

FOUR QUESTIONS ABOUT ACQUIRED PERCEPTION

‘Acquired perception’ is the name Reid gives to a cognitive phenomenon that arises through three steps that may be characterized schematically as follows: (i) On the occasion of sensation S, I form (in accordance with my native constitution) a conception of and a belief in the presence of some external object or quality A. This much is *original* perception. (ii) As time goes by, I find that my perceptions of A are always or nearly always accompanied by perceptions (perhaps belonging to another sense) of some other object or quality, B. I develop the habit of thinking that B is present on occasions when I perceive A—even if I have not yet perceived B. (iii) Eventually, the association between A and B becomes so strong that on the occasion of perceiving A, I automatically conceive of and believe in B without making any inference. I now have *acquired* perception of the quality B.¹

Reid’s favorite examples of acquired perception are the perception of distance and three-dimensional figure by sight. Reid agrees with Berkeley that what is given originally to sight is only a two-dimensional array in which objects are displayed as having locations along the left-right and up-down axes, but not along the near-far axis. “Outness” and three-dimensional shapes (such as being cubical or spherical) are given originally only to touch.² By experience, however, we come to learn that certain sensations connected with adjusting the “trim” of the eye and certain patterns of light and

¹ Reid’s views on acquired perception are concentrated in Chapter 6, Sections 20-24, of *An Inquiry into the Human Mind*, cited henceforth in the text as IHM 6.20-24, and in Essay 2, Chapters 21 and 22, of the *Essays on the Intellectual Powers of Man*, cited henceforth in the text as EIP 2.21-22.

² I think Reid and Berkeley are wrong about this. “Outness” is originally given to sight, owing partly to stereopsis, a mechanism not known in their time. In this paper, though, I will go along with them for the sake of being able to work with their examples.

shadow are signs of distance and three-dimensional convexity. Eventually, we automatically conceive of and believe in a globe when we see an appropriately shaded disk. It is almost as though we *see* the convexity of the globe:

It is experience that teaches me that the variation of colour is an effect of spherical convexity, and of the distribution of light and shade. But so rapid is the progress of the thought, from the effect to the cause, that we attend only to the last, and can hardly be persuaded that we do not immediately see the three dimensions of the sphere. (EIP 2.12, p. 236)

Other examples of acquired perception are hearing the size of a bell (EIP 2.14, p. 182) and seeing the weight of a sheep (IHM 6.20, p. 172).

In this essay, I take up the following four questions. (1) Is acquired perception really *perception*? (2) Are secondary qualities objects of original perception, or of acquired perception only? (3) Does acquired perception involve any alteration in the content of our original perceptions? Finally, (4) are there any limits in principle to what might one day become an object of acquired perception for us? Before we get to these questions, however, it is necessary to say a little more about the mechanics of acquired perception.

0. The mechanics of acquired perception

Reid first draws the distinction between original and acquired perception in the *Inquiry* in the following passage:

Our perceptions are of two kinds: some are natural and original, others acquired, and the fruit of experience. When I perceive that this is the taste of cyder, that of brandy; that this is the smell of an apple, that of an orange; that this is the noise of thunder, that the ringing of bells; this the sound of a coach passing, that the voice of such a friend; these perceptions and others of the same kind, are not original, they are acquired. But the perception which I have by touch, of the hardness and softness of bodies, of their extension, figure, and motion, is not acquired, it is original. (IHM 6.20, p. 171)

The distinction is further elaborated in the chapter of the *Intellectual Powers* entitled “Of the improvement of the senses” (2.21), where it is illustrated by Reid’s favorite example

of it—the acquired visual perception of three-dimensional figure on the basis of originally perceived two-dimensional signs.

In what way are acquired perceptions “the fruit of experience”? There are two models to consider, an inference model and an association model. In the inference model, after being exposed to many cases of B conjoined with A (for instance, spherical shape with a certain pattern of shading), we form in accordance with induction the general belief ‘Anything that looks like *this* is a sphere’. On subsequent occasions of something’s looking that way, we draw the inference ‘It looks like *this*, and things that look like *this* are spheres; therefore, it is a sphere’. After several such occasions, the inference becomes fully automated: when we see something that looks the right way, we believe forthwith that it is a sphere, no longer passing through a major premise of the form ‘All As are Bs’ or combining it with a minor premise of the form ‘o is an A’ to conclude ‘o is a B’. We simply leap to the belief that o is a B. We now have an acquired perception that the thing we are perceiving is a B.

In the association model, we go through the same history of experiencing As in conjunction with Bs as above, but we never form the explicit general belief that As are Bs (or if we do, we never use it as a premise in an inference). We simply form an association between As and Bs, which eventually becomes strong enough that on the occasion of perceiving an A, we instantly believe that it is a B. We now have an acquired perception that the thing we are perceiving is a B.

In either model, we have acquired perception only when the transition from A-perceptions to B-beliefs has become fully automatic and no longer (if it ever was) a matter of inference. The difference is that in the association model, we do not go through

an inferential phase on our way to acquiring the acquired perception; in the inference model, we do. We might put the matter thus: the inference model posits a phase in which the subject has a belief in a constant conjunction, symbolizable as ‘S believes $(x)(Ax \rightarrow Bx)$ ’; the association model need posit no more than a constant conjunction of beliefs, symbolizable as ‘ $(x)(S \text{ believes } Ax \rightarrow S \text{ believes } Bx)$ ’.

Which model did Reid intend? I do not think he cared; so long as the product is right, the process does not matter. His indifference is shown in his indiscriminate use of two different formulations of the inductive principle that underlies our ability to form acquired perceptions:

When we have found two things to have been constantly conjoined in the course of nature, the appearance of one of them is immediately followed by the conception and belief of the other. (IHM 6.24, p. 196, lines 1-3; see also p. 197, lines 9-11.)

Thus, if a certain degree of cold freezes water to-day, and has been known to do so in all time past, we have no doubt but the same degree of cold will freeze water to-morrow, or a year hence. (IHM 6.24, p. 196, lines 10-12; see also p. 197, lines 6-8.)

In the first formulation, the inductive principle is said to produce in our minds a constant conjunction of beliefs; in the second, it is said to produce belief in a constant conjunction. Here and elsewhere, Reid uses the two formulations interchangeably.

I end this section by commenting on the relation of Reid’s account of acquired perception to ideas in three other writers, Berkeley, Helmholtz, and Ryan Nichols.

Berkeley. Reid is indebted to Berkeley for many examples of acquired perception, which Berkeley often describes using the term ‘suggestion’. Suggestion is the automatic triggering of conception and belief in one thing by the sensation or perception of another, as when a blush suggests shame or a word suggests its denotatum. In the following passage, Berkeley explicitly distinguishes suggestion from inference:

To perceive is one thing; to judge is another. So likewise to be suggested is one thing, and to be inferred another. Things are suggested and perceived by sense. We make judgments and inferences by the understanding. (Sec. 42 of the *Theory of Vision Vindicated*; 1975, p. 293)

Reid's notion of acquired perception and Berkeley's notion of suggestion could be said to be related as follows: A suggests B to person S iff whenever S experiences A, S has an acquired perception of B for which A serves as the sign.

Helmholtz. Whereas Berkeley says that certain of our perceptions are based on suggestion, not inference, Helmholtz says that they are based on *unconscious* inference. Is there a disagreement between them? Robert Schwartz (1994) notes that the "psychological reality" of the major premise 'All As are Bs' in what Helmholtz calls inference may simply consist in the disposition of A ideas to trigger B ideas—what I have called a constant conjunction of beliefs. In that case, the difference between Helmholtz and Berkeley would be merely verbal.

Nichols. Ryan Nichols distinguishes two types of acquired perception in Reid: *inferential* perception (really an oxymoron, given that there is no reasoning in perception), in which one makes a conscious inductive inference from some perceived quality A to a further quality B, and *habituated* perception, in which the perception of a thing as being A makes one automatically believe it to be B, owing to the subject's previous history of inferential perceptions that a thing is B based on its being A (2007, pp. 233-34). If these two types are exhaustive, it follows that all acquired perception is built on previous inference. However, despite this implication, I do not believe Nichols intends to force an inferential model on Reid. On p. 235, he seems to want to keep the possibility of an associationist model open.

1. Is acquired perception really perception?

Acquired perception is a powerful means of gaining information through the senses, but is it really *perception*? We cannot let the issue be decided by Reid's name for the phenomenon. A toy gun is not a gun, and artificial teeth are not teeth. By contrast, a toy block is a block, and artificial illumination is illumination.³ My question is whether acquired perception is like artificial illumination or artificial teeth.

Berkeley's answer to this question is clear and explicit:

In short, those things alone are actually and strictly perceived by any sense, which would have been perceived, in case that same sense had then been first conferred on us. (1975, p. 194; 1948, p. 204)

By this criterion, what we perceive only with the help of learning we do not strictly perceive at all. Had we just now been given sight without any opportunity to learn correlations between the visible and the tangible, sight would afford us no clue of distance or three-dimensional shape. Berkeley unhesitatingly concludes that these properties are not strictly perceived by sight.⁴

Reid's answer to our question is more equivocal. After describing several apparent instances of acquired perception—for example, a farmer's apprehension that his neighbor's cattle have broken loose, based on the down-trodden state of his corn—he remarks,

These are instances of common understanding, which dwells so near to perception, that it is difficult to trace the line which divides the one from the other. (IHM 6.20, p. 173)⁵

³ Thanks to Roy Sorensen (personal communication) for these examples.

⁴ To be sure, Berkeley has a broad sense of 'perceive' in which we may be said to perceive anything that is suggested to our imagination by a sensible cue, including the shame in another's soul when it is suggested by a blush and even God when we are made to think of him by the word 'God'. But things perceived in this broad sense are not *immediately* perceived, and Berkeley insists that only things immediately perceived are sensible things, or things perceived by the senses. "By *sensible things* I mean those only which are perceived by sense, and that in truth the senses perceive nothing which they do not perceive immediately" (1975, p.164; 1948, p. 174).

⁵ In Reid's examples in this paragraph, the various facts "perceived" are all facts about the recent past. Elsewhere, he says perception always has a present object. (See EIP 1.1, p. 23, lines 1-9.) For this reason,

In another passage, he describes a case in which he at first mistook a nearby seagull on a foggy beach for a man on horseback half a mile off. (Fog throws off our acquired perceptions of distance). He observes,

The mistake made on this occasion, and the correction of it, are both so sudden, that we are at a loss whether to call them by the name of *judgment*, or by that of *simple perception*. (IHM 6.22, p. 183)

In yet another passage, he calls the whole question I am raising a verbal one:

[When a kind of judgment becomes habitual] it very much resembles the original perceptions of our sense, and may not improperly be called *acquired perception*. Whether we call it judgment or acquired perception is a verbal difference. (EIP 2.14, p. 182)

Even if Reid refused to answer to my question, is there an answer he *ought* to have given in light of his other commitments? Rebecca Copenhaver has forcefully argued that Reidian acquired perception in no way falls short of genuine perception (2010). In the rest of this section, I offer five arguments to the contrary.

First argument: acquired perception is not immediate. One of the hallmarks of perception for Reid is that it is *immediate*. Here is his official threefold account of perception:

If, therefore, we attend to that act of our mind which we call the perception of an external object of sense, we shall find in it these three things. *First*, Some conception or notion of the object perceived. *Secondly*, A strong and irresistible conviction and belief of its present existence. And, *thirdly*, That this conviction and belief are immediate, and not the effect of reasoning. (EIP 2.5, p. 96, and repeated elsewhere)

If it turns out that acquired perception is not immediate in the requisite sense, we will have the materials for the following syllogism:

1. All genuine perception is immediate perception.

I am not sure whether he would regard these instances of quasi-perceptual “common understanding” as cases of acquired perception.

2. No acquired perception is immediate perception.
3. Therefore, no acquired perception is genuine perception.

What, then, is the requisite sense? What all does Reid mean by calling perception (or the belief involved therein) *immediate*?

Much of the time, Reid simply means that no reasoning or inference is involved, psychologically speaking. There is no marshalling of premises and drawing of conclusions. If this is all he ever means by immediacy, the syllogism above would have a false minor premise. As discussed in the preceding section, even if inference is part of the process by which acquired perception is developed, once the habit is fully acquired, the inference is no longer there. The transition from sensory sign to perceptual belief in the thing signified has become fully automated, and no vestiges of reasoning remain.

Nonetheless, there is another sense in which it is arguable that genuine perception is immediate for Reid and acquired perception not. Genuine perception is immediate in an *epistemic* sense: deliverances of perception are *immediately justified*, that is, justified without deriving their justification from any other beliefs. In Reid's favored terminology, deliverances of perception are first principles. But acquired perceptions do not seem to be like that. Even though my perceptual belief that the bell I am hearing is large is psychologically noninferential, it is justified only because on many past occasions when I heard similar sounds, I knew by sight or touch that they came from a large bell.⁶ Had I not been justified on those sundry occasions in what I believed about the source of the sound, I would not be justified now. Thus my current belief is not epistemically immediate.

⁶ What I mean by 'perceptual belief' in this sentence is the belief that is ingredient in perception in Reid's threefold account. I am departing from the terminology of Copenhaver, who uses 'perceptual belief' for a further belief based on the perception.

On this point, I agree with Nichols:

[H]abituated perceptual beliefs . . . depend for their justification upon other perceptual beliefs upstream in the belief-forming and habit-forming processes. In this sense, habituated perceptual beliefs could not serve as basic beliefs in a foundationalist theory of the structure of empirical knowledge (p. 237).⁷

However, Nichols and I do not agree on the other premise in the argument from immediacy—that *all* genuine perception is epistemically immediate. He maintains that Reid is an epistemic direct realist—one who holds that the deliverances of perception are epistemically basic or immediately justified—*only* as regards the deliverances of original perception. In the inconsistent triad {*all perception is immediate perception, acquired perception is not immediate perception, acquired perception is perception*}, we both accept the second proposition, but he chooses to deny the first and I the third. Since the matter is controversial, I shall not rest my case entirely on the argument from immediacy.

Second argument: I do not perceive my upstairs wife. In previous work (Van Cleve 2004), I advanced the following example as a conundrum for Reid’s theory of perception:

I return home and see my wife’s car keys on the counter, whereupon I automatically conceive of her and believe that she is home. Since she is upstairs, I do not perceive her, but it seems that I fulfill all the conditions for [acquired] perception (p. 127).

This example can be made the basis of the following argument:

1. I have an acquired perception of my wife on the occasion of seeing her keys.
2. In fact, I do not perceive her on that occasion.
3. Therefore, not all cases of acquired perception are cases of perception.

⁷ For further reinforcement of this point, see Pollock’s discussion (1974, pp. 60-64) of “the principle of implicit reasons,” according to which our justification for believing things may derive from general propositions that we may never have articulated and the supporting instances for which we no longer specifically recall, provided our past observation of the instances played a causal role in generating our present belief.

Some friends and interpreters of Reid have taken exception to the first premise. Nichols opposes it on the ground that the example is out of character with Reid's other examples of acquired perception (2007, p. 232),⁸ and Copenhaver opposes it on the ground that my wife does not enter into the content of my car-key perception in the way she thinks required for *bona fide* acquired perception (2010, p. XX).⁹ Yet it seems to me that my critics must concede that the example contains all the ingredients that Reid ever lists as necessary for acquired perception. I do have a conception of my wife, I do believe in her present (and nearby) existence, this conception and belief have been produced in me by the past association between seeing her keys and subsequently seeing her in the flesh, and this conception and belief now arise in me as automatically as the conception and belief in any other case of acquired perception.¹⁰ If this is *not* a case of acquired perception, it must be because there are conditions of acquired perception that are yet to be articulated.

One additional condition to propose on Reid's behalf might be this: in acquired perception, the signifying item and the signified item must be *qualities of the same object*. This would rule out perceiving my wife by perceiving her keys, since my wife is

⁸ See Reid's examples at IHM, p. 173, however, for examples not far removed from my own.

⁹ Copenhaver develops a three-fold distinction among beliefs *ingredient* in perception, beliefs formed on the *basis* of perception, and beliefs *inferred* from perception. She regards the belief that one's spouse is home as a belief belonging to the middle category—a belief formed on the basis of perceiving the keys. However, she also explicitly argues that beliefs that initially belong to categories two or three may migrate (in the development of acquired perception) into category one—they may become perceptual contents or beliefs ingredient in perception, as happens when someone becomes expert at spotting counterfeit coins. I should like to know from Copenhaver what, if anything, keeps belief in my upstairs wife from becoming a perceptual content.

¹⁰ What of Reid's requirement that the belief that is an ingredient in perception be *irresistible*? If that rules out acquired perception of my upstairs wife, it also rules out many of Reid's own examples of acquired perception—for instance, that this is the handwriting of such-and-such a friend (IHM 6.20, p. 172). Perhaps I can resist believing that my wife is home by supposing she has been kidnapped, but so likewise can I resist believing that this is her handwriting by supposing it to be a clever forgery.

not a quality of the keys.¹¹ It would also rule out kindred cases such as seeing the fire over the ridge by seeing the smoke produced by it.

Even with that condition in play, however, it will be possible to generate examples of acquired perception that we may well hesitate to classify as perception. A colorblind motorist can see that a traffic light is red by seeing that the illuminated light is the one in the top position. Here the signifying quality (place) and the signified quality (color) are qualities of the same object, so our motorist satisfies our latest condition for having an acquired perception of the color of the light. But does he perceive the redness of the light? No, for he is colorblind.¹²

The car-key example in my 2004 was not actually meant in the first instance to be a counterexample to ‘all acquired perception is perception’ as a Reidian thesis. It could not be a counterexample to that, since the reasons for thinking that the example satisfies all the conditions for my having an acquired perception of my wife—that I conceive of her, etc.—are also reasons for thinking that the example satisfies all the conditions for my having a perception of her *simpliciter*. The example is really a counterexample to Reid’s account of perception at large, indicating that his standard threefold account either leaves out some crucial ingredient in perception or else fails to make explicit some way in which one of the included ingredients is to be understood. My suggestion in 2004 was that Reid should be understood thus: the conception that is involved in perception must be *conception of the acquaintance variety*. It must not merely be conception of something

¹¹ Someone could try to surmount the proposed restriction by saying my keys have a “wife-is-home-y” quality about them. Being such that my wife is home *is* a property of the keys—a “Cambridge property,” to be sure—signified by their being on the counter. If the requirement that signifying qualities and signified qualities must belong to the same object is to do the work desired of it, then, we will have to require as well that Cambridge properties not be among the signified qualities.

¹² If you doubt that the colorblind person can *conceive* of redness, assume that he once had normal vision and acquired the ability to conceive of redness at that time. Not all colorblindness is congenital.

by means of some description it satisfies. That is why I do not perceive my wife on the occasion of seeing her keys: though I may conceive of her under some description, I am not acquainted with her in any way, shape, or form.

Instead of acquaintance, why not appeal to the epistemic immediacy discussed above, saying that genuine perception must be epistemically immediate and my acquired perception of my wife is not? That seems right to me, but it cannot be the full story. Epistemic properties supervene on nonepistemic properties, and we would have to say what the relevant nonepistemic properties are. Perhaps genuine perception is epistemically immediate precisely because it incorporates acquaintance.

I went on to suggest in 2004 (and I urge again now) that by the acquaintance standard, few cases of acquired perception qualify as perception. Thus even if the car-key example does not underwrite the simple 1-2-3 argument above, it does serve in the end to motivate the claim that not all acquired perception is perception.

Third argument: I do not perceive by sight the heat of the poker. One of the remarkable features of acquired perception is that it enables us to jump across sensory modalities, perceiving by one sense qualities that were originally given only to another. As Reid tells us,

We learn to perceive, by one sense, what originally could have been perceived only by another, by finding a connection between the objects of the different senses. (EIP 2.21, p. 236)

[By means of acquired perception] we often discover by one sense things which are properly and naturally the objects of another. Thus I can say without impropriety, I hear a drum, I hear a great bell, or I hear a small bell; though it is certain that the figure or size of the sounding body is not originally an object of hearing. (EIP 2.14, p. 182)

Berkeley gives another example of the same phenomenon—“seeing” the heat of a red-hot bar of iron when the heat of the iron is “suggested to the imagination by the colour and figure, which are properly perceived by that sense” (1975, p.194; 1948, p. 204).¹³

Using this example to explicate what Berkeley means by ‘immediate’ when he says we do not perceive distance immediately, George Pitcher writes as follows:

A person, when he views a red, glowing poker that has just been taken from a roaring furnace . . . sees *that* the poker is very hot, but he does not really see the heat itself. . . . Just so, Berkeley tells us, a person can see that something is located at such-and-such a distance from him; but he cannot see the distance. . . . To say that we do not literally see the heat of the poker . . . is to say that the visual manifold of which we are aware when we see a hot poker does not contain any heat in it. Similarly, to say that we do not literally see the distance of objects is to say that the visual manifold of which we are aware when we see them does not contain distance. (1977, pp. 7-8)

Pitcher is endorsing Berkeley’s own view as quoted earlier—that we actually and strictly perceive by any sense only those things we would perceive if that same sense had then been first conferred on us.

Drawing on examples of this sort, we may now construct another argument for the thesis that not all acquired perception is perception:

1. There are some properties that are proper to a given sense, as heat to touch: they cannot be strictly perceived by any other sense.
2. We sometimes have acquired perceptions through one sense of qualities proper to another.
3. Therefore, we sometimes have acquired perceptions that are not perceptions.

This argument seems intuitively compelling to me, and I shall let it stand without further comment on its merits.

¹³ Berkeley actually speaks of “being said to see a red-hot iron bar,” but it is clear from the context that he means to discuss the sense in which one sees the heat of the bar, not just the sense in which one sees a bar that is hot.

I do, however, wish to take this occasion to discuss another issue prompted by Pitcher—the relationship between the original/acquired distinction and a further distinction invoked in Pitcher’s remarks. Pitcher is willing to allow that we see *that* the poker is hot, but not that we see the heat itself. Implicit here is a distinction between *propositional* perception and *objectual* perception. Propositional perception is perception *that p*, for example, perception that O is F. Objectual perception is perception simply of O (an object) or of *the Fness of O* (a quality of an object), where these do not resolve into propositional perception.¹⁴

With this distinction in mind, let’s look again at a passage from Reid:

Our perceptions are of two kinds: some are natural and original, others acquired, and the fruit of experience. When I perceive that this is the taste of cyder, that of brandy; that this is the smell of an apple, that of an orange; that this is the noise of thunder, that the ringing of bells; this the sound of a coach passing, that the voice of such a friend; these perceptions and others of the same kind, are not original, they are acquired. But the perception which I have by touch, of the hardness and softness of bodies, of their extension, figure, and motion, is not acquired, it is original. (IHM 6.20, p. 171)

It is striking that every one of Reid’s examples of acquired perception in this passage is a case of propositional perception, while each of his examples of original perception is a case of objectual perception. Are the two distinctions aligned in Reid’s thought—is every case of original perception a case of objectual perception and every case of acquired perception a case of propositional perception?¹⁵

¹⁴ Ordinary people sometimes use ‘S sees the Fness of O’ simply as a stylistic variant of ‘S sees that O is F’ (as in ‘Tom saw the hopelessness of his situation’). Some philosophers allow that ‘S sees O’ is a permissible locution, but only if it is unpackable into ‘EF(S sees that O is F)’. What I mean by objectual perception is perception of O (or the Fness of O) that is not in either of these ways equivalent to anything propositional.

¹⁵ Reid probably meant the distinction between original and acquired perception to be exhaustive, but he overlooked an intermediate case. Suppose that some years after my birth, someone programs my brain so that upon smelling a certain scent, I automatically believe that there are oranges nearby. The resulting perception would be neither original (because it does not arise in me by my native constitution) nor acquired (because it is not acquired by experience).

The answer to the first question is no. Reid’s language indicates that there may be propositional perception in regard to the objects of original perception—for example, “we perceive visible objects to have extension in two dimensions...” (EIP 6.21, p. 236), and I may perceive “that there is in my hand a hard smooth body of a spherical figure” (EIP 6.21, p. 237). Of course, we may also have objectual perceptions of the objects and qualities that are constituents of those propositions.

The answer to the second question is harder to determine. There are passages in which Reid does use objectual locutions to refer to acquired perceptions—for example, hearing the size of a bell (EIP 2.14, p. 182) and seeing the weight of a sheep (IHM 6.20, p.172).¹⁶ But insofar as people sometimes use objectual locutions as stylistic variants of propositional ones, these passages do not settle the question. Reid might speak of the butcher’s seeing the weight of the sheep even if he thinks that strictly speaking, the butcher only sees *that* the sheep weighs so much. So the answer to the second question is not clear.

It is a thesis worthy of consideration that whereas genuine perception may take either an objectual or a propositional form, acquired perception may take a propositional form only. If the thesis were true, it would give us one more reason for thinking that acquired perception is not genuine perception.

Fourth argument: errors in acquired perception are not errors of the senses. Perhaps the best case for thinking acquired perception is not perception in Reid’s book is to be found in EIP 2.22, “Of the fallacy of the senses.” The purpose of this chapter is to refute the opinion of those philosophers who maintain that the senses are systematically

¹⁶ He actually says “knows by sight” the weight of his sheep, but in the other examples in the same paragraph, he uses “perceives by his eye” and “sees” as though all three were equivalent.

fallacious, or at any rate, that they often deceive us. Reid admits that the senses *sometimes* deceive us, his leading example being the case of phantom pain felt in a limb no longer possessed (EIP 2.18, p. 214 and 2.22, p. 251). But he maintains that *most* so-called fallacies of the senses are not fallacies of the senses at all; they are errors, but not errors of the senses proper.

Reid distinguishes four classes of alleged errors of the senses, of which only the fourth class contains errors of the senses properly so called (such as pain felt in a phantom limb). The first class is described (and dismissed) in the following paragraph:

Many things called deceptions of the senses are only conclusions rashly drawn from the testimony of the senses. . . . Thus, when a man has taken a counterfeit guinea for a true one, he says his senses deceived him; but he lays the blame where it ought not to be laid: For we may ask him, Did your sense give a false testimony of the colour, or of the figure, or of the impression? No. But this is all that they testified, and this they testified truly: From these premises you concluded that it was a true guinea, but this conclusion does not follow. (EIP 2.22, p. 244)

What I want to call special attention to in this passage is that the only qualities Reid mentions as being testified to by the senses are color, figure, and impression. These are all on the list of original objects of perception.¹⁷ In other nearby places, he uses interchangeably the expressions ‘what our senses testify’ and ‘what we perceive’.¹⁸ So it is tempting to generalize from the guinea example to the following claim: the only objects we strictly perceive are the objects of original perception. Putting it the other way around, acquired perception is not perception strictly speaking.

¹⁷ Color and figure are objects of original perception by sight. I am not sure what he means by ‘impression’. Perhaps he means the pattern impressed on the coin, which would be an original object of sight in two dimensions and of touch in three, or perhaps he means its heft, which would be an original object of touch.

¹⁸ For example, at EIP 6.22, p. 246, he says “Our senses testify only the change of situation of one body in relation to other bodies” and restates this one sentence later as “It is only the relative motions of bodies that we perceive.”

The second class of alleged errors of the senses are errors we make in our acquired perceptions. Reid tells us that if acquired perception could be resolved into some form of reasoning, this class would reduce to the first class along with the false guinea, but since he thinks acquired perception “results from some part of our constitution distinct from reason,” he makes it a class of its own (EIP 2.22, p. 247). In any case, Reid maintains “that the errors of acquired perception are not properly fallacies of our senses” (*ibid.*). For example, if I am deceived by a clever painter into believing that a flat patch on canvas is really a sphere, I am in error, but my error lies not in original but in acquired perception. The objects of original perception—the light and colors—are distributed just as my senses say they are.

What Reid unequivocally affirms here is that *errors in acquired perception are not errors of the senses*. This provides the take-off point for the following argument:

1. No error in acquired perception is an error of the senses (premise).
2. If every acquired perception is an exercise of the senses, then every error in acquired perception is an error (in an exercise) of the senses. (This is a logical truth; compare DeMorgan’s ‘If every horse is an animal, then every head of a horse is a head of an animal’.)
3. Therefore, not every acquired perception is an exercise of the senses (from 1 and 2).
4. Every genuine perception is an exercise of the senses (premise).
5. Therefore, not every acquired perception is a genuine perception (from 3 and 4).

That argument seems to me decisive. However, as noted above, Copenhaver stands on the opposite side of the issue, holding that acquired perception *is* in all cases perception. She has sought to defuse the textual argument based on premise 1 above by proposing that ‘error of sense’ is a technical term for Reid. She takes it to refer specifically to errors in original perception. This proposal apparently keeps the door

open for saying that errors in acquired perception, though not errors of sense in the technical sense, can nonetheless be cases of misperception, as required by her view. However, her proposal does nothing to block the argument as I have stated it. The premises are 1, 2 and 4, and her proposal leaves all of them standing.¹⁹

The question whether acquired perception is genuine perception has been reincarnated in contemporary philosophy of mind as the question whether so-called higher-level properties (properties such as being a pine tree or being an apple, which are not on Reid's list of objects of original perception) can be *represented* in perception. That is, can such properties belong to the contents of perception proper and not just to the contents of beliefs formed on the basis of perception? Susanna Siegel (2006) offers the following test question as a diagnostic for determining one's stand: if you are taken in by a bowl of wax fruit, is your error an error in perception or an error in accompanying belief? If your visual experience represents only colors and shapes, you have made an error in belief; if it represents apples and pears, you have made an error in perception.²⁰ It seems to me that in his discussion of the fake apple made of turf, Reid has given as explicit an answer as one could like to Siegel's question: your error is an error in belief, not in perception (EIP 2.22, p. 245).

Fifth argument: speak with the vulgar, but think with the learned. For my final argument, I let Reid speak for himself:

¹⁹ Perhaps one could maintain that if 'error of sense' has a technical meaning in Reid, one cannot drop the parenthetical expression in my premise 2, shortening 'error in an exercise of the senses' to 'error of the senses'. I need take no stand on that. I can stay with the longer formulation of premise 2, under which it is a logical truth. And I can rewrite premise 1 as 'No error in acquired perception is an error in an exercise of the senses' to make it engage with premise 2. It is clear that Reid would assert 1 in either the longer or the shorter version.

²⁰ In this context, Copenhaver remarks, "It is precisely because we are perceptually sensitive to such features as 'being a tomato' and 'being a quarter' that we may be misled by wax vegetables and counterfeits." I do not see why that is so. Even if the content of my perception were limited to colors and shapes, could it not still mislead me into believing falsely that there is a tomato in the bowl?

Acquired perception is not properly the testimony of those senses which God hath given us, but a conclusion drawn from what the senses testify. . . . The appearance of the sign immediately produces the belief of its usual attendant, and *we think we perceive* the one as well as the other. [emphasis mine]

That such conclusions are formed even in infancy, no man can doubt; nor is it less certain that they are confounded with the natural and immediate perceptions of sense, and in all languages are called by the same name. We are therefore authorized by language to call them perception, and must often do so, or speak unintelligibly. But philosophy teaches us in this, as in many other instances, to distinguish things which the vulgar confound. I have therefore given the name of acquired perception to such conclusions, to distinguish them from what is naturally, originally, and immediately testified by our senses. (EIP 2.22, p. 247)

In this telling passage, the equivocation of the earlier passages is gone. Reid all but says that in calling acquired perception “perception,” we are speaking with the vulgar. When we think with the learned, we acknowledge that acquired perception is not perception proper.

2. Are secondary qualities objects of acquired perception only?

Reid is an upholder of the distinction between primary and secondary qualities, though he rejects some ways of drawing it. *Pace* Locke, it is not true that primary qualities resemble our sensations and secondaries do not; *pace* Berkeley’s Hylas, it is not true that primary qualities are mind-independent and secondaries not. Both sets of qualities are mind-independent, and neither set resembles anything in our minds. But in Reid’s view, there is a basis for drawing the distinction nonetheless:

Our senses give us a direct and a distinct notion of the primary qualities, and inform us what they are in themselves: But of the secondary qualities, our senses give us only a relative and obscure notion. They inform us only, that they are qualities that . . . produce in us a certain sensation. (EIP 2.17, p. 201)²¹

Some commentators, including Lehrer and Smith (1985), Nichols (2007, p. 224), and Buras (2009, pp. 348ff.), attribute to Reid the thesis that all perception of secondary

²¹ For further discussion, see Van Cleve 2011.

qualities is acquired perception. One possible piece of evidence for their attribution is the following passage:

Three of our senses, to wit, smell, taste, and hearing, originally give us only certain sensations, and a conviction that these sensations are occasioned by some some external object. We give a name to that quality of the object by which it is fitted to produce such a sensation, and connect that quality with the object, and with its other qualities.

Thus we learn, that a certain sensation of smell is produced by a rose; and that quality in the rose, by which it is fitted to produce this sensation, we call the smell of the rose. Here it is evident that the sensation is original. The perception, that the rose has that quality, which we call its smell, is acquired. In like manner, we learn all those qualities in bodies, which we call their smell, their taste, their sound. (EIP 2.21, p. 235)

Reid does indeed seem to say here that at least *three* classes of secondary qualities—smells, tastes, and sounds—are perceived only via acquired perception. But are we entitled to generalize this claim to *all* secondary qualities?

I think not. The outstanding exception is *color*, which Reid certainly regards as a secondary quality (EIP 2.17, p. 201) and which he lists among the original objects of sight in the *Inquiry*: “By [sight] we perceive originally the visible figure and colour of bodies only, and their visible place” (IHM 6.20, p. 171). Confounding the issue, however, is a fact noted by Nichols (p. 224)—Reid apparently omits color when he comes to list the original objects of sight in the *Intellectual Powers*:

By [sight] we perceive visible objects to have extension in two dimensions, to have visible figure and magnitude, and a certain angular distance from one another. These I conceive are the original perceptions of sight. (EIP 2.21, p. 236)

Does this signal any change of view on his part?

Again, I think not. For one thing, it is quite possible that Reid’s pronoun ‘these’ in the sentence quoted is meant to refer back not just to the qualities mentioned in the previous

sentence, but to color, which was mentioned in the sentence just before that.²² For another and more decisive thing, Reid clearly implies later on the same page that color is originally perceived. Speaking of a sphere that we now know (by acquired perception) to be three-dimensional, he says “The eye originally could only perceive two dimensions, and a gradual variation of colour on the different sides of the object” (EIP 2.21, p. 236, lines 26-28; see also lines 36-37 on the same page.).

So there is at least one secondary quality, color, that we perceive originally. Are there others? I would like to advance the following conjecture: if our senses enable us to *localize* a secondary quality (as they do in the case of colors, textures, and temperatures), we may have original perceptions regarding it. To see what lies behind the conjecture, look back at the quotation about the rose. By our original constitution, when we smell a rose, we know that some quality of some external object is causing our sensation—we just do not know what object or where. It takes repeated experience and induction before we know that the quality (i.e., the cause of the fragrant sensations we are getting) resides in a rose. At that point, we have acquired perception: we can perceive by smell that a rose is in the room, even if we have not yet seen it. With color, we do not need to go through any such process to learn where the external cause of our sensation lies. That is because the same retinal excitations that give us sensations of color also induce us to believe that the cause of them lies in a certain direction. As Reid says, we always see any point of an object along the line passing from the retinal point stimulated by it back through the center of the eye and into ambient space. (See IHM 6.12, pp. 122-23, for

²² Here is the sentence: “By sight, we learn to distinguish objects by their colour, in the same manner as by their sound, taste, and smell.” What makes the matter ambiguous is that sound, taste, and smell are also mentioned in the same breath.

Reid's formulation of this law of vision.)²³ Owing to this law, we have an innate ability to localize the distal causes of our color sensations. We have no such innate ability to localize the causes of our olfactory sensations.

Are there any other secondary-quality sensations that should be grouped with color rather than smell in this regard? Yes: heat and cold. When we feel a surface to be warm or cold, we do not merely have a certain sensation and believe it to have an external quality somewhere as its cause; we know that the cause is right here, at the ends of our fingertips. The same is true of rough and smooth, if they count as secondary qualities.²⁴

Apart from the matter of localization, there is another way in which I think Lehrer, Smith, and Nichols may be too hasty in declaring secondary qualities to be objects of acquired perception only. What Reid gives as an example of acquired perception in regard to smell is "the perception, that the rose has that quality, which we call its smell." That leaves open the possibility that we have an original perception to the effect that *some* quality exists that is causing our sensation or, more colloquially, that a certain scent is in the air. Perhaps (though it seems a stretch) one could even be said to have an objectual perception of the scent or quality itself, without knowing where it resides. In one or both of these latter two ways, there could be original perceptions of all secondary qualities, including those that are not innately localized.

²³ For further discussion of this law, see Van Cleve 2003, especially section IX.

²⁴ I am not sure whether they do. They supervene, of course, on primary qualities—the hardness of an object and its figure at a fine level of resolution. But I do not think our senses give us any very determinate notion of the configuration responsible for the roughness or smoothness we feel, and that fact would make textures secondary qualities in Reid's scheme.

One more example of a localized secondary quality may be mentioned: pain. In its primary sense, pain is a sensation, but there is also a sense in which we perceive pain as some unknown disorder in our toe causing the sensation (IHM 6.21, p. 175).

That is a welcome result for me, since it provides a way out of an inconsistency in Reid that would threaten to arise on my interpretation otherwise. According to Lehrer, Smith, and Nichols, (1) secondary qualities are objects of acquired perception only. According to me, (2) acquired perception is not perception. Yet according to Reid himself, (3) secondary qualities are objects of perception.²⁵ (1)-(3) form an inconsistent triad. If Reid does not embrace (1), the inconsistency does not arise.

A deeper potential contradiction about secondary qualities is addressed in my final section.

3. Does acquired perception alter the content of our original perceptions?

Originally, I perceive a sphere only as a variegated disk and a certain type of bird only as a slow flutter of gray and white. Subsequently, I have the acquired perception of the disk as a sphere and the moving patches of color as a mockingbird. Do my original perceptions survive as ingredients in the enriched perception? Or are they transformed into or superseded by something else?

As a preliminary to determining Reid's answer to this question, let us consider Locke's answer, which he presents under the heading "Ideas of Sensation often changed by the Judgment" in 2.9.8-10 of the *Essay* (1690):

The Ideas we receive by sensation, are often in grown People alter'd by the Judgment, without our taking notice of it. When we set before our Eyes a round Globe, of any uniform colour . . . 'tis certain, that the Idea thereby imprinted in our Mind, is of a flat Circle variously shadow'd, with several degrees of Light and Brightness coming to our Eyes. But we having by use been accustomed to perceive, what kind of appearance convex Bodies are wont to make in us; . . . the Judgment presently, by an habitual custom, alters the Appearances into their Causes: So that from that, which truly is variety of shadow or colour, collecting the Figure, it makes it pass for a mark of Figure, and frames to its self the perception of a convex Figure, and an uniform Colour; when

²⁵ EIP 2.17 is entitled "Of the Objects of Perception; and first, of primary and secondary Qualities."

the Idea we receive from thence, is only a Plain variously colour'd, as is evident in Painting. (p. 145)²⁶

That seems to be an unequivocal answer to our question—sensation is altered by learning and judgment. But does Locke really mean it? I think not. In the first place, there can hardly be any question of a two-dimensional object somehow morphing into a three-dimensional object. Dimension is a topological invariant; if the original cue does not survive, that must be because it is replaced, not altered. In the second place, not even the talk of replacement accurately expresses Locke's view if such talk is taken literally.

Scrolling ahead to Locke's more careful statement of what he is getting at, we read:

[The judging of shape from shadow] is performed so constantly, and so quick, that we take that for the Perception of our Sensation, which is an *Idea* formed by our Judgment; so that one, *viz.* that of Sensation, serves only to excite the other, and is scarce taken notice of it self; as a Man who reads or hears with attention and understanding, takes little notice of the Characters, or Sounds, but of the *Ideas*, that are excited in him by them. (p. 146)

And therefore 'tis not so strange, that our Mind should often change the *Idea* of its Sensation into that of its Judgment, and make one serve only to excite the other, without our taking notice of it. (p. 147)

Although Locke uses the language of “changing” one more time, the surrounding commentary makes clear that it is not to be taken literally. The original cues are “scarce taken notice of,” but like the characters on a page, they are still there.

Turning now to Reid, we find that his view of the matter is substantially the same as Locke's:

It is experience that teaches me that the variation of colour is an effect of spherical convexity, and of the distribution of light and shade. So rapid is the progress of the thought, from the effect to the cause, that we attend only to the last, and can hardly be

²⁶ Interestingly, Locke's discussion of this issue serves as the context in which he raises and answers Molyneux's question. Locke's answer is no—the newly sighted person would not recognize what he saw as a globe or a cube—because he would not yet have connected the two-dimensional objects he sees with the three-dimensional objects he knows by touch.

persuaded that we do not immediately see the three dimensions of the sphere. (EIP 6.21, p. 236)

He even uses the same example of words or characters, comparing sensory cues to “the words of a language, wherein we do not attend to the sound, but to the sense” (IHM 2.9, p. 43, and elsewhere). It appears, then, that the objects of original perception are still present in richer states of acquired perception. It is just that we do not attend to them.

Yet there are passages in which Reid tantalizes us by pulling us in the opposite direction:

Nay, it may be observed, that, in this case, the acquired perception *in a manner* effaces the original one; for the sphere is seen to be of one uniform colour, though originally there would have appeared a gradual variation of colour. (EIP 6.21, p. 236, emphasis mine)

There are many phaenomena of a similar nature [to double vision due to lack of focus], which shew, that the mind may not attend to, and thereby, *in some sort*, not perceive objects that strike the senses. (IHM 6.13, p. 135, emphasis mine)

Custom, by a kind of legerdemain, withdraws gradually these original and proper objects of sight, and substitutes in their place objects of touch, which have length, breadth, and thickness, and a determinate distance from the eye. (IHM 6.20, p. 167)

What are to we make of these passages?

For a potentially illuminating parallel, we may consider the recently much investigated topic of inattentional blindness (Mack and Rock 1998). I invite any readers who are unfamiliar with this phenomenon to seek out a demonstration of it (easily available on the internet) before reading on.²⁷

In one famous demonstration, subjects are asked to view a video of two interspersed teams passing basketballs back and forth. They are asked to count how many times the ball changes hands among members of the white-shirted team. With their minds thus

²⁷ Try [youtube.com/watch?v=vJG698U2Mvo&feature=player_embedded](https://www.youtube.com/watch?v=vJG698U2Mvo&feature=player_embedded).

occupied, over 50% of subjects do not notice what they are amazed to see on a replay: that someone wearing a gorilla suit has strolled right through the midst of the basketball players. This is an example of the “blindness” we sometimes have to objects to which we do not attend.

My suggestion is that once a cue has become a sign for us in the acquired perception of something else, we often become inattentionally blind to it. Of course, this proposal may simply be a case of *obscurum per obscurius*, replacing one imponderable question by another. Did I see the gorilla or not? It was right there before my eyes; yet in some sense I was oblivious to it.

Reid’s answer, I believe, is that we are still aware of the cues—even though they are “in a manner” effaced and even though “in some sort” we do not perceive them. It is a measure of the perplexingness of the phenomenon that Reid uses such equivocal language, but I believe we can construct a respectable Reidian case that we are still aware of the cues.

One argument that awareness of the cues remains is physiological. The cue or sign in acquired perception may be either a sensation or something originally perceived (EIP 621, p. 237). Suppose it is a sensation. For Reid, connections between physical impressions and mental sensations are part of our original constitution and are therefore not undoable by learning or shifts in attention. If we have the same stimulus again, we shall have the same sensation again. (This is a principle that was made famous by Helmholtz a century later.) The physical causes of sensations to which we no longer attend are still there, and therefore the sensations are still there. Moreover, we never have sensations according to Reid without being conscious of them (IHM

6.21, p. 175, last three lines). It follows that sensational signs we no longer attend to, even if we are in some sense blind to them, are still there before our consciousness.²⁸

The same argument can be extended to cover cases in which the sign is something originally perceived. This is because Reid holds (i) that the laws connecting sensations with original perceptions are as much a part of our constitution as laws connecting physical impressions with sensations (IHM 6.21, p. 174), and (ii) that there is no such thing as an unconscious perception (EIP 2.15, p. 191). Cues in the external world to which we no longer attend are therefore still consciously perceived.

Reid explicitly endorses the possibility for which I am contending when he says, “We are conscious of many things to which we give little or no attention” (EIP 1.2, p. 42).²⁹

My suggestion, then, is that the legerdemain that “withdraws” the original objects of sight withdraws them only from attention, not from existence or awareness.. The attentive eye can catch the magician’s hand.

4. Could *anything* become an object of acquired perception?

Acquired perception is a tremendous enlargement of our cognitive faculties, far outstripping original perception. As Reid notes,

The acquired perceptions are many more than the original We learn to perceive by the eye, almost every thing which we can perceive by touch” (IHM 6.20, p. 171).

²⁸ Yaffe (2009) challenges my assumption that Reid makes use of the premise that sensations supervene on physical states of organs. However, he thinks Reid has reasons independent of that assumption for holding that we can be conscious of items to which we do not attend. The latter proposition is all I need to sustain my claim that one’s original cues survive in acquired perception.

²⁹ Russell endorsed a Reidian position (1913, p. 9): “Thus the question we have to consider is whether *attention* constitutes experience, or whether things not attended to are also experienced. It seems we must admit things to which we do not attend, for attention is a selection among objects that are “before the mind”, and therefore presupposes a larger field, constituted in some less exclusive manner, out of which attention chooses what it wants.” For further arguments in support of the claim that we can be aware of items to which we do not attend, see Tye 2006.

But are there any limits on the class of objects to which our acquired perceptions might one day extend?

As a foil to Reid's stance on this issue, I shall use the views of Paul Churchland, a proponent of the radical plasticity of perception (1979). According to Churchland, we could come to perceive anything that causally interacts with our sensory systems, given only scientific progress and enlightened education.

Churchland identifies two conditions for perceiving a property ϕ : (i) we must have sensations that are caused by ϕ and reliably indicate its presence, and (ii) we must respond noninferentially to those sensations with the belief that something is ϕ , that is, with a belief deploying a term or concept that means ϕ (p. 14). Reid would agree that these conditions are in most cases necessary for perception. Perception of an object is typically mediated by sensations nomically correlated with it,³⁰ and perception always involves psychologically noninferential beliefs in response to these sensations.

Churchland goes on to offer a holistic conceptual-role account of what it is for a belief containing a given concept to be about one property rather than another. In a nutshell, "The meaning of a term (or the identity of a concept) is not determined by the intrinsic quality of whatever sensation happens to prompt its observational use, but by the network of assumptions/beliefs/principles in which it figures" (p. 15). Reid could agree with the negative part of this—the beliefs that figure in perception are not about the sensations that prompt them, but about external qualities. He would probably disagree with the positive part, maintaining that which qualities a belief is about is a primitive intentional property of the belief rather than something determined by the web of theoretical

³⁰ The one exception Reid mentions is the perception of visible figure, which he thinks is directly cued by retinal impressions rather than by sensations (IHM 6.21, p. 176).

connections to which the belief belongs. However, that difference between Reid and Churchland is not what I shall highlight as the key difference between them.

If the foregoing points are correct, Churchland says, “the possibility of a dramatic modification and expansion of the domain of human perceptual consciousness—without modification of our sense organs—becomes quite real” (p. 15). He invites us to imagine an advanced scientific society in which children are taught to respond noninferentially to their sensations with terms from the best theories of the day. Where we respond with ‘loud noise,’ they are taught to respond with ‘large amplitude atmospheric compression waves’; where we respond with ‘red,’ they are taught to respond with ‘selectively reflects electromagnetic waves at $0.63 \times 10^{-6} \text{ m}$ ’, and so on. These children

do not sit on the beach and listen to the steady roar of the pounding surf. They sit on the beach and listen to the aperiodic atmospheric compression waves produced as the coherent energy of the ocean waves is audibly redistributed in the chaotic turbulence of the shallows. . . . They do not observe the western sky redden as the sun sets. They observe the wavelength distribution of incoming solar radiation shift towards the longer wavelengths They do not observe the dew forming on every surface. . . . they observe the accretion of reassociated atmospheric H_2O molecules as their kinetic energy is lost to the now more quiescent aggregates with which they collide. (pp. 29-30)

“O brave new world!” expostulates Jerry Fodor (1984) in reaction to these lines, “that has such children in it.”

Reid’s views do not afford such a dramatic extension of our perceptual horizons. Setting aside the question whether acquired perception is perception, the main point is that Reid does not let us get even as far as acquired perception of such things as the accretion of H_2O molecules. For Reid, we can come to have acquired perceptions only of properties that we already perceive in some fashion to begin with. This is because the mechanism by which acquired perceptions are acquired is induction, and as Hume taught, we can learn by induction that a correlation holds between two properties only by

perceiving the properties independently. So we cannot have acquired perceptions of esoteric properties or entities that we first come to know about through the postulational methods of science.

A methodological question dividing Reid and Churchland now comes into the spotlight: whether explanatory postulation (also known as abduction or the method of hypothesis) is a legitimate method alongside enumerative induction in scientific inquiry. Reid takes a strongly disapproving line on what he calls hypotheses (see EIP 1.3, pp. 47-52). By a hypothesis he means a proposition whose only recommendation to our belief is that it would, if true, explain other things that we know to be true, but whose truth is not open to confirmation by any more direct method. An example is the Indian philosopher's hypothesis of a great elephant supporting the earth on its back, offered to explain why the earth does not hurtle downward—"His elephant was a hypothesis, and our hypotheses are elephants" (IHM 6.19, p. 163). By what Reid takes to be proper Newtonian method, we may invoke a proposition to explain phenomena only if it is supported by induction from the phenomena themselves—either the phenomena to be explained or other related phenomena. His strictures thus rule out of play explanatory assumptions about entities that are never observed.

Reid's prohibition of hypotheses would perhaps be faulted by some for putting a straitjacket on scientific inquiry. However, the point I am about to make does not depend on his blanket proscription of hypotheses. It only depends on his disallowing hypothetical reasoning as a mechanism of acquired perception.

Here is one of Reid's key claims about acquired perception:

In acquired perception, the sign may be either a sensation, or something originally perceived. The thing signified, is *something, which, by experience, has been found connected with that sign*. (EIP 6.21, 237; emphasis mine).

Note the implications of the italicized words. The finding by experience of a connection between sign S and feature X requires that we perceive X. So acquired perception of X requires prior perception of X, and if the prior perception were always itself acquired, there would be an impossible infinite regress. (Compare the regress involved in the supposition that there are indirect flights to Toronto, making a stop on the way, but no direct flights to Toronto from anywhere.) Therefore, we can have acquired perceptions only of those features that are original objects of perception for some sense. We now perceive the convexity of the ball by sight, but only because we previously perceived it by touch.³¹

For Reid, then, it is not the case that we can come to perceive new things under the sun. We can only develop new sensory routes to the same old things. Reid's world is not as brave or new as Churchland's.

And yet . . . alongside Reid's conservatism about what we may *come* to perceive is a radicalism about what we *might have been* able to perceive, even given our present sensory organs. That is because he holds that the links between what sensations we receive and what conceptions and beliefs we form in response to them are contingent:

³¹ Three supplementary remarks: (1) Nothing I say here rules out that perception might be multiply layered, S serving as the sign for the acquired perception of X, which serves in turn as the sign for the acquired perception of Y. Two-dimensional cues are the signs for the acquired perception of three-dimensional shape, which might in turn become the sign for the acquired perception of a ship or a barn. (2) Instead of saying any object of AP must be an object of OP for some sense, one should probably say that any object of AP must a constellation of properties—a Lockean “nominal essence”—each of which is an object of OP for some sense. (3) If one wanted to allow (as I suspect that Reid would not) that acquired perceptions may be acquired by testimony as well as by personal experience, one should say that we can have AP only of objects of which *someone* has had OP.

Perhaps we might have been so made, as to taste with our fingers, to smell with our ears, and to hear by the nose. . . . We might perhaps have been made of such a constitution, as to have our present perceptions connected with other sensations. (IHM 6.21, p. 176).

It is in the spirit of Reid's view to affirm the converse as well—that we might have been so constituted as to have our present sensations connected with other perceptions, including perceptions of properties of which we now have no notion. The very sensations that are the occasions of our perceiving redness might have been lawfully correlated with hardness, or some property altogether unknown to us, and they might have induced us to conceive of and believe in that property. In that case, we would have perceived a property undreamt of by us now. Had it so pleased our Maker, we might have been constituted so as to perceive a vastly different realm of things on the same sensory occasions we have now.

5. Problems

I close by discussing three inconsistencies that threaten to arise in Reid's philosophy on my interpretation of him.

To begin with, there is the following inconsistent tetrad, taking off from the proposition I used to distinguish Reid from Churchland:

1. We can have acquired perception only of things of which we also have original perception.
2. All perception of secondary qualities is acquired perception.
3. We come to have acquired perception by sight of the coldness of the distant mountain and the hotness of the glowing poker.
4. Hotness and coldness are secondary qualities.

1 and 3 imply that there is original perception of hotness, while 2 and 4 imply to the contrary that all perception of hotness is acquired perception.

If my conjecture about localization is correct, we can avoid the inconsistency of 1-4 by denying 2: hotness and coldness are secondary qualities of which we do have original perception. However, that strategy would leave standing the following simpler contradiction:

1. We can have acquired perception only of things of which we also have original perception.
2. There is acquired perception of some secondary qualities (e.g., smells) that are never objects of original perception.

Here one could deny 2, for reasons brought forth in section 2. We do have original perception of the sheer existence of smell qualities, even if we do not have original perceptions of which objects they proceed from.³²

The third inconsistency is more vexing. In section 1, I floated the suggestion that we have genuine Reidian perception only of those objects and qualities with which we are *acquainted* in something like Russell's sense. Acquaintance is a relation to an object (or quality) rather than to a proposition, and it is a relation that is direct rather than being mediated by some description, such as *the woman I married* or *the quality that causes this sensation in me*.³³ This characterization permits us to say (what Russell himself did not allow) that we are acquainted with physical things or at least with some of their

³² This position is tenable only if the content of perception can be a bare existential proposition—that *there is* a quality causing such-and-such a sensation in me.

³³ Such descriptions express what Reid calls "relative notions." "A relative notion of a thing, is, strictly speaking, no notion of the thing at all, but only of some relation which it bears to something else" (EIP 2.17, 201).

qualities. My suggestion was that it is for want of acquaintance with my wife that I do not see her when I see her keys, even though I do think of her. The problem I now want to air is this: by the acquaintance standard, it seems that I do not perceive secondary qualities, for according to Reid, I only conceive of them under descriptions such as *the quality that causes this sensation of color in me*. I have no conception of what red things are like in themselves, as a naïve realist would have it. Yet Reid says we *do* perceive secondary qualities. In brief:

1. We perceive only those qualities with which we are acquainted.
2. We are not acquainted with secondary qualities (having only “relative notions” of them.)
3. We do perceive secondary qualities.

Since Reid definitely affirms 2 and 3, there is a strong presumption against my attributing or even recommending 1 to him. Yet there is still some reason for doing so. How else are we to distinguish perception from various things that are clearly not perception? How, for example, are we to distinguish perception from belief formed on the basis of testimony? Reid is a noninferentialist about knowledge from testimony; according to his “principle of credulity,” when we hear someone say *p*, we believe *p* forthwith without any reasoning (IHM 6.24, p. 194). Yet believing on the say-so of a fellow traveler that there is a washed-out bridge around the next bend is not yet perceiving the bridge, nor even perceiving that there is one.³⁴ What is the missing ingredient, if not acquaintance?

³⁴ If I am alerted to the broken bridge by a shouted warning and you by a written sign, do I perceive it by hearing and you by sight? Or do we each have amodal perceptions? If we turn around before we reach the bridge, have we nonetheless both perceived it?

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