GOD AND DESIGN

The teleological argument and modern science

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In 1885, the Duke of Argyll recounted a conversation he had had with Charles Darwin the year before Darwin’s death:

[In the course of that conversation I said to Mr. Darwin, with reference to some of his own remarkable works on the *Fertilisation of Orchids*, and upon *The Earthworms*, and various other observations he made of the wonderful contrivances for certain purposes in nature—I said it was impossible to look at these without seeing that they were the effect and the expression of Mind. I shall never forget Mr. Darwin’s answer. He looked at me very hard and said, “Well, that often comes over me with overwhelming force; but at other times,” and he shook his head vaguely, adding, “it seems to go away.”

(Argyll 1885:244)

It is interesting—even surprising—that in the last year of his life, over twenty years after publication of the *Origin of Species*, Darwin could still say that he sometimes found the idea of deliberate design in nature to have “overwhelming force,” and sometimes found himself in the grip of an impression of designedness. Of course, sometimes it all evaporated.

But equally interesting here is what Darwin does not say. There are no mentioned inferential or evidential processes driving those swings. There are no mentioned intellectual exertions, decisions, acts of will, etc. Darwin here merely *reports* these alternations in passive, experiential, phenomenological terms, portraying himself as a *spectator*—not an actor—in and to this ebb and flow within his cognitive landscape. This belief—or absence—is something that “comes over” him, something that *happens to* him. And he seems to have little say in the matter—*overwhelming force* is involved. Indeed, *both* parties to the conversation implicitly presuppose a passive, perceptual view. Note that Argyll asserts the *impossibility* (no choice, no decision) of not *seeing* (perceptual, non-inferential) that mind was involved in the contrivances in question.
Although the familiar examples of design are generally read as inferential, contrary suggestions were not completely absent historically. For instance, William Whewell, in 1834, said:

> When we collect design and purpose from the arrangements of the universe, we do not arrive at our conclusion by a train of deductive reasoning, but by the conviction which such combinations as we perceive, immediately and directly impress upon the mind.

(Whewell 1834:344)

And among views noted by Hume is the following expressed by Cleanthes:

> Consider, anatomize the eye: Survey its structure and contrivance; and tell me, from your own feeling, if the idea of a contriver does not immediately flow in upon you with a force like that of sensation [emphasis in original].

(Hume 1947:104)²

In what follows, I shall explore a picture of design perception and recognition as non-inferential—as passive and experiential. Current attempts by advocates of intelligent design follow the presumed historical precedent in focusing nearly exclusively upon inferences to design conclusions.³ Perhaps that is the correct approach. But even if so, it is, I will suggest, incomplete in a crucial respect.

**Background: Reid**

In order to get an initial fix on what a non-inferential picture of design recognition might look like, I shall begin with a brief exploratory sketch of a non-inferential treatment of everyday cases of belief and recognition in familiar domains. The most plausible such case historically comes from Thomas Reid (1710–96), so let us begin with his treatment of ordinary perceptual judgments:

> When I grasp an ivory ball in my hand, I feel a certain sensation of touch. In the sensation there is nothing external, nothing corporeal. The sensation is neither round nor hard; it is an act of feeling of the mind, from which I cannot, by reasoning, infer the existence of any body. But, by the constitution of my nature, the sensation carries along with it the conception and belief of a round hard body really existing in my hand.

(Reid 1872b:450)

Reid’s position is that in certain experiential situations, specific sensory, phenomenological content triggers particular cognitive states—de re beliefs, conceptions, etc.—which do not follow inferentially from that content. (Nor does that content resemble in any relevant sense the character attributed to the object
of the belief.) The resultant cognitive state is a causal consequence of the triggering sensory experience given our constitution (and relevant antecedent states), and does not result from any inference, decision, choice, or other volition. In the above case, we simply find ourselves in the grip of a conviction of the cognitively apprehended object both really existing and really having the cognitively apprehended properties, and we are in general powerless to resist. Acquiring the belief in question is something that happens to us. Sensation accompanied by involuntary conviction is Reid’s basic picture of perception.

Of course, some beliefs are based on inferences. But, quite obviously, constituents of such inferences must ultimately track back to beginning points independent of further inferences, on pain of infinite regress. It is Reid’s position that such beginning points must be consequences of the constitution of our nature. The innate processing structures from which such beliefs emerge can be articulated in a variety of “first principles” that, according to Reid, shape our conceptual systems. These first principles are accepted involuntarily, characterize all mature minds, and are both unproven and unprovable. For instance, in sensory perception our mind is presented with a certain complex apprehension (e.g. the round hard body above), and is carried involuntarily to a belief in the objective reality of that object by a cognitive structure articulated as a first principle that Reid states thus:

[T]hose things do really exist which we distinctly perceive by our senses, and are what we perceive them to be.

(1872b:445)⁴

Suppose for the moment that Reid is basically right. The fact, then, that our common beliefs concerning objects in the external world in no way rest upon an inference of any sort would rather neatly explain why it is that, despite the efforts of many of the best thinkers historically, attempts to construct (or reconstruct) satisfactorily powerful inferences from, for example, sense data to physical objects have been hard to come by—or, perhaps more accurately, have been without exception abysmal failures (much to the detriment of classical foundationalism, for instance).⁵ It would equally well explain why the formal failure of such arguments has never made the slightest substantive difference to anyone. It would furthermore explain why the seeming irrefutability of skeptical arguments has also not made the slightest practical difference to nearly anyone—even including proponents of such arguments themselves.⁶

This picture fits nicely with human personal experience as well. We simply do not find ourselves engaging in inferences (whether from sense data, incorrigible beliefs about our own inner states, self-evident propositions, or whatever) out of which emerge our convictions concerning the existence of the objects of everyday experience. Indeed (as Reid points out), each of us firmly held such
beliefs well before constructing inferences was, so far as we know, within our capabilities. Nor do we find ourselves deciding whether or not to hold such beliefs, or able to discard such beliefs at will. We simply have the convictions under the right experiential circumstances, with few options to do much about it.

It might be argued that although we do not in practice acquire the beliefs in question on the basis of inference, the rational justification of such claims requires that appropriate inferences at least be in principle constructible. But that is at least problematic. Indeed, any such arguments may be irremediably invidiously circular (Alston 1991: Ch. 3). In any case, Reid’s position is that starting points that are consequences of the constitution of our nature are thereby, other things being equal, rationally justified for us as are other beliefs properly derived from them.

As Reid argued, this general schema fits not only ordinary perceptual beliefs, but a wide range of other essential human beliefs. Our memory beliefs about the past, our beliefs concerning the existence of other minds, even our beliefs about fundamental axioms of reason—all arise not from specifiable inferences, but in specific circumstances as nearly ineluctable causal consequences of our nature.

**Reid and design**

According to the usual (non-Reidian) account of design recognition, we observe (and participate in) the coming into existence of humanly designed artifacts, and by some type of abstraction we notice certain commonalities among them. We infer that those constitute generally reliable marks of design, and we then attempt to inductively extend this generality to things in nature, thereby identifying relevant things as also designed.

Reid, however, suggests a different story. To begin with, for Reid the primary sense of design applies not to designed objects, but to minds. For Reid, objects have design only in a derivative sense of carrying marks of design, or being effects of design in a mind.⁷ (Such derivative senses are common, as when we speak of “intelligent solutions” to problems.) The underlying question for Reid, then, is how we recognize relevant (logically prior) qualities of minds.

Reid contends that this recognition cannot be based on past experiences, as the usual account has it. First, we never directly experience the minds of others, and thus could never experience a single positive instance of principles linking other people’s behavior or other observable evidences to their mental qualities.⁸ Nor could we always generalize even from direct awareness of our own mental qualities, since, Reid claims, we know many relevant qualities even in our own case only via their signs and effects.⁹ (That is not as peculiar as it might initially sound. We do not, for instance, discover via sheer introspection that we have a talent for solving crossword puzzles—we do that empirically by seeing how we do on them.)
But Reid believes that we do learn about the mental states and characteristics of other beings via marks, signs, and the effects of such states and characteristics.\textsuperscript{10} If experiencing signs does underlie our perception of relevant mental properties in others, and if that process rests neither upon inference, nor prior experience, nor anything of that sort, then the connection linking signs with states and characteristics must be simply built into our cognitive nature.

That is Reid’s direction in the case of design. Among our inbuilt cognitive structures, he claims, is one articulated as follows:

\begin{quote}
[D]esign and intelligence in the cause may be inferred with certainty, from marks or signs of it in the effect.
\end{quote}

(1872b:457ff.)\textsuperscript{11}

Reid explicitly compares this general principle to the earlier quoted first principle concerning external physical objects.\textsuperscript{12} According to Reid, this design first principle is not only crucial to everyday life, underlying many of our beliefs concerning those around us, but it also applies to natural phenomena:\textsuperscript{13}

\begin{quote}
[T]here are in fact the clearest marks of design and wisdom in the works of nature;
\end{quote}

From that we can conclude that

\begin{quote}
the works of nature are the effects of a wise and intelligent Cause.
\end{quote}

(1872b:461)\textsuperscript{14}

A crucial question, of course, is: what are those “clearest marks” and signs? Reid unfortunately does not address that question systematically, but the marks referenced in scattered passages include contrivance, order, organization, intent, purpose, usefulness, adaptation, aptness/fitness of means to ends, regularity, and beauty.\textsuperscript{15} Of those, contrivance generally seems to be the default value.\textsuperscript{16}

But surely, it might be objected, from such marks we cannot infer “with certainty” the existence of a designing mind. We now have alternative (e.g. Darwinian) possible explanations for such marks as function, adaptation, etc. That claim may indeed be plausible, but I think it slightly misses Reid’s mark. Reid placed the design first principle among \textit{necessary} truths, and had a correspondingly strong conception of marks. And for some marks of design, the principle as stated is plausible—e.g. genuine intent does indeed require an intender, and from intent we can infer an intender with certainty. Reid may have been led by the science of his day into thinking that adaptation shared relevant properties with intent, and thus fell under the same principle. Perhaps he was mistaken about that. But that does raise another, even more crucial question: How are true marks of design reliably identified as marks of design?
Unfortunately, Reid does not seem particularly concerned over that issue, and (so far as I can find) does not address it systematically. One reason might have been his belief that, in many cases, we simply do not know what the cues are from which our beliefs—even about the mental states of others—arise. For instance, infants can recognize moods of adults from facial expressions, but neither they nor most adults could produce a defensible catalogue of the visual cues (Reid’s example). But one’s beliefs concerning the mental states of others are not rationally any the worse for that. Similarly, recognition of the relevant marks as design marks is presumably not essential to recognition of design (or, by extension, of designedness), given that design in its primary sense refers to a mental characteristic.\textsuperscript{17}

But I think that Reid must be read as holding the view that, when it does occur, recognition of a mark as a mark of design is perceptual. For one thing, the claim that one needs an inference to a mark of design and then another from that mark to design itself (in accord with the design first principle) begins to look suspiciously regressive—something to which Reid was relatively sensitive—and runs counter to Reid’s overall general approach. And although I will not go into detail here, Reid was more explicit in one area that he himself closely linked to design—aesthetics—and his views there very strongly (if circumstantially) reinforce the key points concerning design—that recognition of designedness (and often of design itself) is not inferential.\textsuperscript{18} For instance, in discussing mental properties associated with beauty, Reid says:

Other minds we perceive only through the medium of material objects, on which their signatures are impressed. It is through this medium that we perceive…wisdom, and every…intellectual quality in other beings. The signs of those qualities are immediately perceived by the senses; by them the qualities themselves are reflected to our understanding.

(1872b:503)

Here, not only are the mental qualities in question perceived (in Reid’s sense) but the \textit{signs themselves} are “immediately perceived.” Since for Reid every perception embodies a judgment, perception of the signs would involve a conviction (at least \emph{de re}) about those signs. Note also that resultant convictions about the qualities of the mind in question are results neither of prior experience nor of arcane inference from the signs: the qualities of other minds are \textit{perceived}—indeed, they are “\textit{reflected to our understanding}” (my emphasis) by the marks or signs.

Finally, Reid’s remarks involving apprehending marks of design are almost always perceptual. Suggestive examples are numerous, of which a small sample follows (all emphases mine):
Thus then we *see evident* marks of design

(1973:25)

In our own planetary system we *perceive*...marks of wisdom and design.

(1973:19)

Everyone *sees* that [plant] roots are *designed*.

(1981:30)

These are very much in line with other remarks on closely allied topics. Reid at one point explicitly mentions *purpose*—one mark of design—as something that, in other humans at least, is

discovered to us by a natural principle, without reasoning or experience.

(1872a:122)

In some cases, judgments of design proper may, of course, rest upon inferences. But, in the primary cases, the requisite conceptual, cognitive, and epistemic transitions are simply functions of faculties that are constitutive parts of our natures. So I think that we can take Reid as holding that recognizing various characteristics *as* marks or signs of design is a *perceptual* process upon which in appropriate circumstances we simply discover in ourselves the requisite recognitions as one component of our sensory contact with the world.

Reid further holds that design recognition, like any other type of perception, is not subject to our will—choice, decision, and anything else voluntary is typically absent. Concerning judgments of mental properties (as design fundamentally is) Reid says:

Every man of common understanding forms such judgments of those he converses with, he can no more avoid it, than he can seeing objects that are placed before his eyes.

(1981:51–2)

In the case of perception more generally, resisting, says Reid, is often

not in my power.... My belief is carried along by perception, as irresistibly as my body by the earth.

(1872a:183–4)

In a related aesthetic case involving the experience of *grandeur*, Reid turns the dial up even further, saying that one's belief is
Reid's fuller picture, then, is that we perceive in objects in the world qualities that we often involuntarily and non-inferentially recognize as marks of design. From them, via a constitutionally constitutive processing structure (articulatable in terms of the various first principles), we acquire the belief of a power of design in the mind of the ultimate cause of these marks. That sequence involves at most one trivial inferential step riding the rails of the relevant "self-evident" (and, according to Reid, necessary) first principle. Even if an inference is involved, the real work is done at the initial design-recognition stage.

Whether or not inferences are ultimately unavoidable in identifying design in nature (and I think Reid is not completely clear here), Reid does push the case that basic design recognition is perceptual, and that, consequently, even if inductive design inferences are required, those arguments must themselves ultimately rest on a foundation of base cases of perceptually, non-inferentially recognized designedness.

Assessment

Prima facie plausibility

Reid's position has some initial plausibility. He at least seems to be right that in our ordinary, everyday recognition and identification of designedness we do not engage in inferences, calculate probabilities, or anything of the sort. (Truth to tell, we likely have almost no clue as to what the relevant probabilities even are.) Nor do we typically choose whether or not to believe that selected things around us are or are not designed. We seem to be very much in a Darwinian position—when we see anything, from a muffin to a space shuttle, we simply find that a belief in its designedness happens to us.

There are, of course, examples of more specialized cases where we do examine evidence etc. in attempting to come to a reasoned conclusion concerning design—when trying to distinguish, for example, extremely primitive hand axes from naturally chipped stones. We also engage in such processes when attempting to distinguish very subtle codes from sheer noise. But, in these cases, a Reidian might claim with some plausibility that we were really trying to identify properties that, once discovered, would be directly seen as marks of design from which—once found—full recognition would spring.

To take a less familiar example, when a string of prime numbers in binary was received in the movie Contact, not only was the string instantly perceived as
designed (once its character was identified), but the content of the aliens’ thinking was also instantly discerned as well—they had been thinking of the produced string of primes in binary. Again, if there was an inference, it was a monumentally trivial one.25

Counter-suggestions and responses

Tacit arguments

Of course, it can be maintained that complex inferences do underlie design identification—the inferences being so familiar and reflexive that, they go unnoticed. As Sherlock Holmes once remarked concerning an inference of the sort for which he is famous:

From long habit the train of thoughts ran so swiftly through my mind that I arrived at the conclusion without being conscious of intermediate steps.

(Doyle 1905:24)

That may be right. It is often difficult in specific types of cases to determine whether or not unconscious tacit inferences are involved. For instance, philosophers for centuries sought tacit inferences to physical objects, other minds, etc.—inferences that, if Reid is correct, simply did not exist, but which many philosophers were firmly and mistakenly convinced were tacitly employed.

But even if we do sometimes employ tacit inferences, as it turns out that cannot be the whole story. One of the crucial components of ordinary design identification is recognition of artifactuality. Typically, it is the recognition that some phenomenon is not (or cannot be) a product of nature that turns our thoughts onto a design track. Recognition of artifactuality has profound effects concerning design judgments. We might disagree over whether the eye is a product of design or of fundamentally chance processes, but, were we to agree that the eye was an artifact, we would not for a moment consider the possibility that it was not deliberately designed. Whatever chance may or may not produce, the evidential status of properties like those possessed by the eye change drastically in the context of artifactuality.26

But nature is typically identified as nature precisely because of its intuitively non-artifactual character.27 Consequently, the very foundation of design recognition procedures in ordinary cases—artifactuality—is systematically missing from cases in nature. It might be possible, of course, to construct inductive inferences concerning objects in nature, using for known base cases artifacts recognized as designed in the ordinary non-inferential way. But the evident artifactuality on which the base case recognition rested would be
systematically absent in the natural cases, so the sample property for the
induction would have to be some other property that was consistently present in
the base cases and the proposed natural cases, and to which ordinary design
recognition was not connected.

Here is a simple analogy. We recognize blue things directly, experientially,
and non-inferentially. But suppose that we needed to identify blue things in total
darkness. If we found that in our experience all and only blue things tend to have
temperatures two degrees above their surroundings, we could then inductively
identify blue things in total darkness by that temperature difference. The
induction could not be based on the actual ordinary identifying process—seeing
the color—but would depend upon something totally irrelevant to normal
identification processes—temperature variation—but which the two classes of
objects (observed blue and unobserved test cases) shared. Identification of cases
in the dark would be inferential, and would not represent a simple extension of
ordinary recognition processes. That would potentially affect the evidential force
of the induction, as would the fact that in the design issue all the base cases fell
within one category—artifacts—whereas every relevant attempted conclusion
involved phenomena in what appears to be an importantly distinct category—
natural phenomena. 28

In any case, the key implication above is that even if inductive inferences
figure in important cases of design identification, the base cases for those
inductions must involve a qualitatively different—evidently non-inferential—
recognition process. Inference, then, even if essential, cannot be the entire story.

Inference to the best explanation

Some proponents of inferential design pictures see design arguments not as
strictly formal, but as looser “inferences to the best explanation.” Although there
is some plausibility to this approach, not only is this argument-genre problematic
in some respects in itself, but it, too, cannot be the whole story. Taking design to
be the best explanation of some phenomenon requires recognition of specific
properties of the phenomenon as design-relevant. How exactly is that supposed
to be done?

That issue is closely tied to the one discussed in the previous section.
Significantly, exactly the same question arises concerning other design inference
theories as well. But even the most rigorous current attempt to formalize design
inferences—William Dembski’s The Design Inference—does not address in
inferential terms the core process of design recognition. 29 Without going into
detail, running Dembski’s formal inference structure requires first identifying
what he terms “side information,” which functions as a key component in more
than one aspect of the formalism. 30 Very intuitively, side information identifies
patterns that would be reasonable candidates for being deliberately designed.
This side information is thoroughly mind-related and, it seems to me, constitutes the deep core of design identification even within Dembski’s inferential system. How do we identify this key information? Dembski says:

[I]dentifying suitable patterns and side information for eliminating chance requires of [the inferer] S insight.... What’s needed is insight, and insight admits no hard and fast rules.... We have such insights all the time, and use them to identify patterns and side information that eliminate chance. But the logic of discovery by which we identify such patterns and side information is largely a mystery.

(1998:148)

However, a Reidian approach might actually solve that mystery. Even if inferences are ineliminable in identifying and attributing design in cases involving nature, the foundations for such inferences might still, perhaps unavoidably, be Reidian. Reid might suggest here that there simply is no such logic of discovery—such discovery being perceptual—and that it is to Dembski’s credit that he sees that an inferential approach can penetrate only so far before leaving one on the edge of “mystery.” Perhaps the mystery is that we simply see patterns that speak of design, that we simply find that certain things speak design to us perceptually. If so, that aspect of that particular mystery evaporates.31

So even if design advocates are correct in taking broader design cases to be fundamentally inferential, non-inferential design recognition may still be essential to the foundations of their case. But Reid’s reach may well be greater even than that.

Additional support for Reid

The strength of the convictions of design advocates might suggest that such convictions are underpinned by more than just an induction with possible confirmation problems. Critics, of course, will (and do) immediately claim that religious commitments are the source of and provide the driving force for such convictions. Perhaps so. But that cannot be the whole story.

Design resistance

If design beliefs were founded on mere problematic inferences, or if their force arose merely from religious convictions, then we might not expect beliefs concerning design in nature to exert a very substantial tug on, for example, biologists—especially those not sympathetic to religion. That is not quite what we find. Even professional biologists seem to have an almost innate tendency to see
biological systems in design terms. Thus, Francis Crick, co-discoverer of the structure of DNA (and no great fan of religion):

Biologists must constantly keep in mind that what they see was not designed, but rather evolved.

(1988:138)

(And recall Darwin himself—also by the 1880s no great fan of religion.) But, according to historian of science Timothy Lenoir, commenting on a related area, maintaining rigorous vigilance and successfully resisting teleological inclinations are two quite different matters—even for professional biologists:

Teleological thinking has been steadfastly resisted by modern biology. And yet, in nearly every area of research biologists are hard pressed to find language that does not impute purposiveness to living forms.

(1992:ix)

That we have a deeply embedded conceptual tilt of this sort against which resistance is futile would come as no surprise to any Reidian.

Missing analyses

Historically there have been almost no attempts to construct rigorous analyses of the very concept of design. That is rather striking—bordering on astonishing—given that arguments from design have been discussed in great detail for centuries, that design evidences were the focus of enormous intellectual attention during the early nineteenth-century natural theology movement, and that the presence or absence of design in nature was one of the more volatile issues surrounding Darwinism. It was—and is—just assumed that everyone was on the same conceptual page concerning design. This otherwise puzzling absence is reasonably explainable, however, if a Reidian view is correct. It is not unusual where familiar experiential matters are involved.32

Missing arguments

One final consideration tells in Reid’s favor. Convictions concerning design in nature have a long, influential, sometimes intellectually dominant history. But it is worth noting that most historically proposed attempts to reconstruct design inferences have been no more successful than historically proposed attempts to reconstruct physical object inferences. Perhaps the same explanation—the non-existence of the sought arguments—holds in both cases. If so, then the widespread recognition (or at least conviction) of design in nature must have
some non-inferential source. Reid’s proposal, then, might apply much more broadly than merely to some set of base cases.

Implications

The various foregoing considerations do not, of course, establish that a Reidian, non-inferential view is correct. But suppose for the moment that it was. Then attempts to co-opt familiar design-recognition procedures for application in nature may be problematic, for several reasons.

First, if basic design recognition is perceptual and not inferential, it cannot be claimed that inference-based searches for design in nature involve simply applying to objects in nature the identical procedures and criteria we employ in familiar situations. This could put attempts to identify design inferentially into roughly the same category as attempts to inferentially establish the existence of physical objects—efforts that, as noted earlier, have a track record which is not only abysmal but which may be inevitably so. In addition, if ordinary design recognition is experiential and not inferential, then constructed inferential design procedures and criteria cannot claim to automatically be the heirs of the legitimacy and justification of those familiar processes.

Second, Reid believed that some perceptual processes were susceptible to interference. Perception of beauty (which Reid tied closely to design) could be skewed by, among other things, fashion, habit, opinion, custom, fancy, casual association, education, and perhaps individual constitution, as well as being relativized to varying ends and purposes. Thus it might be that disputes over design in nature arise out of the variable clarity or variable ability to perceive such design. If design recognition is perceptual, and if that perception is sensitive to subjective influences above some threshold level in cases of natural objects, the prospects for design playing a substantive role in natural science seem problematic—at least, that is, given the usual scientific preferences for objectivity and commonality of observation. On the other hand, if Reid is right, there are objective properties in objects that trigger the experience in question. But if the properties that trigger design experiences are objective, measurable properties in their own right, design recognition might be scientifically superfluous, the underpinning properties themselves being able to do any requisite scientific work. It may not be just coincidence that in the most influential specifically empirical piece of current design advocacy—Michael Behe’s Darwin’s Black Box—the scientific work is done not by the concept of design itself, but by a specific complex property (irreducible complexity) for which, it is claimed, Darwinian processes are unable to account. The subsidiary claim that this sort of complexity is a sign of design carries none of the scientific load.
Finally, if design recognition is ultimately experiential there will be strategy implications for current design efforts as well. Presenting arguments in issues where positions are experience- or perception-based does not seem particularly effective. One cannot be argued into having an experience of blueness. One cannot be argued into having a genuine aesthetic experience. Similarly, it may be that one cannot be argued into recognition of design. The most effective strategy may be (as in the case of blueness) simply to situate a person in experientially favorable circumstances, and hope that any scales will fall from his or her eyes.

Some prospects

Both historically and presently, most discussions of design in nature have been read as attempts to inductively extend inferential structures of design recognition from the artifactual realm into the natural realm. If Reid is correct—and I have suggested some reasons for thinking that he may be—then both the foundation of that approach (inferentially identified base cases) and attempts to build cases for design upon it (inductive extensions to nature) may be seriously problematic. But even if inferences necessarily play some role in recognizing design in nature (and, again, it may be possible to read Reid either way here), the primary design recognition upon which inductive extensions would be based may demand a Reidian analysis.

One could construe this as solving a current “mystery” for design advocates. And a Reidian analysis might also offer them additional potential attractions. If basic design recognition is perceptual, then many of the historically popular criticisms of design cases will be irrelevant. Furthermore, if design recognition in nature is non-inferential, then standard criticisms of the inferential moves in design cases will have no bearing on properly constructed design positions. And such objections as that we have only one observed universe, and thus cannot attribute design to it—having no comparison cases—would be equally irrelevant. After all, perception and experience function in single cases perfectly unproblematically. And if design recognition is fundamentally perceptual, charges that design is not an empirical matter—and thus scientifically illegitimate—will at least require modification.

So, if a thoroughgoing Reidian view is correct, current design advocates may be on the wrong evidential track and may have to redirect their efforts. But it is not clear that they must simply give up.

Notes

1 This conversation is also referenced in Darwin (1958:68n). With respect to specifically religious belief, in 1879, only three years prior to his death, Darwin wrote:
[M]y judgment often fluctuates....In my most extreme fluctuations I have never been an Atheist in the sense of denying the existence of a God. I think that generally (and more and more as I grow older), but not always, that an Agnostic would be the more correct description of my state of mind [emphasis mine].

(1958:55)

2 Cleanthes may not speak for Hume in the dialogues, but Philo—who is generally thought to represent Hume—says concerning “the inexplicable contrivance and artifice of nature”:

A purpose, an intention, or design strikes everywhere the most careless, the most stupid thinker; and no man can be so hardened in absurd systems, as at all times to reject it.

(Hume 1947:214)

3 Indeed, one of the most influential attempts is titled simply The Design Inference (Dembski 1998).

4 This is the fifth of twelve contingent first principles Reid outlines.

5 Any such inferences would have to be new discoveries since they have no connection to the actual acquisition of our beliefs.

6 Reid himself mentions Zeno’s arguments (unanswerable for centuries, but yet not “moving” anyone).

7 As Reid says:

The works of men in science, in the arts of taste, and in the mechanical arts, bear the signatures of those qualities of mind which were employed in their production.

(1872b:503)

8 This is frequently stressed in Reid. See, for example, Reid (1973:30–1; 1872b: 449–50, 460, 461; 1981:53–4).

9 Reid says:

[Intelligence, design, and skill, are not objects of the external senses, nor can we be conscious of them in any person but ourselves. Even in ourselves, we cannot, with propriety, be said to be conscious of the natural or acquired talents we possess. We are conscious only of the operations of mind in which they are exerted. Indeed, a man comes to know his own mental abilities, just as he knows another man’s, by the effects they produce, when there is occasion to put them to exercise.

(1872b:458)

As he puts it:

How do I know that any man of my acquaintance has understanding?
...I see only certain effects, which my judgment leads me to conclude
to be marks and tokens of it.

(Reid 1872b:461)

A slightly different version appears at Reid (1981:56).

It is not clear that Reid is correct concerning the modal status of that principle, but,
even if he is not, the substance of his position concerning design need not be
affected.

He says:

[It is no less a part of the human constitution, to judge of men’s
characters, and of their intellectual powers, from the signs of them in
their actions and discourse, than to judge of corporeal objects by our
senses.]

(Reid 1872b:458)

See also Reid (1981:52).

We do, says Reid, “conclude...[human wisdom] from tokens that are visible” and
(in a slightly different context) Reid affirms that:

The very same argument applied to the works of nature, leads us to
conclude that there is an intelligent Author of nature, and appears
equally strong and obvious in the last case as in the first.

(1872b:449)

Thus, from signs and marks of design in nature, we move via a first principle
built into our cognitive constitution to a belief in the existence of a wise, intelligent
Author of nature. In a slightly more extended comment, Reid says:

[From the marks of wisdom and design to be met with in the
Universe we infer it is the work of a wise and intelligent cause.... [I]
intelligence, wisdom and skill are not objects of our external senses....
A man’s wisdom can be known only by its effects, by the signs of it....
Yet it may be observed that we judge of these talents with as little
hesitation as if they were objects of our senses.... Every man of
common understanding forms such judgments of those he converses
with, he can no more avoid it, than he can seeing objects that are
placed before his eyes. Yet in all these the talent is not immediately
perceived, it is discerned only by the effects it produces. From this it
is evident it is no less a part of the human constitution to judge of powers by their effects than of corporeal objects by the senses.... [N]ow every judgment of this kind is only an application of that general rule, that from marks of intelligence and wisdom in effects, a wise and intelligent cause may be inferred.... [This] is...to be received as a first principle. Some however have thought that we learn this by reasoning or by experience. I apprehend that it can be got from neither of them.

(1981:51–2)

14 A nearly identical passage occurs at Reid (1981:54). See also Reid (1981:15).
15 Why he did not is not totally clear. See, for example, Diamond (1998:226–7). Even the status of some of the relevant materials is unclear. The Lectures on Natural Theology (Reid 1981) are lecture notes, but it is unsettled whether they are Reid’s own notes or student notes, and, if the latter, how reliable they are. Some lecturers of the time read the same lectures over a course of years, and student notes were passed along, corrected, and came close to being lecture (and lecturer’s notes) transcripts. I take the present notes (whatever their nature) to be quite reliable. In fact, in places they seem to be a virtually verbatim copy of passages Reid published elsewhere. I shall take the content of Reid (1981) to be Reid’s own. Some even of what he does say is ambiguous. Complicating matters is the fact that Reid also sometimes uses key terms in potentially misleading ways. See, for example, Somervill (1989:259). See also Diamond (1998:226–7).
16 This is especially evident in Reid (1981)—see, for example, pages 49 and 74.
17 For instance, Reid notes that we can often read mental states off subtle features of facial expressions without having any clue specifically as to what triggers that recognition. See also Reid (1973:31–2, 37).
18 In fact, Reid may have thought of design as a subspecies or a subcomponent of beauty:

I come now to consider what this beauty is or in what it consists.

It consists then, I apprehend, in those actions and qualities of mind which command our admiration and esteem.... Beauty in material objects arises from those actions and qualities of mind which excite our esteem, in a secondary manner, as signs.... [B]eauty in figures, theorems, &c., arises from a consideration of some excellence in them or in some quality of mind which excites our esteem, either as marks of design or excellence or some other qualities [my emphasis].

(1973:41)

See also Reid (1872b:503).

19 Reid says the following [all emphases mine]:

[W]e evidently see the intentions of nature

(1973:27)
When we consider attentively the works of nature we see clear indications of power, wisdom, and goodness.

(1973:61)

[T]hose who have the least discernment will observe that it is intended.

(1981:40)

[God’s wisdom is] conspicuous

(1981:113)

The invisible creator...hath stamped upon all his works signatures of his divine wisdom...which are visible to all men.

(1872b:503)

[Y]et it is manifest that we were designed for this.

(1981:47)

There are also numerous instances throughout Reid (1981). However, Reid sounds a possibly contrary note:

The ignorance of true philosophy which leads men to discern marks of wisdom and design in the formation and government of things may be considered then one cause of Speculative Atheism.

(1981:3)

20 S.A. Grave refers to “self-identifying marks of intelligence and will” (my emphasis) (1967:121). In a related area, Roger Gallie comes to a similar reading of Reid:

The beauty of the virtues lies in their real excellence which is, it seems, immediately recognised [his emphasis].

(1998:152)

21 He also makes more informal comments, e.g. “It is impossible not to see that man was intended to take care of his own preservation” (Reid 1981:35).

22 That there must be a mind follows from design being a quality of mind. Reid also makes the connections more explicit in some limited contexts. For instance:
Regularity and uniformity are the marks of design; nothing produced by chance can possibly be regular. Hence it is evident that regularity must be the sign of intelligence and of mind as well as of design.

(Reid 1973:42)

23 Reid’s sense of “self-evident” does not require analyticity, but is a bit weaker. See, for example, page 6 of D.D.Todd’s Introduction to Reid (1989).

24 If there are inferences here, they are often tacit ones of which we are unaware and which we might not even be able to reconstruct. It might be held that usual design conclusions implicitly rest upon a deep familiarity with human intents, purposes, etc. However, we do recognize design even in cases where the intent, purpose, design specifics, source, means of production, and all such other matters are utter mysteries to us. I have discussed relevant cases in Ratzsch (2001).

25 Were we to land on Mars, climb out of our vehicle, and see in front of us a diesel bulldozer, we would not begin a search for unusual Martian natural laws or unusual Martian chemistry. We wouldn’t begin some complicated probability calculations. Nor would we construct some inductive inference based upon prior experiences with diesel bulldozers back on Earth. Indeed, we might do nothing remotely like that even if confronted with some alien construct whose purpose, intent, mode of construction, etc. was not only unknown to us but completely beyond us, involving concepts that we were unable to fit into any human conceptual categories at all. But we might still simply find ourselves with the belief that we were dealing with something designed, even were we unable to fathom specifically what the content of the design was. But, whatever it was, we’d attribute it to a mind having the requisite design capacities.

Of course, we might, upon further study, come to understand what the thing did, and then take ourselves to also understand what it was intended for—what the content of the design was, what the intent of the designing mind was. And although inferences, calculations, and the like might be involved in the determination of the function, the transition from conviction concerning function to conviction concerning intent would require either no inferential steps or a spectacularly short one.

26 I have discussed this effect in more detail in Ratzsch (2001).

27 I have developed this distinction in detail in Ratzsch (2001). Reid suggests it also (Reid 1981:58).

28 Beyond the systemic weakness just indicated, inductive cases for design in nature may also have attenuated confirmability. An induction concerning the sun rising tomorrow can eventually be tested and confirmed independently of the induction itself—we can gain independent access to the truth of that matter. But with inductive cases for design in nature, there is no obvious independent access to the truth of the matter. This is connected to Reid’s contention that we can not learn first principles connecting signs and others’ inner states by experience, because we never experience those inner states and thus can never experience positive instances of the connections. See Reid (1973: 30–1; 1872b:449–50, 460, 461 1981: 53–4). In the absence of any noninferential means, how would we (aside from the initial inference itself) establish whether or not the propulsion system of E.coli is in fact designed? Of course, science deals routinely with a multitude of things to
which it has no inference-independent or theory-independent access—quarks, the past, etc. In such cases, however, there are numerous independent but converging lines of evidence. Are such “consilience” cases available here? I do not know if anyone has attempted to make that case.

Again, Reid does speak in some places of inferences involved in design cases. (See the earlier quotation concerning the argument involving final causes, for instance.) Any inferences in such cases, however, would be inferences to conclusions concerning the mind of a designer—not to the existence of design or to evidence of design in natural phenomena. Inferences of this kind would leave intact the core Reidian contentions that both (1) recognition of marks and signs of design as such, and (2) acceptance of the relevant first principle connecting marks and signs to the mind of a designer, are non-inferential and involuntary.

I have discussed this and related matters in detail in the appendix of Ratzsch (2001).

It could then be argued that the remaining substantive difference between Dembski and Reid involves the modal status of the link between perceptually identified marks of design on the one hand, and the existence and qualities of a designing mind on the other—Reid taking that link to be both necessary and a constitutive part of our cognitive natures, Dembski taking it to be much weaker, and requiring serious probabilistic analysis. Whether this hybrid position would be remotely tolerable to either is, of course, another question.

There are some other interesting matters which may tell in Reid’s favor, but which are, I think, more difficult to assess. For instance, when we have fully grasped an inference, or have seen our way along a trail of reason, the conviction of the cogency of the inference seems relatively stable—we don’t usually just find at some point that the inference no longer seems cogent. Yet Darwin reported a marked variability in the conviction that nature exhibited design. That sort of variability seems more in keeping with our experiences of perception than with those of inference.

Reid (1973:48, 36, 42–3) and Reid (1872b:490, 491, 492, 501, 506). Natural taste can also, Reid claims, be corrupted; see Reid (1973:36) and Reid (1872b:491–2).

Although I will not pursue the issue here, contrary to the nearly universal reading I am not convinced that Paley intended to present an inductive argument for design. I think that Paley can be read as presenting cases of human design as examples of nearly direct design recognition, calling our attention to the relevant recognition processes, then showing us those same processes operating in our interactions with natural phenomena. The uncritically received presumption that design cases are inferential has masked intriguing contrary hints in Paley—a masking that sensitivity to non-inferential possibilities could remove.

According to Reid, Hume has apparently woefully understated the problem. It isn’t merely that we have not experienced multiple worlds—some designed with wisdom, some not—but that we have never directly experienced wisdom—even our own—at all. If, then, we do recognize wisdom—which we surely can—it cannot rest on prior direct experience, either internal or external. Recognition of signs as signs must evidently arise elsewhere. See again the earlier quoted passage from “Of judgment” in Reid (1872b:458).

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