BOOK REVIEWS

The Realm of Reason. CHRISTOPHER PEACOCKE. New York: Oxford University Press, 2004. x + 284 p. Cloth $35.00*

This ambitious work aims to set out a "moderate rationalist" position in epistemology and ethics. Section I below provides noncritical exposition. Section II registers criticisms.

I. EXPOSITION

Peacocke argues for a "generalized rationalism," holding that "all entitlement has a fundamentally a priori component" (2). But his rationalism "differs from those of Frege and Gödel, just as theirs differ from that of Leibniz." He requires both substantive theories of intentional content and of understanding, and systematic formal theories of referential semantics and truth. We need an externalist theory of content: "Only mental states with externally individuated contents can make judgements about the external, mind-independent world rational" (123).

Purely evidential conceptions of meaning and content are inadequate (34–49). They cannot account for the following: a thinker often has to work out what would be evidence for a content; contents cannot depend, for their identity, on all of the infinitely ramifying evidential connections among them; and thinkers conceive, however tacitly, of (at least some) observed properties as categorical. By contrast with an evidential theory, a truth-conditional theory of content can account for all these problematic facts.

Peacocke states, develops, and defends three principles of rationalism which collectively "relate entitlement to truth, to the identity of states and their intentional contents, and to the a priori" (3–4). He does not thoroughly explain his central notion of entitlement, but this much is clear: any thinker is entitled to various transitions *in*, or *into*, thought. An example of a transition *into* thought would be that from one's perceptual experience to an observational judgment. An example of a transition *in* thought would be a logical inference from certain premises to a conclusion.

A transition is rational just in case the thinker is entitled to it. (Note that this aims to explain rationality in terms of entitlement, not the other way round.) It is clear from p. 28 that Peacocke needs an abstract ontology of entitlements (such as proofs, in the case of mathematics). Yet he does not endorse "Gödel's obscure quasi-perceptual and quasi-causal epistemology of mathematics and the abstract sciences" (54).

Underlying any thinker's entitlements are objective norms (7). Peacocke's conception of entitlement is neither conventionalist nor language-relative (51). Attitudes and community practices do not suffice to institute norms (57). There are three levels of entitlement: instances; generalization about instances; and explanations of those generalizations (60–65). The third level, on which Peacocke places special emphasis, is where we encounter the brunt of the philosophical work to be done by the moderate rationalist.

To show that a transition is rational, we need to allude to reference and truth (15). If a transition tends to lead to, or to preserve, truth, let us say that it *conduces* to truth. Peacocke's three principles (on pp. 11, 52, and 148) boil down to:

  (I) Rational transitions are truth-conducive.
 (II) The truth-conduciveness of rational transitions is to be explained by the intentional contents and states involved.
(III) Rational transitions are a priori.

One must not underestimate the reach of the a priori. "[F]or any concept at all there will be a priori principles governing it" (193); and "[a]ny case of knowledge of an empirical theory exists only because some a priori entitlements also exist" (194). Any empirical theory involves the a priori (195) in at least three ways: in its methodological canons of confirmation, induction, and abduction; in our taking perceptual experience and memory at face value; and in our employing at least some logical principles (and, one might add: mathematics).

Peacocke defines perceptions as *instance-individuated* with respect to their contents just in case

> [w]hat makes these perceptions have the content they do is the fact that *when the subject is properly related to the world* the holding of these contents causally explains such perceptual experiences of their holding (69, emphasis added).

We are entitled, Peacocke says, to take experiences with instance-individuated contents at face value. He asks "What is the philosophical explanation of the existence of this entitlement" (74)? After a digres-

sion on complexity-reducing explanations, he ventures the sugges-
tion that:

> the explanation of the occurrence of a perceptual experience with the
> instance-individuated content that p which most reduces complexity is
> that the experience is produced by a device which has evolved by natural
> selection to represent the world to the subject (87).

Chapter 5 is devoted to the rationality of enumerative induction:
those transitions from finite collections of evidence $Fa_1\&Ga_1$, ...,
$Fa_n\&Ga_n$ to the conclusion 'All Fs are G'. We have, says Peacocke, an
a priori, though defeasible, entitlement to make such transitions.

Basic moral principles, according to Peacocke, are *contentually a
priori*. (I spare the reader here the contorted definition of this techni-
cal term. It can be found on p. 160.) Our ability to know them traces
back to our grasp of moral concepts. The notion of truth that applies
to moral propositions is uniform with that which applies in any other
domain (233). The moral rationalist turns out to be a moral realist
also, in holding a species of mind-independence about moral truth
(234).

II. CRITICISMS

The writing is often indigestible and obscure. It imparts an appearance
of complex depth to ideas that are often simple, superficial, or passé.
Some of Peacocke's thoughts may be profound, but his writing invites
the charge of unnecessary complication. It can garb thoughts so fancily
that it can take a few moments' reflection to realize that they are
obvious.

Peacocke draws on his earlier work *A Study of Concepts*.[1] In so doing,
however, he repeats (187–88) his mistake, in that work, of thinking
that one can quantify into positions occupied by numerical adjectives
rather than substantivals.[2]

The impression to be gained, as this work begins, is of an a priorist
forsaking his armchair to greet those for whom philosophy has long
been taken as being continuous with science. The blinding by science
begins in chapter 3, with snowflakes. After a brief flurry, a thaw sets
in. By chapter 7 science is once again ignored. One is back in one's
soggy armchair for the discussion of moral rationalism, deprived of
any insights to be had from neuroscience, social psychology, or socio-
biology.

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[1] Cambridge: MIT, 1995.
[2] For a detailed discussion of this shortcoming, and others, in *A Study of Concepts*,
see my "The Emperor's New Concepts," *Philosophical Perspectives*, XVI (2002): 345–77.

Any reader hostile to the a priori will ask: What is the point of talking about the a priori? Why not suppress 'a priori' wherever it occurs? One will still have that a transition is rational just in case the thinker is entitled to it. The three levels of entitlement could still be recognized, and accorded due theoretical interest. One would still have principles (I) and (II). Only Principle (III) would have to go, to be replaced, perhaps, with something like:

(III*) Rational transitions are highly entrenched.

By 'highly entrenched' here I mean so positioned and so influentially at work within the individual thinker's web of belief as to be relin-quished only with the utmost reluctance. Any empirical theory will involve the highly entrenched in the same three ways as Peacocke claimed it would involve the a priori: in its methodological canons, in the primacy accorded reliable observations and memories, and in the principles of logic and mathematics used. Finally, one could still insist that to show that a transition is rational, we need to allude to reference and truth.

Peacocke has no interest in whether there are any synthetic a priori truths, and, if so, how this is possible. Hilary Putnam, for one, viewed W.V. Quine's celebrated attack in "Two Dogmas of Empiricism" on the analytic/synthetic distinction as being just as devastating for the a priori/a posteriori distinction (and held that that was how Quine saw it too).[3] Nevertheless, Peacocke abandons the former distinction, in what he thinks is due deference to Quine, but takes himself as still entitled to the latter distinction.

Peacocke defines a content as a priori

if a thinker can be entitled to accept it without the entitlement being constitutively dependent upon the content or kind of her perceptual experiences *or other conscious states* (24–25, emphasis added).

But what about reflective awareness of the content itself? On a reading of this definition as a one-way conditional, '*Cogito, ergo sum*' would not yet be confirmed as enjoying a priori status; and on a biconditional reading, the *Cogito* would be denied a priori status. Perhaps Peacocke could avoid this problem by re-classifying it as *judgmentally a priori with respect to reflection* (see p. 160). Or perhaps one ought to say that the claim that I exist is *judgmentally a priori with respect to my thinking*. There

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[3] Quine, "Two Dogmas of Empiricism," in *From a Logical Point of* View (Cambridge: Harvard, 1961, rev. ed.), pp. 20–46; Putnam, "There Is at Least One *A Priori* Truth," in *Realism and Reason: Philosophical Papers, Volume III* (New York: Cambridge, 1983), pp. 98–114 (see the opening paragraph).

is no guidance from Peacocke as to how one should classify the *Cogito* within his own rationalist scheme of things, and using his special terminology.

Peacocke also significantly misunderstands the structure of his own argument in response to skepticism. He is aware of the charge that, by invoking explanations from the theory of natural selection, he will be resting his account of the a priori on empirical considerations. He resists the charge (97–98). He claims that his a priori explanation has taken the form of the following argument:

> [Perceptual e]xperiences are complex events.
>
> As such, [perceptual] experiences are in need of complexity-reducing explanations.
>
> A natural-selection explanation of their occurrence meets the requirement of complexity reduction, and it is not clear that there is any other that does.
>
> The natural selection explanation makes [that is, predicts that—NT] the contents of the experiences it explains [will be] by and large correct [that is, veridical—NT] (98).

The argument, says Peacocke, "does not have the truth of the wholly empirical biological theory of evolution by natural selection as one of its premises." And he supposes that the argument furnishes an a priori case for the claim that our perceptual experiences are by and large veridical.

But consider this analogous argument:

> Planetary orbits are complex events.
>
> As such, planetary orbits are in need of complexity-reducing explanations.
>
> A gravitational explanation of their occurrence meets the requirement of complexity reduction, and it is not clear that there is any other that does.
>
> The gravitational explanation predicts that the planetary orbits it explains will be by and large elliptical.

This argument does not have the truth of the wholly empirical theory of force laws and gravitation as one of its premises. So, if Peacocke were right, we would have here an a priori case for the empirical explanandum that planetary orbits are by and large elliptical! But in the case of perceptual experience we cannot, in the face of skepticism, take as given or empirically confirmed the corresponding explanandum that our perceptual experiences are veridical. For that is precisely

what is at issue! Nor can Peacocke claim, in response, that all the premises of his explanatory argument are a priori.

For, first, it does not appear to be a priori that perceptual experiences are complex events. Second, to compound Peacocke's problems, note that 'explain' is a success-verb, and 'explanation', correlatively, a success-noun. Hence the reference, in the conclusion of the argument, to 'the natural-selection explanation' is to an explanation with purportedly true premises—amongst which will be the very empirical claims of evolutionary theory that Peacocke mistakenly believes he has eschewed. He therefore errs in claiming that "[w]hat has been important for the argument is not the empirical truth of Darwinian hypotheses but the special, complexity-reducing status of explanations by some natural-selection mechanism" (108).

Peacocke's invocation of the fundamental insight of evolutionary epistemology is about a quarter of a century late even within the community of Anglo-American philosophers. It goes back to Georg Simmel, and has since been developed as a self-consciously scientific response to philosophical skepticism by writers in the Austro-German tradition, such as Konrad Lorenz, Gerhard Vollmer, and Rupert Riedl.[4]

Perhaps the most important oversight is Peacocke's failure to illustrate or analyze or explicate what he means by a *way of coming to know* a proposition, and, especially, an *a priori way*. His crucial notion of a *contentually a priori content* rests, ultimately, on the notion of an *a priori way*. Yet the latter is taken as an unproblematic primitive, and he proceeds as if it would be clear and acceptable to his reader.

Peacocke offers no epistemology for mathematics. This is puzzling, given the importance accorded to the ontology and epistemology of mathematics by the rationalist precursors whom he cites, and in whose shadows he takes himself to be generating new light. It is not enough to distance oneself from Gödel's "abstract perceptualist" epistemology of number theory and set theory, and allude only to open-textured concepts of abstract objects, and our "implicit conceptions" of the same (180–81). The Gödelian critic has an immediate *tu quoque*. He need only quote Peacocke himself, who does not object to

> cases in which we are, intuitively, inclined to say that it is because *we see the nature* of some kind of entity—a set, a colour, a number, a shape—that we appreciate a priori that certain principles about that entity are correct (181, emphasis added).

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[4] For further details, see Florian von Schilcher and Neil Tennant, *Philosophy, Evolution, and Human Nature* (Boston: Routledge, 1984).

Peacocke's "resourceful metasemantic theorist" responds to this quasi-perceptual description of the philosophical data by agreeing

> that there is here a special class of examples of the a priori, but he should say that what distinguishes them is as follows. The conditions which individuate the entity in question (the set, colour, number, shape) actually enter the possession-condition for certain canonical concepts of these entities.

This is disappointingly inadequate. What, for example, is the 'canonical concept' of *set*? How does that canonical concept throw any light on the actual structure of the cumulative hierarchy of sets? How does it help to validate the axioms of Zermelo-Fraenkel set theory and its various extensions? What, indeed, are the Peacockean possession-conditions for the concept of *set*? No answers are forthcoming.

One has to provide much more than Peacocke does, in order to be considered a contributor to the great rationalist tradition that derives the greater part of its force from fascination with problems concerning mathematical knowledge. It is also irksome to see the adjectival phrases 'neo-Gödelian' and 'quasi-causal' in this connection. Gödel himself never invoked anything like a causal relation when accounting for our knowledge of mathematical objects. For 'neo' here, one should substitute 'non'.

Peacocke is proficient in neither elementary plane geometry nor the metamathematics of arithmetic. On p. 60, he takes as a priori sufficient for a rectangle to fall under the concept *square* that it be symmetric about the bisectors of its opposite sides. But any rectangle satisfies that condition! What is needed, rather, and will suffice, is symmetry about a diagonal (and indeed just one will do).

There are metamathematical mistakes, of greater moment. On p. 19, Peacocke had advanced a mistaken objection against Conservative Extension of a set of logical rules being necessary for them to determine the meaning of the logical operator involved. His imagined case in point was that adding second-order quantifiers to the language of first-order arithmetic enables one to prove the Gödel sentence of one's first-order theory. He fails to realize, however, that this would not be a case of Conservative Extension. For, upon adding second-order quantifiers, one also helps oneself to all second-order instances of mathematical induction! This is a dramatic extension of the underlying theory. It cannot count as allowing one to prove the new result (that is, the Gödel sentence) only by adding to one's language the logical rules for the second-order quantifiers.

On p. 180, we are invited to "[c]onsider an ordinary person's possession of the concept of a whole number."

> I would say that underlying this person's grasp of the concept is possession of an implicit conception with the content:
>
> (1) 0 is a whole number;
>
> (2) the successor of a whole number is a whole number;
>
> (3) only what is determined to be a whole number on the basis of the preceding two conditions is a whole number.
>
> Now consider the principle that any whole number has only finitely many predecessors. This principle cannot follow from what the ordinary thinker explicitly accepts.

With what justification can one thus thrust on the ordinary thinker only a first-order understanding of (3)? On its obvious reading, (3) is a second-order principle. As such, it guarantees that any whole number has only finitely many predecessors.

The book contains an important self-contradiction. "Contemporary theorists of the a priori should not be involved with the uninstantiated and uninstantiable notion of 'true purely in virtue of meaning' " (27). But "[i]f some principle has an a priori status, its status as such must be explicable in terms of the meaning[s] of the expressions occurring in the principle" (158). All we need here is the very plausible extra premise that some a priori principles are true, and Peacocke is caught in a contradiction. Not too blatant, to be sure, given that the other two premises are separated by 131 pages—but a contradiction nonetheless.

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