have access to abstract or general ideas. General representations are possible only if the mind can distinguish relevant from irrelevant similarities for purposes of determining the boundaries of general concepts. The explanation

presupposes what it was meant to explain, and thus the notion that causal role determines relevance is not viable.[17]

At T 1.1.7, Hume makes frequent appeals to the place or role in reasoning that general terms play, raising the possibility that inferential role could explain the distinction between relevant and irrelevant resemblances. Consider again the above example of the "equilateral triangle": Hume makes clear that different abstract terms, though represented by the same particular idea, are "wont to be apply'd in a greater or lesser compass," and it is this difference in "present design or necessity" that prompts the mind to call up the relevant counter-examples that correct whatever aspect of the original particular idea was not part of the general idea. Thus, on the inferential role account, relevance is not revealed in the empirically given content of a set of associated particular ideas. Instead, which resemblances among the set of associated images are relevant is determined by the functional role in reasoning played by the general term.

However, the inferential role explanation is confronted by much the same line of critique that the causal role explanation faced; indeed, Sonia Sedivy develops a very similar rebuttal in her "Hume, Images, and Abstraction." While Sedivy grants that, at T 1.1.7, "Hume was trying to work out a very important insight—that mental entities may represent by virtue of their role in reasoning," she contends that Hume could not develop this insight "because of his determination to show that pictorial properties together with principles of association are sufficient to allow images to be deployed in reasoning in a way that allows them to represent a unique general content."[18] Making a point also maintained by Garrett, Sedivy claims that "an image cannot be claimed simply to have general representation *in virtue* of playing that role in inference because it must already be general in its representation in order to play the appropriate role in inference."[19] Appeals to an idea's function in reasoning as a constraint on the resemblances in the revival set are not allowed, since the idea must already have a fixed and unique meaning in order to be employed in reasoning in the first place. As Sedivy says, "counterexamples can only fix the content of the image as general, if the image is already being applied in reasoning 'as if' it represented a general idea in making the generation of relevant counterexamples possible."[20] The inferential role explanation, like the causal, presupposes what it is meant to explain, and thus is not a viable account of how relevance is determined.

The arguments from Kemp Smith and Sedivy eliminate appeals to the causal and/or the inferential role of general ideas as a means of providing constraints on resemblances that would allow us to distinguish relevant resemblances from irrelevant ones; it seems we are left with a theory of general ideas where relevance is simply given in the empirical content of the particular ideas themselves. As Sedivy says, "[on Hume's account of representation] it is necessary for the image to carry some kind of indication of which of the imaged properties are relevant

for the general idea and of the way in which they are relevant."[21] However, this interpretive conclusion rests on an implicit assumption: if we can't find a source of constraints on resemblances in Hume's account of general ideas from T 1.1.7, then we must conclude that Hume treats relevance as a given provided by direct experience (i.e., as revealed in the empirical content of perceptions—i.e., the myth of the given). It's this assumption I aim to deny.

We should distinguish two problems about general representation.[22] The first asks how the representing-things represent what they do. We could ask how a road sign (a diagram of a deer, or of children walking) represents what it does. By virtue of which properties, or by what mechanism or process, does the representing-thing carry its meaning? The second problem is about multiplicity of meaning and individuation: why does the representing-thing represent what it does rather than something else? We might ask why a road sign (a diagram of a deer, or of children walking) represents what we take it to represent ("beware of animals on road" or "beware of children on road") rather than something else entirely (say "deer meat for sale ahead" or "fertility clinic"). We're not questioning the fact that the road sign has the right properties or capacities to carry its traditional meaning (the second problem assumes this capacity); the problem is really one of excess capacity—how do we eliminate the alternative interpretations?

It is important to see that these two requests for explanation are distinct, and that a theory of representation may answer one without committing itself thereby to an answer to the other. For an example of such a theory, consider *Interpretational Semantics*. Under a standard *Interpretational Semantics* (IS) familiar from computational theories of mind, the representational content of cognitive states is radically non-unique. Orthodox computationalism contends that cognitive systems are automatic interpreted formal systems, and that mental representations are symbolic data structures as these are understood in computer science.[23] Interpretational Semantics offers an account, in terms of simulation, of how such symbolic data structures acquire their representational content:

> A symbolic data structure Q represents x in a simulation S if and only if there are functions g, f, and interpretation I such that S satisfies g, g simulates f under I, and $I(Q) = x$.[24]

The existential quantifier in the second half of the bi-conditional requires at least one interpretation for content ascription to *Q*, but places no upper limit on the number of interpretations that may satisfy the constraints, and thus no limit on the number of meanings *Q* may have. It does not follow from interpretational semantics that *Q* may represent anything you like, but it does follow that representational contents for symbolic data structures are radically non-unique for IS.

And since, for orthodox computationalism, mental representations simply are symbolic data structures, their content must be radically non-unique as well. IS provides a perfectly satisfactory explanation for the first problem: representation is understood in terms of simulation. However, IS provides no answer to the second problem: it allows for non-unique meanings for its representing-things, but without any internal means for eliminating non-standard interpretations.[25]

Hume clearly targets the first problem with his account of general ideas at T 1.1.7. He seeks an explanation for our ability to use words with general signification given that (a) linguistic meaning is explained in terms of ideas, and (b) all of our ideas are particular. However, there is no compelling reason to suppose that Hume intended to take on the second problem in his account of general ideas at T 1.1.7. If one assumes that Hume does try to provide an answer to the second problem, as Kemp Smith and Sedivy do, then Hume hopelessly takes for granted what he means to explain. But rather than uncharitably assume ineptitude on such a scale, we should conclude that Hume had no intention of explaining how alternative meanings (i.e., alternative resemblances among the set of ideas) were ruled out in his account of general ideas.[26] The myth of the given is a very substantial thesis in cognitive theory: it requires that resemblances, as they appear in the materials of sense, come marked or branded as to their relevance; the thesis implies that the image carry "some kind of indication" of which of the properties are relevant. More than uncharitable, it is unfair to take the absence of an explanation of relevance in Hume's account of general ideas at T 1.1.7 as proof that Hume must be committed to a thesis as strong as the myth of the given; it seems much more likely that Hume had no intention of providing any such explanation there.

3. Taking Relevance for Granted

Clarifying Hume's explanatory purpose in the section on general ideas undermines the substantive arguments for the position that Hume is guilty of falling for the myth of the given. But if not in the account of general ideas found at T 1.1.7, where does Hume offer an explanation of how we distinguish relevance for general representations? If Hume is committed to the position that, for any set of particulars, there is no unique resemblance that unites them, but always multiple resemblances that relate them, then he must also admit that the set of particulars can be *interpreted* as resembling in multiple ways. So, how is it that certain resemblances among things (the relevant ones) become the basis for classifying and sorting whereas other resemblances don't?

Janet Broughton, in "Explaining General Ideas," has offered a dispositional account of Humean relevance. She suggests that a feature is relevant if it disposes one to recognize it or form a general idea of it. In the following passage,

Broughton shows how relevant resemblances are distinguished in the case of perceptual discrimination:

> Suppose I am looking at a table. The object of my impression—the table—has many features. It is composed of a great many molecules; it is green; it is well-made; it is four-legged; it is grue. Let us say that for me, some of these features *register perceptually* and some do not. A feature registers perceptually with me, or is "in" my impression of a thing, when it disposes me to recognize it or to form a general idea of it. So, for example, two tables that I see may be alike in having the same combustion point or in being grue, but those resemblances aren't by themselves going to dispose me to notice them or to form the general ideas of such-and-such combustion point or grue.[27]

For Broughton, relevant resemblances are those that "register perceptually," and a feature registers perceptually if it disposes one to recognize it or form a general idea of it.

It's clear that Broughton's interpretation, as an explanation of relevance, does not advance the matter very far. After considering Broughton's account, one is tempted to ask: *why do some features dispose us to form general ideas of them while others don't?* This question looks little different from the one we started with, viz., *why are some resemblances relevant but others not?* While Broughton's explanation makes only a very modest advance on the status quo ante, it does put us in a better position to grapple with a crucial question: will any robust answer to the relevance question inevitably rely on constraints not available within cognitive theory itself? Hume perhaps recognized that a satisfactory answer to the relevance question would lead outside the scope of his investigations in Book 1. By way of illustration, suppose we accept Broughton's account of relevance: we conclude that certain features dispose us to form general ideas of them. Why those features and not others? The likely move at this point would be to search for constraints (pragmatic, economic, adaptational, biological, teleological, social, or what have you) that would explain why just that feature is picked out. We might say that a particular feature disposes us to form a general idea of it because that feature is conducive to reproductive fitness, or because it increases our differential prestige within our community. Whichever account is chosen, the explanation proffered identifies factors that, at least *prima facie*, are well outside the theoretical resources of cognitive science per se.

At this point it may again be fruitful to compare Hume's predicament with that faced by computationalists who advocate an *interpretational semantics* (IS) account of mental representation. As was mentioned above, IS allows for non-unique meanings for mental representations. However, Burgean counterparts and

Twin-Earth cases[28] have convinced some computationally inclined philosophers of the need to provide fully individuated contents for at least intentional states. A number of theories have been put forward, but they all employ the same basic strategy: devise a set of constraints that can be used as filters to select the uniquely correct content of a data structure from among its many possible contents. To get a sense for how this strategy plays out, consider David Papineau's case for biological-adaptational constraints on content.[29] Papineau contends that cognitive science needs to attend to the biological purposes of mental states in order to explain the representational content of those states:

> But suppose we step back a level and ask for an explanation of our general disposition to form tokens of that type—an explanation of our having that belief-type in our repertoire in the first place. At this level we *do* get a distinction among the different possible causes of the belief. The biological explanation of our disposition to form the belief that it is warm somewhere is that (a) that belief has typically arisen on occasions when it is warm in the relevant place, and (b) on just those occasions the actions which issue from that belief have had selectively advantageous results.[30]

In Papineau's example, the content "it is warm somewhere" is privileged over alternative interpretations, such as "there is light," because it is about a feature of the environment that provides selective advantage.

Papineau's account illustrates just how far outside the standardly conceived confines of cognitive theory the search for a complete explanation of cognitive content will lead. Indeed, insofar as cognitive science is conceived as a relatively autonomous domain of inquiry, explanations such as Papineau's must lie outside its theoretical reach. To see this, consider the case of exact physical duplicates: will a newly created duplicate of an organism have the same representations as the original? A striking feature of Papineau's account (and of any that employs the same basic strategy, e.g., Tyler Burge's and Ruth Millikan's) is that exact physical duplicates will not have the same representations. This is because "wide"[31] representational content is a matter of things "outside-the-head," such as distal causal factors in the external environment or factors in past evolutionary or learning history.[32] In Papineau's case, we can't ask which features in the newly created duplicate's environmental history have been selected as the content of its representations because it doesn't have the required history. The filtering strategies individuate representational states in a way that makes them sensitive to external factors such as their history. However, cognitive science (at least as traditionally understood as a semi-autonomous domain of inquiry) is decidedly *individualistic*: it aims to account for cognitive capacities independent of physical or social

conditions outside the individual's body. So, insofar as psychology is committed to individualism, strategies that individuate mental representations by providing a "wide" content will rely on factors that reside outside the domain of cognitive theory per se.

Is Hume's theory of the mind, as developed in Book 1 of the *Treatise*, committed to psychological individualism? Not in the sense that Descartes' is (i.e., for metaphysical reasons), but Hume's science of the mind uses the Newtonian model as the normative ideal: science should "render all our principles as universal as possible, by . . . explaining all effects from the simplest and fewest causes." This approach leads to methodological individualism: a commitment to go only as far in one's explanations as the entities and principles internal to his theory of human understanding allow. There is for Hume a methodological constraint against providing an account of why certain classifications and types get selected for the primitive repertoire of general ideas: such an explanation would lead him beyond the resources of his theory of understanding. I certainly don't mean to imply that Hume has no answer to give to such an important question. What I am questioning is whether we should expect to find Hume's answer in his Book 1 account of human reason and the understanding.

A further question is whether psychological explanation should be committed to methodological individualism. Hilary Putnam[33] and Burge have argued for anti-individualism and wide content for intentional states. Someone persuaded by these arguments, yet sympathetic to Hume's cognitive theory, may try to devise a "long arm"[34] supplement to Hume's account that could individuate representations as finely as you like. So long as the supplement is consistent with the rest of Hume's theory (including his demand that any explanation be applicable to the capacities of animal understanding), I see no principled objection to such further constraints on resemblances. We must allow for different levels of psychological explanation, with different aims and resources for such purposes, and supplementing Hume's theory in this way may represent a powerful extension. I would only add that Hume's theoretical caution should not be dismissed lightly. As Hume says of the attraction of ideas and with obvious application to the present topic:

> Its effects are every where conspicuous; but as to its causes, they are mostly unknown, and must be resolv'd into *original* qualities of human nature, which I pretend not to explain. Nothing is more requisite for a true philosopher, than to restrain the intemperate desire of searching into causes, and having establish'd 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 1.1.4.6; SBN 13)

Indeed, the challenge of providing a satisfactory account of wide content that individuates content as finely as you please has proven quite daunting. Many proponents of extending the explanatory resources of cognitive science to include non-individualistic, environmental factors seem to assume that there is a unique best way to specify those environmental factors. As Robert Cummins has noted with regard to this assumption, "the idea that there is some unique causal network here, with the organism being simply a proper part, is simply outlandish."[35] Hume's methodological individualism is conservative in its explanatory aims, and that may prove a virtue.

Whatever the outcome of these contemporary debates, the considerations raised in this paper serve to undermine any substantive support for the charge that Hume assumes that relevance is simply given in the empirical content of perceptions. By deflecting this line of criticism, we can appreciate that, for Hume, relevance at whatever level of psychological explanation requires explication through appeal to factors external to the empirical content of ideas themselves. There will be Humean causes for relevance, but they will not be determined solely by the representational content of our ideas (i.e., by the understanding)—instead, like our moral values, they will depend on how our passions and interests interact with objects in the world.[36]

NOTES

1 David Hume, *A Treatise of Human Nature*, ed. David Fate Norton and Mary J. Norton (Oxford: Oxford University Press, 2000), abbreviated as "T" and cited by Book, part, section and paragraph, followed by the page number in the "SBN" edition, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge, revised by P. H. Nidditch (Oxford: Clarendon Press, 1978).

2 Don Garrett, *Cognition and Commitment in Hume's Philosophy* (Oxford: Oxford University Press, 1997).

3 Nelson Goodman, "Seven Strictures on Similarity," in *Problems and Projects* (Indianapolis and New York: The Bobbs-Merrill Company, Inc., 1972), 444.

4 Ibid., 443.

5 Garrett, *Cognition and Commitment*, 63.

6 Perhaps the best evidence that Hume's conception of the resemblance relation does include higher-order isomorphic similarity without shared qualities is his own treatment and use of analogical arguments that rely on just this sort of resemblance. And although Hume frequently offers objections to such analogies, his critique is never based on a simple-minded demand that the analogues must share some common quality to be considered resembling (viz., his treatment of the design argument in the first *Enquiry* and the *Dialogues*).

7 In *The Letters of David Hume*, ed. John Young Thomson Greig, 2 vols. (Oxford: Clarendon Press, 1932), 1:39. I am indebted to the editors of *Hume Studies* for bringing this letter to my attention.

8 Garrett, *Cognition and Commitment*, 63.

9 The result depends on an additional premise: that all complex ideas have a Humean finite decomposition into simple ideas.

10 On an earlier reading of Hume's remark that particular colors, sounds, tastes, and smells "admit of infinite resemblances," I took Hume to be saying that, for any given pair of particulars, there exists an infinite number of resemblances. On a less extravagant view, while particular colors, tastes, smells etc., offer the elements for an infinite number of resembling pairs, this does not imply that any given pair has an infinite number of resemblances. Given that Hume's remark about "infinite resemblances" is meant to apply to resemblance-as-likeness only, the less extravagant view is clearly preferable and can be adopted without compromising the main thrust of my interpretation of Humean resemblance as polymorphous. I'd like to thank Peter Millican for his perseverance in convincing me of this point.

11 Regarding *likeness*, Goodman notes that "[s]imilarity of so-called simple qualities can be measured by nearness of their positions in an ordering, but they may be ordered, with good reason, in many different ways." Goodman, "Seven Strictures on Similarity," 445.

12 Wilfrid Sellars, *Empiricism and the Philosophy of Mind* (Cambridge: Harvard University Press, 1997), 59.

13 Ibid., 59.

14 Ibid., 58.

15 Garrett, *Cognition and Commitment*, 103–4.

16 Norman Kemp Smith, *The Philosophy of David Hume: A Critical Study of Its Origin and Central Doctrines* (London: Macmillan, 1941), 260.

17 While the argument from Kemp Smith eliminates existing causal beliefs as criterial for relevance, it does not rule out a broadly causal explanation for relevance (the distinction is the same as that frequently invoked to distinguish "causal beliefs" from "causes of belief"). Indeed, as I discuss in section 3, I think that a causal explanation for relevance is what makes best sense of Hume's position.

18 Sonia Sedivy, "Hume, Images, and Abstraction," *Hume Studies* 21.1 (1995): 117–34, 129.

19 Ibid., 122.

20 Ibid., 123.

21 Ibid., 125–6.

22 Janet Broughton adopts a similar strategy, though the details differ. Janet Broughton, "Explaining General Ideas," *Hume Studies* 26.2 (2000): 279–90.

23 See John Haugeland, *Mind Design* (Cambridge: MIT Press, 1981).

24 Adapted from the formulation in Robert Cummins, *Meaning and Mental Representation* (Cambridge: MIT Press, 1989), 129.

25 This fact has not been of much concern to cognitive scientists interested in simulating cognition. For this group, it is important that cognitive states be able to have representational content, but that the explanation of this capacity offers non-unique contents for states is not seen as a problem (in fact, it may be a requirement for a successful theory of representation in their eyes, as Robert Cummins argues in his *Meaning and Mental Representation*).

26 Kemp Smith cites the following from (T 1.1.7) to substantiate his view that Hume takes relevance as an empirical given: "*When we have found a resemblance among several objects*, that often occur to us, we apply the same name to all of them, whatever differences we may observe in the degrees of their quantity or quality, and whatever other difference may appear among them" (T 1.1.7.7; SBN 20; my emphasis). But what is obvious from this passage is that Hume's account *begins* with the right resemblances; it doesn't set out to explain how we got there.

27 Broughton, "Explaining General Ideas," 286.

28 See Hilary Putnam, "The Meaning of Meaning," in *Language, Mind and Knowledge*, ed. Keith Gunderson (Minneapolis: University of Minnesota Press, 1975): 131–93, and Tyler Burge, "Individualism and Psychology," *The Philosophical Review* 95.1 (1986): 3–45.

29 David Papineau, "Representation and Explanation," *Philosophy of Science* 51.4 (1984): 550–72. Ruth Millikan provides the best-known "adaptational role" or teleological account of representation in *Language, Thought, and other Biological Categories* (Cambridge: MIT Press, 1984).

30 Papineau, "Representation and Explanation," 557.

31 The distinction between "wide" and "narrow" content again comes from Putnam and Burge; "wide" content is highly determined and finely individuated, whereas "narrow" content is less determined by external, causal, non-cognitive, and historical factors, and thus less finely individuated.

32 See Papineau, "Representation and Explanation," 565, for an explicit avowal of this position.

33 Hilary Putnam, "The Meaning of Meaning," in *Language, Mind, and Knowledge*, ed. Keith Gunderson (Minneapolis: University of Minnesota Press, 1975), 131–93.

34 The distinction between "long arm" and "short arm" components is borrowed, somewhat inappropriately, from functionalism (see Ned Block, "Advertisement for a Semantics for Psychology," in *Midwest Studies in Philosophy 10*, ed. P. French, T. Euhling, and H. Weinstein (Minneapolis: University of Minnesota Press, 1986), 615–78. "Short arm" accounts appeal only to internal factors "in the head" to fix content, whereas "long arm" approaches identify external environmental factors to fix the semantics of representations.

35 Cummins, *Meaning and Mental Representation*, 122.

36 One last example from Goodman: "Consider baggage at an airport check-in station. The spectator may notice shape, size, color, material, and even make of luggage; the pilot is more concerned with weight, and the passenger with destination and ownership. Which pieces of baggage are more alike than others depends not only upon what properties they share, but upon who makes the comparison, and when" (Goodman, "Seven Strictures on Similarity," 445).