

WHAT DOES RUSSELL'S ARGUMENT AGAINST NAIVE REALISM PROVE?

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We provide a study of Russell's argument (in *An Inquiry into Meaning and Truth*) against naive realism in which we distinguish five different forms of the argument. We agree with McLendon's (1956) criticism, that Russell's premiss that naive realism *leads to physics* (our emphasis) is ambiguous as between "leads historically or psychologically" and "leads logically". However, physics does logically lead to naive realism, in the sense that it presupposes it. In that case it is physics that is false. There is also the possibility that physics and naive realism are compatible, and that possibility obtains if phenomenalism is true.

“**P**hysics”, in the sense in which the word is used in debates about the alleged clash between physics and common sense, tells us, according to Russell,¹ (1) that perceived objects stand at the end of a long causal chain, and (2) that therefore they are unlikely to resemble our perception of them. Russell contrasts this causal view with common sense, or naive realism, from which we “start”; naive realism is “the doctrine that things are as they seem.”² But naive realism is apparently unstable, in the sense that it is self-contradictory. A celebrated passage in *An Inquiry into Meaning and Truth* deploys the contradiction to derive the conclusion that naive realism is false:

¹ BERTRAND RUSSELL, *An Inquiry into Meaning and Truth* (New York: Norton, 1940), p. 15; London: Penguin, 1962, p. 13.

² *Ibid.*

Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore naive realism, if true, is false; therefore it is false.

(*IMT*, p. 15)

The derivation requires both premisses, so neither is more important in the argument than the other. The first premiss is the proposition that naive realism “leads to” physics. The interpretation of this proposition is deeply problematic. The second premiss is the proposition that physics, if true, shows that naive realism is false, or, equivalently, the contrapositive that naive realism, if true, shows that physics is false. In a word, naive realism and physics are incompatible.

Hiram McLendon formalizes the argument as follows.³

A-Version

- | | |
|-----------------------|----------------------|
| 1. $N \supset P$ | Premiss |
| 2. $P \supset \sim N$ | Premiss |
| 3. $N \supset \sim N$ | 1, 2, H.S. |
| 4. $\sim N$ | 3, <i>reductio</i> . |

McLendon notes that *reductio ad absurdum*, or indirect proof, is the very first logical principle that Whitehead and Russell prove in *Principia Mathematica*, at * 2.01. Still, if one wanted one could, of course, run the argument in a natural deduction system without *reductio ad absurdum*, or indirect proof, for example as follows.

B-Version

- | | | |
|-------------------------|------------|--|
| 1. $N \supset P$ | Premiss: | Naive realism leads to physics. |
| 2. $P \supset \sim N$ | Premiss: | Physics, if true, shows that naive realism is false. |
| 3. $N \supset \sim N$ | 1, 2, H.S. | If naive realism is true, it is false. |
| 4. $\sim N \vee \sim N$ | 3, Impl. | Naive realism is false or naive realism is false. |
| 5. $\sim N$ | 4, Simp | Naive realism is false. |

³ “Has Russell Proved Naive Realism Self-Contradictory?” (1956), p. 290. MCLENDON’s formalization, however, does not “exhibit the logical structure of the argument”, the *form* of the argument, the *argument* itself, as N is naive realism and P is physics (including physiology).

“Obviously this [the *A*-version] is the logical pattern that Russell intends to follow in this argument”, McLendon observes (*ibid.*), and in this he is plainly correct. (We will not discuss the *B*-version further in what follows.) Nevertheless, as he shows without difficulty, “[T]he first premiss is to be understood as a statement about history, the history of science as a public growth of doctrine” (*ibid.*, p. 297). He quotes a passage from *Human Knowledge: Its Scope and Limits*:

Historically, physicists started from naive realism, that is to say, from the belief that external objects are exactly as they seem. On the basis of this assumption, they developed a theory which made matter something quite unlike what we perceive. Thus, their conclusion contradicted their premiss, though no one except a few philosophers noticed this. We therefore have to decide whether, if physics is true, the hypothesis of naive realism can be so modified that there shall be a valid inference from percepts to physics.⁴

What is very puzzling about this is that Russell himself cannot possibly have supposed that the truth-functionally defined material conditional “ \supset ” gives us anything that is even close to a translation of (1). “ \supset ” simply does not mean “historically leads to”, as the latter is an almost wholly non-logical notion. Russell is the last person one would expect to mix up the logical and historical or psychological concepts in this sort of connection.

It is in this sense only that naive realism leads to physics, namely, that *historically and psychologically, reflective study of nature begins not with solipsism nor with any other subjective or sceptical outlook but rather with realism in its naive form*, and then moves from this kind of realism and theory of direct perception to the esoteric doctrines of physics and physiology.⁵

McLendon’s conclusion is not hard to accept. This conclusion is that Russell’s premisses do not yield a “genuine *reductio ad absurdum* argument, and furthermore that they do not form any valid argument at all, and that therefore they yield no conclusion whatsoever” (*ibid.*, p. 301). McLendon compares a “loose form” of Russell’s argument with an “exact form”; the loose form is certainly Russell’s argument,

⁴ *Ibid.*, p. 298. The passage is to be found in *HK*₂, pp. 197–8 (UK edn., p. 213).

⁵ McLENDON, p. 298.

C-Version

Russell's Original, "Loose" Form

1. Naive realism *leads* to physics.
2. Physics *shows* that naive realism is false.
3. Therefore, naive realism, if true, is false.
4. Therefore, naive realism is demonstrably false.
5. Therefore, the causal theory of perception is true.

D-Version

Exact form [from McLendon]

1. Historically, naive realism *is the ancestor of physics*
2. Doctrinally, physics *implies* that naive realism is false.
3. Therefore, nothing.
4. Therefore, nothing.
5. Therefore, nothing.

McLendon writes:

My exposure of the semantical blunder of confusing “leads to” and “shows” shows, quite apart from questions concerning the truth values of the premisses, that Russell’s conclusion does not follow from the premisses of his pseudo-argument. (P. 301)

We agree with all this, but we do not think that it describes Russell’s view completely. Russell knew perfectly well that from naive realism *alone* physics does not follow, in the logical sense. His later view was that it *does* follow, however, with the addition of further “hypotheses” or premisses or postulates, such as this one: “... a cause and its effect, if separated by a finite time-interval, must be connected by a continuous intermediate causal chain” (*IMT*, p. 285). This postulate leads Russell to another, which is a version of the principle of induction (*ibid.*). With such postulates as premisses, or “modifications”, naive realism does indeed lead to physics in the sense that it does “justify us in believing” a proposition of physics or a proposition about events in physical space. In brief, physics, plus an inductive postulate, give the best explanation of the deliverances of naive realism. This is Russell’s solution to how we know the external world.

Still, there is another problem. For physics to proceed, the necessarily naive observations on which it relies must be also true. So if physics is true, then so is naive realism. And then we still have a difficulty, since the propositions of naive realism conflict with physics. If naive realism is true, physics is false. This is the contrapositive of $P \supset \sim N$. But it is also true that $P \supset N$, and hence it follows that *physics* is false.

E-Version

1. $P \supset N$	Premiss:	Physics implies naive realism.
2. $P \supset \sim N$	Premiss:	Physics, if true, shows that naive realism is false.
3. $N \supset \sim P$	2, Trans.	If naive realism is true, then physics is false.
3. $P \supset \sim P$	1, 3, H.S.	If physics is true, then physics is false.
4. $\sim P \vee \sim P$	3, Impl.	Physics is false or physics is false.
5. $\sim P$	4, Simp	Physics is false.

The *E*-version is sound, one of the authors (Westphal) thinks. Physics does imply naive realism, in the sense that for physics and its explanations to be true, the observations on which it is based must be true, not false, and the observations must be as they seem. If Charles' Law (that the volume of a gas at constant pressure is proportional to the temperature) is true, then it must have been *observed* to be the case that gases expand when heated, and the observations must be expressed in true propositions. Physics cannot be true if the reports of such observations are false. Physics presupposes that our observations give us some purchase on the world; *something* must be as it seems. Naive realism is for Russell "the doctrine that things are as they seem" (*IMT*, p. 14). This does not mean that for Russell naive realism is the straightforwardly and obviously false view that there are no illusions and hallucinations. For him naive realism is the view that when propositions about the world attribute secondary qualities to their host subjects, these subjects are said to possess in themselves those qualities. Roses are literally red, violets are violet, sugar is sweet, and so on, says naive realism in Russell's sense. What naive realism rejects is the claim that in physical strictness roses are not themselves red but reflect light that causes sensations of red, and that in physical strictness

violets are not themselves violet but reflect light that causes sensations of violet, and that the sweetness of the sugar is not in sugar, rather than something else that causes the sensation of sweetness in us.

However, if there were no information available as to *qualities* in Russell's sense (*IMT*, p. 121), no information would be available to us at all. We cannot say that something, with which we are not acquainted, but which we infer is changes in electromagnetic potential, is greater at one spatio-temporal location than at another, if we cannot detect colours and sounds or *something* directly, i.e. some *quality*. Even seeing that an instrument reads a "5" rather than a "6" demands a proposition whose truth is fully observational. We have to be able to detect the edges between black and white to see the numerals.

In his *Russell*, Mark Sainsbury misreads the context of Russell's argument against naive realism.⁶ Its true context is the relation of sense-data to physics. But Sainsbury writes that, "no one, so far as I know, and certainly no non-philosopher, has ever held naive realism, as Russell characterizes it"—that things are for Russell's "as" they seem (Sainsbury puts "what" for "as"). Sainsbury's example is the seeing of an ellipse when we look at a circular object. However, the context of the argument against naive realism is clearly the relationship between *qualities* in the sense in which Russell uses the word in the *Inquiry*, or secondary qualities. Naive realism is the view that these qualities *do* somehow literally inhere in objects, when perception is veridical. Sainsbury's view is that naive realism can only be the view that "there are no causal intermediaries between the experience involved in seeing and the object seen." This is not as absurd a view as Sainsbury supposes, since it is held by perceptual disjunctivists and others, for example, that the object perceived can be a literal constituent of the visual experience. It is surely false, as Sainsbury writes, that no one has held this view.

Our choices appear to be (i) that it is the Russellian postulates that are false; (ii) that $P \supset N$ is false, and the *E*-version of the argument is unsound; (iii) that with or without the postulates it is false that $N \supset P$; or (iv) that naive realism and physics in the intended sense are compatible, so that $N \supset \sim P$ is false.

The authors agree that $N \supset P$ is false. We agree that one of $P \supset \sim N$ and $P \supset N$ is false. Neither of us accepts the Russellian postulates, and

⁶ SAINSBURY, *Russell*, pp. 188–9.

we certainly agree that “induction is not valid as a *logical* principle”, as Russell puts it (*HK*, p. 402). One of us (Westphal) accepts $P \supset N$ and the *E*-version, and the other (Keller) thinks that physics and naive realism are compatible, so that $P \supset \sim N$ is false. Westphal's view is that if we were able to reconstruct physics phenomenally, as Russell wished to do in *Our Knowledge of the External World*, then $P \supset \sim N$ would be false,⁷ and the *E*-version would be unsound. But then both naive realism and physics would be true. Alas, Russell changed his mind about the phenomenism. We ourselves have been unable to reach agreement. However, we hope that, as a result of the discussion, the choices are a little clearer than they were in 1940, when Russell devised his marvellously interesting argument.

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⁷ WESTPHAL, *Colour* (1991), is in part an attempt to construct a reduction of this sort for the physics of colour.
