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Hume and Reid on the Perception of Hardness

LORNE FALKENSTEIN

Nicholas Wolterstorff has recently identified what he takes to be a “decisive” argument employed by Reid to refute “Humean phenomenalism.”¹ The argument turns on appeal to the specific case of our perception of hardness, which according to Wolterstorff could not possibly be accounted for by any theory that holds that all of our knowledge is based on introspective acquaintance with representative images, such as Humean impressions and ideas or twentieth-century sense data, which are supposed to instantiate the qualities of the objects of knowledge.

What’s fascinating about Reid’s argument is that it provides us with a decisive argument of quite a different sort² against phenomenalism: Lots of external objects are hard, perceptibly so; among their perceptible qualia are their hardnesses. But nowhere within the realm of sense data is there a hardness to be discovered—hence, none that resembles the hardness of my desk in being a hardness.³

Quite simply, the suggestion that we might come to know hardness by acquaintance with images that are themselves hard is one that Wolterstorff finds “preposterous” and “wacky.”⁴

Neither the experience [that I have when I touch a hard body] as a whole nor any ingredient therein has the property of being hard.

There is no such quality as the sensory experience's hardness—none such as the sense datum's hardness. There couldn't be. Sense data, if there are such entities, aren't the sort of things that could be hard. There couldn't possibly be a quality present in the sense datum [that] resembles the hardness of the object in that both are hardnesses.⁵

The absurdity Wolterstorff finds in this tenet is so blatant, and the refutation the case of hardness supplies is so "easy" and "briskly decisive" that he wonders how phenomenalist theories of perception could have "held so powerful a grip for so long on the imagination of so many intelligent philosophers."⁶ He suggests that the major reason for their mistake may have to do with "the habit of philosophers of concentrating on vision when developing theories of perception and offhandedly assuming that the other senses work pretty much the same way."⁷ Visual after-images do have qualities of shape and color, and this lends plausibility to the view that we perceive by means of acquaintance with images that instantiate the qualities of the objects they represent. But visual images are certainly not hard, Wolterstorff claims, and once we realize that no images are hard, we are forced to accept that "the model [of perception by means of acquaintance with reflective images] is of no use for developing a general theory of perception."⁸

The danger with Wolterstorff's appeal to the case of hardness is that it invites reply by appeal to other cases that pose as serious a problem for Reid as hardness purportedly poses for Hume. I have argued elsewhere that color is such a case.⁹ However, I propose to offer a different reply here. Rather than charge that Reid's account of visual perception runs into problems that match those encountered by Hume's account of tangible perception, I want to show that Hume's account of tangible perception does not encounter the problems Reid and Wolterstorff think that it does. This is not to say that there are no problems with Hume's account of perception. But it is worth establishing that this particular problem has no currency, not just because accuracy demands that Hume's views be absolved of erroneous objections, but because exposing the error of one objection might lead us to rethink the force of others as well.

Wolterstorff's Hume

Wolterstorff does not set out to provide an exact or uncontroversial analysis of Hume's thought. His purpose is rather to present what he describes as "a rational reconstruction of a line of thought that gripped [Reid's] predecessors"; it is, moreover, to present *Reid's* rational reconstruction of this line of thought, that is, to present the line of thought as rationally reconstructed by Reid. Wolterstorff stresses that in offering this reconstruction, Reid's exegesis was

often “idealized” and “stereotypical” and insensitive to the “fine texture of particular expositions.”¹⁰ Nonetheless, I find nothing of substance to disagree with in Wolterstorff’s presentation of Hume’s model of perception, or in his attribution of this presentation to Reid. On these matters Reid gets Hume fundamentally right, and Wolterstorff gets them both right.

As Wolterstorff and Reid see it, Hume’s model of perception is a specific version of a general type of perceptual theory that Wolterstorff labels “the Way of Ideas” theory. According to proponents of this theory, who include not just Hume but to some extent virtually all early modern philosophers prior to Reid, perception does not supply us with an immediate acquaintance with external objects. It rather supplies us with a direct acquaintance with “reflective images” that represent external objects to us in the way that the image of a mountain reflected in a lake represents the mountain.¹¹ More explicitly, the way these images represent external objects is by a literal picturing that involves a quality-for-quality correspondence. As Wolterstorff puts it, “The reflective image of a mountain in a lake really does have a whiteness and a specific contour; and it’s appropriate to infer that the mountain has a colour *like that image’s whiteness* and a contour *like that image’s contour*.”¹² These reflective images are what seventeenth- and eighteenth-century theorists called “ideas,” and what twentieth-century theorists have called “sense data.”¹³ While their precise ontological status is unclear they are to be understood as lacking any sort of external existence. They exist in the mind or perhaps in the brain.¹⁴ And they are at one and the same time effects that external objects bring about in us when they act on our senses, the immediate causes of our acts of apprehension of an object, and crucially, the objects thus apprehended.¹⁵

This general theory applies to Hume’s views with some modifications. Hume supposed that all of our perceptions may be reduced to either sense impressions or the ideas that copy them, or the passions that our other impressions and ideas arouse in us. Objects, insofar as they are known at all, are known by means of these perceptions. However, Hume would have hesitated to declare that these perceptions exist either in the mind or in the brain. On his view, some of our impressions and ideas, those of vision and touch, are “disposed” in space to constitute extended and configured aggregates.¹⁶ This renders them unsuitable for containment in or “local conjunction” with an unextended, spiritual substance, such as minds are supposed to be. (T 1.4.5.33; SBN 250). Yet our passions, our remaining sense impressions of smell, taste, and hearing, and the ideas that copy these passions and remaining sense impressions, are not only unextended and shapeless; they are not even located in space (T 1.4.5.9–10; SBN 235–36). This renders them unsuitable for containment in, or local conjunction with, a brain (T 1.4.5.11; SBN 236). It appears, therefore, that there is no one substance that is appropriately suited

to contain impressions and ideas. Hume did, of course, frequently speak of ideas and impressions as if they were had by, or present before, a mind, but his official position was that we must exercise a skeptical suspension of belief on all matters pertaining to the nature of the substance or substances, if any, that constitutes this “mind.” In Hume’s philosophy the compound idea of self (an idea generated as much by the passions as by the principles of association linking impressions and ideas together in a bundle) stands in for the notion of a mental or material substance.

This skepticism about the substance of the soul suggests that a further modification to Wolterstorff’s standard schema may be necessary. On the standard schema, ideas are at once effects that objects have on the mind or brain, causes of our apprehension of an object, and the objects thus apprehended. But I suspect that Hume would not have recognized any distinction between the occurrence of an impression or idea, and the act of apprehension of that impression or idea. For Hume, it is not evident that there is anything more to the self than the bundle of impressions and ideas that it contains, and so it is not evident that there is anything over and above those impressions and ideas that might perform the act of apprehending them. Thus, causing apprehension and being apprehended are reduced, for Hume, to simply being in the bundle.

We need to be similarly careful about claims concerning the causes of Humean impressions and ideas. Hume’s skepticism about the substance of the soul was wedded to a corresponding skepticism concerning the existence of an external world. Though he accepted that we cannot doubt that bodies exist (T 1.4.2.1; SBN 187), and occasionally speculated about the constitution of the brain when attempting to explain particular cognitive operations (T 1.2.5.20; SBN 60–1), he took the belief in body to be based on natural causes rather than philosophical reasons, and he took these natural causes to be ones of a particularly unreliable and indefensible sort (T 1.4.2.56; SBN 217–18). The only causal relations that we are legitimately in a position to affirm are relations of constant conjunction between impressions and ideas and other impressions and ideas, not causal relations between impressions and ideas and their presumed sources in bodies, be those bodies our own sense organs and brains, or other bodies that act on our sense organs (T 1.4.2.47; SBN 212).

However, these modifications are not so extensive that they challenge the appropriateness of considering Hume to be a “Way of Ideas” theorist. The fundamental feature of the “Way of Ideas” is its supposition of a distinction between objects outside of us and ideas in us, the latter being “reflective images” (in Wolterstorff’s strong sense) of the former and the sole means of cognitive access to the former. And while Hume was skeptical about the existence of external objects and about the nature of the substance that the

term “us” might refer to, his skepticism never took the form of a denial of the legitimacy of the distinction between objects that are supposed to exist independently of being perceived, and fleeting, “internal” passions, sensations, and ideas. He only ever claimed that we have no good grounds for affirming the existence of external objects, not that we have good grounds for denying their existence, much less for denying the bare intelligibility of the notion of an external object. Moreover, he took even this degree of skepticism to be an extraordinary disposition, difficult to obtain, rare and temporary in its existence, weak in its influence, and impractical in its consequences.¹⁷ Most of the time, the strong force of nature compels us to believe in external objects. Admittedly, when we give in to this strong force, it is our very impressions that we take to be the objects in question (or the ideas that copy them if they are not currently being perceived) (T 1.4.2.43; SBN 209). But Hume considered that we have good reasons to suppose that these impressions and ideas are not really the external objects we take them for. When we suppose that some of our impressions refer to external objects and others to effects those objects have on our sense organs, we soon come across certain “experiments” that demonstrate that all of our impressions are actually dependent on the state our sense organs are in and do not exist independently of being perceived. This forces us back in our tracks and induces us to deny the external existence of any of our impressions (T 1.4.2.44–6 and 1.4.4.3–5; SBN 210–11 and 226–27).

Thus, for Hume, as for any “Way of Ideas” theorist, our impressions and ideas are “internal” as opposed to “external” entities in the sense that they are not things that can legitimately be supposed to exist independently of being perceived. Moreover, insofar as we conceive of external objects at all, they are taken to be entities that are either identical to our impressions and ideas or modeled on them, so that, even when our ideas and impressions are not wrongly identified with external objects, those objects are still taken to possess qualities that we find in our impressions (T 1.4.2.54–5; SBN 216–17). Of course, the supposition of “double existents”—distinct, external objects that resemble our internal impressions—is one that Hume condemned as both unjustified and unnatural (T 1.4.2.46; SBN 211–12). But insofar as we think of external objects at all, it is either (unjustifiedly) as copies of our impressions and ideas or (wrongly) as identical to them.

On this account, we should not be able to attribute any features to external objects that are not found in our impressions. If we think that external objects are white and cold, it is because we have impressions that are white and cold. If we think that they have the specific contour of a mountain, it is because we have impressions that have the contour of a mountain. If we think they are solid, it is because we have impressions that are solid. And if we think

that external objects are as hard as granite, it is because we have impressions that are as hard as granite. Thus, Wolterstorff's criticism of Hume is apt. If, for some reason, we suppose that our impressions could not possibly be hard then the fact that we nonetheless have conceptions of external objects as being hard would show both that impressions are not "reflective images" of external objects and that we are somehow able to obtain knowledge of external objects that does not come by way of acquaintance with the features of our impressions.

Hume's account of the perception of hardness

But though Wolterstorff's criticism may be apt, it is not clear that it is sound. What is wrong with saying that Humean impressions could be hard? Unless I have missed something, this is the most that Wolterstorff has to say on this matter:

Neither the experience [that I have when I touch a hard body] as a whole nor any ingredient therein has the property of being hard. There is no such quality as the sensory experience's hardness—none such as the sense datum's hardness. There couldn't be. Sense data, if there are such entities, aren't the sort of things that could be hard. There couldn't possibly be a quality present in the sense datum [that] resembles the hardness of the object in that both are hardnesses.¹⁸

At the outset of this passage Wolterstorff declares three times over that no sensory experience or sense datum has the quality of hardness. He then goes on to say that the reason none of them *does* have this quality is that none of them *could* have it. But why not? In answer to this question he simply repeats two more times over that this is impossible.

I find this dissatisfying. Hardness, as Reid understood it (and as Wolterstorff, insofar as he follows Reid, must understand it), is the quality of having spatially disposed parts that resist displacement relative to one another.¹⁹ It is accordingly a feature that can only apply to something that has spatially disposed parts. But Hume maintained that our (compound) tangible impressions do consist of spatially disposed parts.

The first notion of space or extension is deriv'd solely from the senses of sight and feeling; nor is there any thing, but what is colour'd or tangible, that has parts dispos'd after such a manner, as to convey that idea. (T 1.4.5.9; SBN 235)

So to paraphrase, “what is tangible has parts disposed after such a manner is to convey the idea of extension,” that is, parts disposed alongside of one another over space.

It might be objected that I am over-interpreting and that all that Hume said in this passage is that the objects that we can see or touch must have disposed parts, not that the visual or tangible impressions we get from these objects must have disposed parts. But for Hume the former claim can only be made through the latter. He insisted that we have no knowledge of external objects and can make no claims about what they are like. The best we can do is fancifully attribute qualities that we actually find in our perceptions to them (T 1.4.2.5.54–5; SBN 216–17). So if we think that tangible objects have disposed parts, this can only be because our tangible impressions originally appear to us after that fashion.

Again, it might be objected that the most that Hume suggested is that our visual and tangible impressions must have parts disposed “after such a manner, as to convey the idea” of extension, but not that this “manner” would necessarily have to be a disposition in space. But this suggestion is rendered ineligible by Hume’s adherence to the principle that all ideas are copied from antecedent impressions. Were the parts of our impressions not disposed in space, it would be impossible that we could have formed an idea of an object with parts that are set above, below, before, behind, or beside one another. Our ideas would instead reflect whatever other “manners” the parts of our visual and tangible impressions were actually disposed in, and we would think of visual and tangible objects in those terms, rather than as spatially extended.

Any residual concern that I might be over-interpreting the passage I have cited should be laid to rest by the following passage, where Hume is explicit that what we know of objects is what we know of our perceptions (our impressions and ideas), that our perceptions consist of parts disposed alongside one another in space, and that our ideas can only copy spatially disposed impressions by being themselves extended in space.

The most vulgar philosophy informs us, that no external object can make itself known to the mind immediately, and without the interposition of an image or perception. That table, which just now appears to me, is only a perception, and all its qualities are qualities of a perception. Now the most obvious of all its qualities is extension. The perception consists of parts. These parts are so situated, as to afford us the notion of distance and contiguity; of length, breadth, and thickness. The termination of these three dimensions is what we call figure. This figure is moveable, sparable, and divisible. Mobility,

and separability are the distinguishing properties of extended objects. And to cut short all disputes, the very idea of extension is copy'd from nothing but an impression, and consequently must perfectly agree to it. To say the idea of extension agrees to any thing, is to say it is extended. (T 1.4.5.15; SBN 239–40)

Note that it is not the table that Hume here took to consist of parts, but our perception of the table (which, in conformity with his previous remark on the twin origination of the idea of extension in vision and touch, we should take to include tangible as well as visual perceptions). Nor is this the only passage in which Hume expressed a commitment to the view that some of our impressions and ideas are extended and consist of spatially disposed parts.

I form an idea of *Rome*. . . . This idea . . . I place in a certain situation on the idea of an object, which I call the globe. (T 1.3.9.4; SBN 108)

The idea of space is convey'd to the mind by two senses, the sight and touch; nor does any thing ever appear extended, that is not either visible or tangible. That compound impression, which represents extension, consists of several lesser impressions . . . endow'd with colour and solidity. (T 1.2.3.15; SBN 38)

I first take the least idea I can form of a part of extension, and being certain that there is nothing more minute than this idea, I conclude, that whatever I discover by its means must be a real quality of extension. I then repeat this idea once, twice, thrice, &c. till at last it swells up to a considerable bulk, greater or smaller, in proportion as I repeat more or less the same idea. (T 1.2.2.2; SBN 29)

Once we recognize that Hume took our compound tangible impressions and ideas to consist of spatially disposed parts, all that we need to do is find some reason to think that these parts resist being displaced relative to one another and we will have satisfied the definition of hardness, as Reid laid it out. Suppose that I touch a table at its edge with my palm on top of it and my thumb curled underneath it. On Hume's account, when this happens I simultaneously experience a great number of impressions of some tangible quality, such as felt solidity (the feeling of pressure that is experienced when touching an object that cannot be compressed) or smoothness or coldness. But I do not just experience more than one of these simple impressions at once. Crucially, I experience them to be disposed in a certain manner in space. "The perception consists of parts," Hume said. And he went on to add: "These parts are so

situated as to afford us the notion of distance and contiguity; of length, breadth, and thickness. The termination of these three dimensions is what we call figure" (T 1.4.5.15; SBN 239). In this specific case, the many tangible impressions are "situated" in such a way as to fashion the figure of the inner surface of a hand, with its palm and fingers spread out to form a flat surface, and its thumb crooked beneath it in the configuration of an open-ended rectangle.

Now suppose that I make an effort to curl my fingers into the table, to clutch it in my fist the way I would a bunched up towel, and I discover that nothing happens. That is, the simple impressions that were previously disposed in a certain fashion relative to one another remain in exactly that position. This should entitle me to declare that the compound impression, consisting of those simple impressions disposed in that particular way, is hard. After all, there is no part of the definition of "hardness" that has not been satisfied by my experience. My impression is experienced to consist of spatially disposed parts. And the parts are experienced to resist motion relative to one another.²⁰

Admittedly, Hume never discussed the perception of hardness, and he never actually made any of the claims I have just attributed to him. But he did discuss the related perception of solidity, and in that context he made analogous claims. Whereas hardness is the property of having parts that resist displacement relative to one another, solidity is the property of having parts that resist penetration or compression into a smaller volume of space, so an account of our perception of the latter property ought to be transferable to the former with only minor modifications. In his treatment of solidity, Hume distinguished between the tangible feeling of solidity, which is a simple sensation (presumably a pressure sensation) that we take to be induced in us as a consequence of touching a solid object, and solidity considered as the quality of resisting penetration, and he even went so far as to observe that the pressure sensation bears absolutely no resemblance to the quality.²¹ But this is not because the quality belongs to external objects and the pressure sensation to our internal experience, but because the quality is a compound impression, constituted from simple sensations that have been observed to be disposed in a particular way in space before and after impact.²² As long as we have just one, simple pressure sensation we cannot say whether this sensation is penetrable or impenetrable. But supposing that we have two or more such sensations, moving toward one another, impacting on one another, and then remaining contiguous to one another rather than penetrating, we acquire all the experience we need to be entitled to think that the sensations are solid in the sense of being impenetrable.²³

The account I have given on Hume's behalf of the perception of hardness makes a similar appeal to the possibility of reducing that perception to one involving the contiguity and impulse of a number of simple sensations.

Incidentally, when discussing the perception of solidity, Hume made a throw-away remark that tells against a further objection that Wolterstorff raises to the "Way of Ideas." Wolterstorff claims that the theory of perception by means of reflective images gains its plausibility from the case of vision, because "Many an after-image . . . really does have a contour and a colour." But Wolterstorff continues,

Unfortunately for the Way of Ideas theory [after-images] are also like reflective images in the respect which Reid so insistently calls to our attention: though mountains are hard, reflective images of mountains in lakes are not! That's why the model is of no use for developing a general theory of perception.²⁴

However, as Hume observed,

A man, who has the palsey in one hand, has as perfect an idea of impenetrability, when he observes that hand to be supported by the table, as when he feels the same table with the other hand. (T 1.4.4.13; SBN 230)

In other words, solidity can be seen as well as felt.

The same observation might be made about hardness. Wolterstorff claims that the image of a mountain reflected in a lake is not hard, but what justifies this claim? If it is because we see the image shimmer and vibrate with undulations in the soft surface of the lake, then it turns out that the reason that this particular image is not thought to be hard is that it is instead thought to be soft, not that it is not thought to be the kind of thing to which hardness (or, by implication, softness) could apply. If the impact of the slightest breeze causes the parts of the image to change place relative to one another, then it is soft, and it fails, to that extent, to accurately represent the mountain.

On Hume's account, solidity and hardness have nothing to do with the specific quality exhibited by individual, simple sensations; they have rather to do with the manner in which the simple sensations are disposed in space and the manner in which they remain disposed in space after impact or while disposed underneath other sensations that rest on top of them. Accordingly, any sensory modality that supplies us with spatially disposed impressions that remain in the same configuration relative to one another ought to be able to supply us with (compound) impressions of solidity and hardness. And because Hume considered there to be two such modes, vision as well as touch, solidity and hardness can be seen as well as felt. Of course, the peculiar feelings of pressure we experience when we touch a hard or solid object, are

tangible sensations and so are not something that can be seen. But the quality of hardness considered as Reid defined it, as the quality of having parts that resist displacement relative to one another, need not be instantiated just by parts that feel a certain way to the touch. Any parts that are disposed in space will do as long as they resist displacement relative to one another.

Hume's account also enables us to reply to yet another of Wolterstorff's objections. Wolterstorff claims that the "Way of Ideas" theory is no more able to account for proprioception than for hardness. But proprioception would have been easy for Hume to explain. He needed merely to have observed that our simple tangible impressions are disposed relative to one another in space and that the totality of the tangible impressions received at any moment is disposed in such a way as to constitute a tangible image of the surface of our bodies. Accordingly, to proprioceive that my leg is bent at the knee is just to have a collection of tangible impressions disposed in the shape of a bent as opposed to a straight leg.

The difficulties that Wolterstorff finds with this view are bewildering.

The suggestion is preposterous! I'm aware of a mental image that exhibits a quality resembling that quality which is my leg's being bent at the knee? What would such a mental image be? Would it be an image with a bent-at-the-knee contour? No; because that would be a visual image whereas my perception of the position of my leg is proprioceptive. The very idea of a proprioceptive image seems incoherent.²⁵

It is unclear why Wolterstorff claims that an image with a "bent-at-the-knee contour" would have to be a visual image. If we take an image to be something that has parts disposed in a way that maps the disposition of parts of the imaged object, and if we accept that tangible as well as visual sensations are disposed in space, then an image does not have to be visual but can be tangible. Wolterstorff goes on to claim that nothing in his argument depends on "the sense of the word 'image'," and that it would be just as "wacky" to use a more neutral term and claim that I have a sense datum that is a "simulacrum" of the bentness of my leg,²⁶ but unless he is tacitly supposing that simulations can only be visual it is unclear what is "wacky" about supposing that I might have tangible impressions that are disposed in such a way as to simulate the manner of disposition of the parts of my leg.

In all of these cases, Wolterstorff's objections are scuttled by a consideration of the role played by spatial manners of disposition in Hume's account of impressions and ideas. This might lead us to wonder whether Wolterstorff's problem is not really with the spatiality Hume ascribed to visual and tangible impressions and only derivatively with their hardness. If ascribing

spatial location to visual and tangible impressions were taken to constitute some sort of “category error,” like that of ascribing spatial location to numbers, then it would be easier to understand why Wolterstorff takes it to be so patently obvious that they could not be hard, for spatiality is a pre-condition of hardness.

But if there is a category error in ascribing spatial location to visual or tangible impressions it is not so obvious an error that it can be asserted to be one without further argument. On the face of it, many if not all of our visual and tangible impressions do seem to consist of spatially disposed parts or to be located in space. Wolterstorff himself allows that many visual after-images are not only coloured but have a “contour” and that “after-images are like reflective images in that respect.”²⁷ But if after-images and reflective images have both color and contour, that implies that they consist of colored parts disposed in space in such a fashion as to constitute that contour. The same holds for many of our tangible feelings, including many of our paradigmatically subjective tangible feelings of pleasure and pain. Unlike visual after-images, many of these feelings do not have contours. But they do have locations. I do not just feel the pain of a toothache at one time but not at another; I feel it at one place and not at another; the pain is felt in a different place from the place where I feel the twinge of a gouty toe or the prick of a mosquito bite (indeed, it is because I experience mosquito bites to be localized somewhere on my body that I know where to slap). Again, it seems quite natural to suppose that if I stand with my back to the fire and my face to the wind then I should feel cold in front and warm behind, that is, that my feelings of cold should be spatially disposed in front of my feelings of warmth. Insofar as all of these aches, twinges, pricks, and feelings of warmth and cold are localized on my body, which is a spatially extended object, they at least seem to be disposed in space relative to one another and relative to other locations on my body. If this appearance is deceptive it is not so patently so that the view that tactile sensations are disposed at different locations in space can simply be dismissed as “wacky.”

One way to justify the charge that Hume committed a category error is to presuppose that our visual experiences of colors and our tangible sensations of heat and cold, pleasure and pain, and so on are states of feeling of an immaterial mind. This is what Reid did.

The form of expression, *I feel pain*, might seem to imply, that the feeling is something distinct from the pain felt; yet, in reality, there is no distinction. As *thinking a thought* is an expression which could signify no more than *thinking*, so *feeling a pain* signifies no more than *being*

pained. What we have said of pain is applicable to every other mere sensation. . . . when we attend to the sensation by itself, and separate it from other things which are conjoined with it in the imagination, it appears to be something which can have no existence but in a sentient mind, no distinction from the act of the mind by which it is felt.²⁸

Reid was a committed dualist who inferred from his antecedent dualistic commitments that one “act of the mind by which something is felt” could not possibly occur above or below, to the left or the right of another, and then sought to engineer a theory of perception adequate to sustain his antecedent commitment to that hypothesis.²⁹ But Hume had no such hobby horse to ride. He doubted whether any sense can be made of the notion of substance and inherence, or of the question concerning the substance of the soul. Accordingly, he had no compunction about accepting that the actions of feeling pain of a supposed mind have exactly those properties that they appear to have. Everyone has always supposed that pleasant and painful feelings exist only in us and only when they are felt. But these very same feelings appear to occur at different locations; the pain of a toothache appears in a different place from the prick of a mosquito for instance, and Hume had no reservation about taking this appearance at face value and declaring that at least some of our feelings therefore exist at different locations in space. Of course, one could dispute this, and maintain that rather than feel a pain in my toe or in my foot, I simply feel a “toe-pain” or a “foot-pain.” But the choice between these two ways of describing our experience is not obvious, and nothing but an antecedent commitment to the dualist hypothesis could justify simply dismissing the former description as “wacky.”

The same can be said of color. The “new” philosophers of Hume’s day had all supposed that the raw, phenomenal look of reds, greens, and other color qualia is “merely secondary” and has no existence outside of the mind and apart from being perceived.³⁰ But if these very same sensations of color look to us to be extended, then Hume had no reservation about taking this fact at face value and declaring that our visual impressions and ideas are spatially extended and composed of a number of parts, disposed in a certain configuration.

Treating our sensations of color as “acts of the mind by which colors are felt” makes no difference to this point. We see various colors at once. From this we can plausibly infer that various “acts of the mind by which different colours are felt” occur at once. But the colors also appear to occur at different locations in space. So, therefore, do the acts by which they are felt. Or, if this is an absurd hypothesis, what makes it absurd is not any incoherence in the possibility that one thing might perform two different actions in two

different places at once (that I might scratch my nose while rubbing my stomach, for example). Any absurdity that we might ascribe to the supposition that an act of “seeing redly” might occur above or below, to the left or the right of an act of “seeing greenly,” gains its plausibility from an antecedent commitment to the dualist hypothesis and the consequent aspatiality of the mind and of all of its states and feelings.

Hume Versus Reid on the Perception of Hardness

According to Reid, there are two things that need to be carefully distinguished when considering our perception of hardness: the sensation that we experience when feeling a hard object, and the perception of hardness. The two are entirely unlike one another.³¹ The sensation is a state of feeling had by the mind. It is a species of the same genus as our feelings of pain and pleasure, or, to use Wolterstorff’s carefully chosen example, the feeling of dizziness. Just as, when I bump into a hard object, I feel pained, so, when I touch a hard object, I feel pressed upon.³² Like the feeling of pain, the feeling of pressure exists only “in” the mind and only when perceived by the mind. His antecedent commitment to the dualist hypothesis led Reid to declare that all sensations—our tactile sensations of pain, pleasure, and pressure included—must be completely aspatial, like the mind itself, and hence must not only lack shape and extension but spatial location as well.³³

In contrast to the sensation of being pressed upon, which is a feeling that exists only in the mind and only when perceived, hardness is a quality that inheres in bodies and is attributable to bodies whether they are perceived or not. It is quite specifically that quality that consists of having spatially disposed parts that resist displacement relative to one another. And, of course, the quality of having parts that resist displacement relative to one another is nothing like the sensation of being pressed upon.³⁴ The quality has to do with the way parts are arranged in space whereas the feeling is completely aspatial. We could have been so constituted that hard bodies pressing upon our skin produced entirely different feelings in our mind. As a matter of fact, bodies pressing upon our eardrums produce sensations of sound; those pressing upon our eyes produce sensations of color. We could have just as well been so constituted that color, sound, or some other sensation now unknown to us would have been produced in us by bodies pressing against our skin.³⁵

However, despite this difference between hardness, considered as a quality of bodies, and the sensation of being pressed upon, considered as a feeling caused in the mind as a consequence of being touched by a hard body, Reid supposed that we have been innately so constituted that the occurrence of a sensation of being pressed upon “suggests” a perception of the hardness of

an object to the mind, that is, that the occurrence of the sensation of pressure is regularly followed by this perception, and that it is in virtue of an innate or original principle of our constitution that this happens.³⁶ This perception is not itself hard; it does not itself consist of spatially disposed parts that resist displacement relative to one another. It is rather an act performed by the mind. But this act consists of thinking something about an object: that it is hard. The object thought about is distinct from the act whereby we think about it.³⁷

As has been seen, Hume drew a similar distinction between two entirely different orders of experience when discussing solidity. But the phenomena Hume described and the nature of the distinction between them are quite different. For Hume, sensations are not states of feeling had by the mind but “reflective images” of qualities, and while some of these qualities—pleasures and pains for example—might be ones that we only ever ascribe to ourselves and never to external objects, others—heat, cold, and colors, for example—are ones that could at least thinkably be ascribed to external objects, even if they should turn out upon further study to likewise be only temporary and internal entities, which exist only when perceived. Furthermore, for Hume, the subjectivity of these qualities is no barrier to their being allowed to have spatial properties. Even pleasures and pains, which are the most uncontroversially subjective of all our impressions appear at different locations in space. Finally, for Hume, hardness is not a quality of the intentional object of an act of perception; it is a compound impression involving the spatially contiguous “manner of disposition” of a number of simple impressions (be they impressions of pressure or, for that matter, impressions of heat or cold, pleasure or pain, or even of color) together with the thought of the persistence of this manner of disposition after impact.³⁸ Thus, what for Reid was a distinction between a state of feeling had by the mind and the qualities of the intentional objects of the mind’s acts of perception was for Hume a distinction between simple impressions and the manner of disposition of those simple impressions in compound impressions.

When commenting on Reid’s account of perception, Hume specifically objected to Reid’s claim that sensations are states of feeling had by the mind rather than images of qualities that might in principle be attributed to objects.³⁹ Hume thought that if Reid were right about this, we should never have imagined that “the sensible Qualities of Heat, Smell, Sound, & probably Colour” might be qualities of objects.⁴⁰ Reid bit the bullet on this point. He insisted that even when ordinary people speak of heat, smell, sound, and color as being in bodies they never mean to say that the qualia of the feelings they experience when they touch, smell, hear, or see bodies are in those bodies,

but only that bodies contain some unknown thing that causes those feelings in us. If philosophers have thought that ordinary people take the feelings they get when they touch, smell, or hear bodies to be in those bodies, this is only because the same words are used to name both the raw, phenomenal qualia of our feelings and their unknown causes in objects, and philosophers have stupidly confused the two uses, even though the vulgar are quite clear on the point.⁴¹

In Hume's eyes, this is simply implausible. To suppose that when the average person says that the mountain "is" white they do not mean to say that the very quality of whiteness that they phenomenally experience (and that Reid considers to be the particular way they feel, visually) is itself spread out over the surface of the mountain, but only mean to say that the mountain contains some unknown cause of their "feeling whitely" is, in Hume's words, "to imagine the Vulgar to be Philosophers & Corpuscularians from their Infancy."⁴²

However, even were Hume wrong about this—even were it the case that sensible qualities are merely so many different ways of feeling—it would not follow that he was wrong to maintain that at least some of these "feelings" are disposed in space. Thus, regardless of what position we might take on the soundness of Reid's "adverbial" analysis of sensation, it is a separate question whether hardness is still to be accounted for the way Hume supposed—as the compound impression of a number of simple impressions (or Reidian states of feeling) remaining disposed in the same way in space after impact.

Towards the close of his book, Wolterstorff makes an interesting observation about Reid's view of the relation between sensation and perception, and between the sensation of pressure and the perception of hardness in particular. As Wolterstorff correctly observes, that we should have the perception of hardness "suggested" to us by the sensation of pressure is something that, for Reid, defies all attempts at explanation.

[Reid] has the sense that he understands why, when he has the proposition *All bachelors are unmarried* clearly in mind, that he believes, about it, that it is necessarily true. Though he doesn't say so, one guesses that he also has the sense that he understands why he believes things about his sensations when he's fully aware of them. But he doesn't have any such sense of understanding why contingent propositions about things quite other than the self and its states and activities are believed by him immediately—especially when it is a perceptual belief. Upon having a certain tactile sensation he immediately believes that his body is in contact with a hard object. That's

mysterious, in a way in which believing that it is a necessary truth, about the proposition *All bachelors are unmarried* when one has it in mind, is not mysterious.⁴³

But for Hume, there is nothing mysterious about the connection between the sensation of pressure and the perception of hardness. When our sensations of pressure remain disposed in the same way despite impact, the compound impression that consists of these many sensations satisfies the definition of hardness. The compound impression is itself literally hard. And to perceive hardness is just to have a hard perception. Thus, far from being unable to account for our perception of hardness, Hume was able to provide a fuller explanation of how this phenomenon arises from our sensations than was Reid.⁴⁴

This is not to say that there are no other problems with Hume's theory of perception. Wolterstorff has drawn attention to two of them: the difficulties of accounting for our experience of objects just by appeal to the association of impressions and ideas, and the difficulties with accounting for belief as nothing more than a more vivacious idea.⁴⁵ But the perception of hardness does not pose a third such difficulty. Hume was able to explain this phenomenon (and do so more fully than Reid) because he was willing to accept at face value a phenomenon that Reid wanted to deny at all costs: the appearance of visual and tangible sensations as disposed in space. More attention to this phenomenon may also help to resolve the other problems with Hume's theories of perception and belief.

NOTES

1 Nicholas Wolterstorff, *Thomas Reid and the Story of Epistemology* (Cambridge: Cambridge University Press, 2001), 84–90, esp. 89–90.

2 Wolterstorff is drawing a contrast with arguments that charge that Hume has no good way of accounting for objects as collections or sets of sense data.

3 Wolterstorff, 89–90.

4 Wolterstorff, 85.

5 Wolterstorff, 87. A similar criticism has been leveled against Aristotle, or at least against “physiological” as opposed to “intentional” interpretations of what Aristotle means by saying that the sense organs take on the forms of objects without their matter. See M. F. Burnyeat, “Is an Aristotelian Philosophy of Mind Still

Credible?," in *Essays on Aristotle's De Anima*, ed. Martha C. Nussbaum and Amélie Oksenberg Rorty (Oxford: Clarendon Press, 1992), 15–26, esp. 20–1, and, for a response (though not along the lines of the one given here), Richard Sorabji, "Intentionality and Physiological Processes: Aristotle's Theory of Sense Perception," also in the Nussbaum and Rorty volume, 195–225, esp. 222.

6 Wolterstorff, 87.

7 Wolterstorff, 89: cf. 84: "It's always been typical of Way of Ideas theorists to conduct their argument in terms of visual perception and then to announce or assume that perception in the other sensory modes has the same structure. The innovative and decisive step on Reid's part was to begin instead with touch."

8 Wolterstorff, 89.

9 "Reid's Account of Localization," *Philosophy and Phenomenological Research* 61 (2000): 305–28.

10 Wolterstorff, 23–4.

11 Wolterstorff, 26–8.

12 Wolterstorff, 88.

13 Wolterstorff, 28.

14 Wolterstorff, 42–3.

15 Wolterstorff, 39–43.

16 David Hume, *A Treatise of Human Nature*, ed. David Fate Norton and Mary J. Norton, Oxford Philosophical Texts (Oxford: Oxford University Press, 2000), 1.2.3, 1.4.5.9 and 1.4.5.15 (referred to hereafter as T); and Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge, 2nd ed., revised by P. H. Nidditch (Oxford: Clarendon Press, 1978), 33–9, 235, and 239–40 (referred to hereafter as SBN).

17 Reid was fond of remarking that no one has ever been seriously of a skeptical disposition and that were anyone to actually succeed at doing so they would be "clapt into a mad-house." (See, for instance, Thomas Reid, *An Inquiry into the Human Mind on the Principles of Common Sense*, ed. Derek R. Brookes [University Park, Pa.: The Pennsylvania State University Press, 1997], 170, lines 3–14.) Though there is no explicit indication that Reid had Hume in mind when writing this passage (but see *Inquiry* 3/36–4/23, 19/31–21/27, and 35/30–36/17), it is worth noting that there is nothing in it that Hume would have disagreed with. Even the Hume who wrote the *Treatise* found skepticism impossible to sustain (T 1.4.2.51; SBN 214). However, unlike Reid, Hume came to believe that an encounter with skeptical arguments could nonetheless have a salutary effect. Though these arguments cannot induce a lasting doubt about the existence of an external world, they might induce a lasting critical disposition. They might make us less credulous and gullible and so inoculate us against the effects of some of our more questionable epistemic tendencies, such as the tendency to draw inferences from recent, lurid anecdotes, the tendency to believe in miracles and urban legends, and the tendency to religion, particularly in some of its more inflated forms. See David Hume, *Dialogues concerning Natural Religion*, ed. Norman Kemp Smith (London: Nelson, 1947), 133–6.

18 Wolterstorff, 87.

19 Reid, *Inquiry*, 55/30–32.

20 A similar objection has been raised against Reid's appeal to the case of hardness by Keith DeRose, "Reid's Anti-Sensationalism and His Realism," *The Philosophical Review* 98 (1989): 313–48, esp. 340–1 and 344–5. However, DeRose is concerned to defend Berkeleian sensationism, not Humean phenomenalism, against Reid's objection, and as a consequence DeRose does not make the same appeal to manners of disposition that I have made here. Instead, DeRose attempts to offer a Berkeleian account of hardness by appeal to temporal sequences of action and sensation. To say that a sword is perceived to be hard, on DeRose's account, is not to say that we have compound sensation that consists of minimally tangible parts that resist motion relative to one another and that are disposed in the shape of a sword, but rather to say that we have a certain sensation that we have learned will be followed by certain other sensations were we to act in a certain way. Nonetheless, DeRose recognizes the important point that even though hardness may not be, as he puts it, "a single tactile sensation" it may be a collection of "tangible sensations" (340).

21 "'Tis easy to observe, that tho' bodies are felt by means of their solidity, yet the feeling is a quite different thing from the solidity; and that they have not the least resemblance to each other" (T 1.4.4.13; SBN 230). "The idea of solidity is that of two objects, which being impell'd by the utmost force, cannot penetrate each other; but still maintain a separate and distinct existence" (T 1.4.4.9 SBN 228).

22 "[S]olidity necessarily supposes two bodies, along with contiguity and impulse; which being a compound object, can never be represented by a simple impression" (T 1.4.4.14; SBN 231).

23 "Taking then penetration in this sense, for the annihilation of one body upon its approach to another, I ask any one, if he sees a necessity, that a colour'd or tangible point shou'd be annihilated upon the approach of another colour'd or tangible point? On the contrary, does he not evidently perceive, that from the union of these points there results an object, which is compounded and divisible, and may be distinguish'd into two parts, of which each preserves its existence distinct and separate, notwithstanding its contiguity to the other?" (T 1.2.4.6; SBN 41). It might be objected that the notion of two pressure sensations moving toward and impacting on one another without penetrating makes no sense, because it supposes that we have some way of identifying and individuating sensations over time. At best, we can form a notion of two distinct sequences of resembling pressure sensations, subsequent members of which occur at increasing proximity to one another up to the point of adjacency, after which point subsequent members of the series continue to appear adjacent to one another. However, Hume thought that there is no more difficulty in taking such sequences of sensations to be enduring, moving, and consequently impacting objects than there is in identifying any changing thing with an enduring object. All our ascriptions of identity are ultimately fictional, on his view, except our identity ascriptions to a single, persisting, absolutely unchanging impression (in which case it is actually our supposition of a passage of time that is fictional and we are

really just experiencing one sensation contemporaneously with a sequence of others and not an identical sensation over time, according to the account of time perception of T 1.2.3.7–11 and 1.2.5.29; SBN 34–7 and 65). We experience sequences of resembling sensations that we feel naturally impelled to treat as experiences of a single impression because of the resemblance that the experience of a sequence of resembling impressions has to the experience of a single persisting impression. Since the remembered distinction between the members of the sequence conflicts with the natural impulse to ascribe a unity, we invent the fiction of identity to paper over the contradiction and in some way satisfy both reason and the imagination at once (T 1.4.2.24–43; SBN 199–210). In light of this theory, thinking of a sequence of increasingly proximate tangible sensations of pressure as the motion and impact of two pressure sensations is as natural an operation of the imagination as thinking of a sequence of increasingly proximate, differently colored points as the motion and impact of two colored objects (as in the case of Hume's discussion of the blue and red points at T 1.2.4.6; SBN 41), or thinking of our impressions of two moving and impacting billiard balls in these terms.

24 Wolterstorff, 89.

25 Wolterstorff, 85.

26 Wolterstorff, 85.

27 Wolterstorff, 89.

28 Reid, *Inquiry*, 168/5–9 and /12–16.

29 Reid, *Inquiry*, 217/3–26.

30 David Hume, *An Enquiry concerning Human Understanding, A Critical Edition*, ed. Tom L. Beauchamp (Oxford: Clarendon Press, 2000), 12.15; *Enquiries concerning Human Understanding and concerning the Principles of Morals*, ed. L. A. Selby-Bigge, 3rd ed., revised by P. H. Nidditch (Oxford: Clarendon Press, 1975), 154. See also T 1.4.4.3; SBN 226.

31 *Inquiry* V.ii: 57/22–25.

32 *Inquiry* V.ii: 55/37–56/30.

33 *Inquiry* VI.xx: 167/36–168/16.

34 *Inquiry* V.ii: 55/30–36.

35 *Inquiry* V.ii: 57/22–34.

36 *Inquiry* V.ii: 58/23–27 and *Inquiry* V.iii–iv.

37 *Inquiry* VI.xx: 168/17–36.

38 It might be asked how any collection of simple visual and tangible impressions, which for Hume are unextended, minimally sensible points, could be compounded to form something extended. Since it is an incidental feature of Hume's thought that visual and tangible perceptions are only finitely divisible, this objection could be met simply by rejecting Hume's commitment to the indivisibility of visual and tangible impressions while continuing to insist that those

impressions are disposed in space, and so salvaging the essentials of Hume's account insofar as it has any bearing on his dispute with Reid over the perception of hardness. But it is worth noting that Hume would not have been without reason for maintaining that this objection has no currency. Points are unextended, but on at least some theories of geometry, they constitute lines, planes, and solids. Indeed, Hume understood the geometrical definitions of "line," "plane," and "solid" in these terms, and proposed in T 1.2.4 to defend the "definitions" of geometry against the "demonstrations" of infinite divisibility (see esp. 1.2.4.8-9; SBN 42). That he was not entirely misguided in doing so is indicated by there being no absurdity in the notion of a discrete space, that is, a space in which there is an immediate adjacency relation between locations. Points in such a space can be beside one another without either overlapping or having any further location between them, and unextended objects of uniform quality can constitute a uniformly qualified extension by being set immediately adjacent to one another. (Computer and television screens, which represent extension as composed of pixels, model such a space, and the finite precision arithmetic used for representing geometrical objects on such screens is a consistent model.) Though Hume lacked the terminology, he seems to have thought of space in these terms. Witness the discussion of the "contiguous" red and blue points at T 1.2.4.6 (SBN 41). For further discussion of these issues see James Franklin, "Achievements and Fallacies in Hume's Account of Infinite Divisibility," *Hume Studies* 20 (1994): 85-101.

39 Letter to Hugh Blair of 4 July 1762 as edited by Derek R. Brookes in Reid, *Inquiry*, 256-7. This letter was only recently discovered by Paul Wood and was first printed in *Mind* 95 (1986): 411-16.

40 Letter to Hugh Blair as reprinted in Reid, *Inquiry*, 256/22-31. Hume's use of the term "probably" is likely due to the fact that he was commenting on an advance copy of Reid's *Inquiry* that did not include the chapter on vision. Thus, he said "probably" because he was speculating that Reid would take the same position on colour that he took on the other sensible qualities.

41 *Inquiry* II.viii: 38/34-39/24 and II.x: 42/26-43/31. Interestingly, this is a claim that Reid only made about the names of "smells, tastes, sounds, as well as heat and cold" (*Inquiry* 43/9). Our names for colors are conspicuously absent from this list. As it turned out, Reid's position was that our names for colors are not ambiguous. But this is not because we ordinarily use color terms to refer to our sensations, but because we *never* do so (*Inquiry* VI.iv-v)! Taking this position allowed Reid to claim that our visual sensations do not even appear to be extended, shaped, or located, because all that anyone ever means when they describe "colors" as having these properties is that whatever it may be in bodies that brings about our visual sensations has these properties, not that the visual sensations themselves have them. This is a brilliant and original sophism, but it is a sophism nonetheless. Seeking to deny one's opponent the vocabulary needed to state an objection is not the same thing as refuting that objection.

42 Letter to Blair in *Inquiry* 256/25-26.

43 Wolterstorff, 216, cf. 258-9. Cf. Reid, *Inquiry* 64/34-9, cf. *Inquiry* 57/22-34.

44 DeRose, 346–8, makes a similar point. However, DeRose thinks that Reid “could still claim that it is obvious that our concepts of bodies have nothing to do with sensations beyond being triggered by them” (348), and so dismiss the explanation as one founded on a contentious hypothesis, even if a sophisticated Berkeleyan could challenge this claim. I hope I have taken the case against Reid a step further and shown that it is not clear that Reid has any evidence on his side and that he may be the one who rests his position on a hypothesis (about the immateriality of the conscious subject and its states).

45 Wolterstorff, 89. On the second point, Wolterstorff frequently alludes to, and occasionally cites Reid, *Inquiry* 197–8. See also Reid, *Inquiry*, 30 for a different set of considerations.