

Carnap on Ontology

G. J. Matthey

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Empiricism and Nominalism

- A *realist* (or “Platonist”) accepts the existence of abstract entities such as properties, classes, number, propositions, etc.
- A *nominalist* denies their existence.
- Empiricists tend toward nominalism, on the grounds that the existence of abstract entities has no observable consequences.
- To eliminate commitment to classes, function, numbers, etc. in mathematics, one might claim that mathematical statements consist of “meaningless symbols and formulas manipulated according to given formal rules” (205).
- Carnap will discuss the question of commitment to properties, propositions, etc. in the conduct of semantics.

Internal and External Questions

- To speak in one’s language about a new class of entities, one must construct a linguistic *framework* for them.
 - This is “a system of new ways of speaking, subject to new rules” (206).
- There are two kinds of questions that might be asked about the existence of entities:
 - An *internal* question, asked from within the linguistic framework for the entities.
 - An *external* question, about the existence of the system of entities as a whole.
- Internal questions and possible answers are formulated using the relevant linguistic framework.
- External questions will turn out to be misleading.

The World of Things

- Consider a world consisting of the simplest things described in ordinary language, the system of things and events co-ordinated in space and time.
- An internal question might be of this sort:
 - “Is there a white piece of paper on my desk?”
 - “Did King Arthur actually live?”
 - “Are unicorns and centaurs real or merely imaginary?”
- Possible answers are based on rules by which we evaluate the results of observation as confirming or disconfirming.
- These rules are ordinarily used habitually, but they can be made explicit in a rational reconstruction in pure epistemology.
- The concept of reality is empirical: what is real is what can be fitted in (by the rules of the framework) to a system of spatio-temporally co-ordinated things.

External Questions About the Thing-World

- An external question will ask whether the thing-world is real.
- Such a question is asked only by philosophers.
- Positive and negative answers have been given, and the dispute continues.
- The question cannot be answered, because the concept of reality applies only within a linguistic framework.
- So the question is not theoretical and is at best a practical one concerning which framework to adopt: a thing-framework, an idea-framework, etc.

The System of Numbers

- The number-system is of a logical nature rather than a factual nature, but the same considerations apply to it.
- The framework for the system is constructed by introducing new expressions and rules for their use:
 - Numerals and sentences containing them,
 - The general term “number” and sentences containing it,
 - Expressions for properties, relations, and functions of numbers, and sentences containing them,
 - Numerical variables, universal and existential quantifiers, and deductive rules of logic.

- Internal questions are answered through logical analysis, and hence if true are logically true.
 - Are there numbers?
 - Yes, 5 is a number, etc.
- Because of the analyticity of answers to internal questions regarding the reality of numbers, philosophers who seriously question such reality are asking external questions.

External Questions About Numbers

- External questions about the reality of the numbers are supposed to be answered prior to the adoption of a linguistic framework constituting the system of numbers.
- Such a question is said to be about the “ontological status” of numbers.
 - Do numbers have a metaphysical characteristic called “reality?”
 - Is the reality of numbers “ideal,” rather than material?
 - Do numbers “subsist?”
 - Are numbers “independent entities?”
- But these questions lack cognitive content, because they are not formulated in scientific language.
- Unless they are so formulated, we must regard them as pseudo-questions:
 - Practical questions about the adoption of a framework are disguised as theoretical questions.

Propositional Logic

- Similar considerations belong to the various linguistic frameworks of propositional logic.
- Such a framework might include:
 - A set of propositional variables, “ p ,” “ q ,” etc. and a rule which allows declarative sentences of an existing language to be substituted for them,
 - The general term “proposition,” and the general sentence-form “ p is a proposition,”
 - Predicates of sentences, which may be either:
 - * Non-modal, such as the truth-functional connectives “or” and “not,”
 - * Modal, as the predicates “possible” and “necessary.”
- Within the framework we can generate such sentences such as:
 - “There is a p such that p is not necessary and not- p is not necessary.”
 - “There is a p such that p is a proposition.”

External Questions about Propositions

- The rules of the framework of propositional logic are sufficient to answer internally any theoretically necessary questions about propositions.
- There are, however, practical questions which it is not theoretically necessary to answer.
- Propositions are not:
 - Mental (against Russell),
 - Linguistic,
 - Subjective.
- In each case, no reference to such a kind of thing is made in the existential statements of the system.
- This negative information may be helpful, though it is not necessary, to the understanding of the framework, just as pictorial models are helpful in understanding highly theoretical scientific theories.

Other Systems

- The distinction between theoretically significant internal questions, practical choices, and external pseudo-questions extends to other linguistic frameworks:
 - Negative integers and rational numbers,
 - Real numbers,
 - Spatio-temporal co-ordinates for physics.
- The practical choice of accepting a framework and of the kind of framework accepted (3-dimensional vs. 2-dimensional or 4-dimensional space) is not forced on us, but is suggested by theoretical considerations like simplicity and by observation.
- Any other external question about the framework (are real numbers ideal?) is a pseudo-question without cognitive content.

Platonism

- “It is clear that the acceptance of a linguistic framework must not be regarded as implying a metaphysical doctrine concerning the reality of the entities in question” (214).
- Some philosophers claim that the admission of variables for abstract types, such as thing-properties, is “Platonism.”

- But this leads to the result that someone who adopts for communication the language of physics, which contains variables for real numbers, would have to be called a Platonist—even a strict empiricist who rejects Platonism.
- Quine had called Carnap’s acceptance of a language of variables for higher-order types “platonic realism.”
- But he did not mean to imply that Carnap agreed with Plato’s own metaphysical doctrine of universals.

Logical Empiricism and Nominalism

- The view advanced here is that of the logical empiricists.
- They regarded questions of the reality or irreality of various types of things as pseudo-statements:
 - Does an external world exist?
 - Do universals exist?
- Nominalists reject the reality of universals, so their claims are really pseudo-statements.
- However, logical empiricists share with most nominalists an anti-metaphysical and pro-scientific attitude.
- So logical empiricists are much closer to nominalists than to their realist or conceptualist opponents.

Hypostatization

- Strong objections have been raised against semantical meaning analyses (like Carnap’s) in which words are taken to designate abstract entities:
 - “The word ‘red’ designates a property of things,”
 - “The word ‘five’ designates a number,”
 - “The sentence ‘Chicago is large’ designates a proposition.”
- It is claimed that these semantical statements are incompatible with basic principles of scientific thinking, or more generally, empiricism.
- The descriptions of designations are said to be “hypostatizations,” in which non-names are treated in the same way as names.
- It was called the “ ‘Fido’-Fido principle” by Ryle.
 - A word like ‘red’ is treated as a name like the name “Fido” of a familiar dog.
 - Ryle called this “a grotesque theory.”

Accepting Abstract Entities

- Within the system of numbers, the following proof can be given:
 - ‘Five’ designates five.
 - Five is a number.
 - So, ‘five’ designates a number.
- The conclusion is an internal statement of the system and thus is analytic and trivial.
- It is not the result of some semantical mistake of the kind that might have been made by Mill, Frege, and Russell.
- It is also not a theoretical claim about existence, but only a statement within a system which has been accepted for practical purposes.
- Thus the debate between nominalists and realists over numbers is of no cognitive significance.

A Misconception

- Some philosophers criticize the reference to abstract entities in semantics on epistemological grounds.
- Following Berkeley and Hume, they think that the designation relation in semantics requires that the designees be present in experience or constructed from what is present in experience.
 - “Triangle” may designate only a concrete particular triangle such as we may encounter in experience or something we construct from particular triangles.
- The requirement of a relation to experience may be the basis for choosing a framework for semantics.
- And it may be “bad psychology” to allow abstract entities within a framework chosen in this way.
- But semanticists are free to choose their framework without regard to relation to experience.

Abstract Entities in Semantics

- The goal of semantical analysis is “the analysis, interpretation, clarification, or construction of languages of communication, especially languages of science” (221).
- The choice of a semantical system which contains abstract entities may be an expedient and fruitful way to carry out the analysis.

- The extent to which it is successful is a matter of degree.
- The most semanticists, including Plato, Aristotle, Peirce, and Frege, have employed systems involving abstract entities.
- Their systems may not be the best, but it is up to the nominalist to produce a better one without references to abstract entities.

Learning from History

- To evaluate systems on allegedly ontological, rather than practical, grounds “is worse than futile; it is positively harmful because it may obstruct scientific progress” (221).
- We should learn from the history of such obstruction on grounds of religion, myth, metaphysics, “or other irrational sources.”
- We ought to grant scientific investigators the freedom to pursue their investigations and evaluate them on the basis of their success or failure in achieving their ends.
- *“Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms” (221).*