**Neurath’s Boat**

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March 2020

Main text: 639 words (812 words including questions and reading)

Each piece of knowledge we have of the world seems to depend on further pieces of knowledge. Our understanding of planetary orbits, for example, is partly justified by our understanding of gravity, and our understanding of gravity is in turn justified by our understanding of mass and force. Many philosophers have assumed that this process bottoms-out when we reach a basic level of knowledge that doesn’t require further justification: a set of foundational claims that are indubitably and unquestionably true. On Moritz Schlick’s view, for example, scientific knowledge is like a pyramid in which each piece of the structure rests on the level below, except for the lowest level which needs no support of its own. Parts of the pyramid of knowledge might have to be rebuilt in light of new discoveries, but always on the same solid and unquestionable foundations. For Schlick (1934/1979), the foundations of the pyramid are basic claims about our sensory observation from which all other knowledge can be derived.

Schlick’s contemporary, Otto Neurath, rejected the ‘pyramid’ view of scientific knowledge. Neurath instead compared our scientific knowledge to a raft made up of many planks, each of which contributes to our total knowledge in a similar way. Neurath suggested that there are no indubitable or unquestionable truths: all of our scientific claims are revisable, just as any plank is replaceable without threatening the structure of the raft. Importantly, Neurath thinks that we don’t have the luxury of rebuilding our raft from scratch on dry land, in the way that we might rebuild a pyramid from its foundations. He suggests that “we are like sailors who have to rebuild their ship on the open sea, without ever being able to dismantle it in dry-dock and reconstruct it from its best components” (1932/1983).

Neurath’s boat features in discussions of several different philosophical ideas. One of these is the problem of justification: if each belief is justified by other beliefs, how can we avoid an infinite regress? There are two traditional ways to address this problem, foundationalism and coherentism. Foundationalists avoid the regress by positing a basic level of beliefs that require no further justification themselves, while coherentists argue that each belief can be justified by its fit within a larger system of beliefs. Foundationalism can be captured by the metaphor of Schlick’s pyramid, while coherentism is often characterized in terms of Neurath’s boat.

Neurath’s boat, and the associated coherentist approach to justification, feature prominently in the ethics literature on reflective equilibrium: the state we achieve when there is no conflict between our moral beliefs. Many ethicists propose that we should adjust our individual moral judgments in light of our moral theories, and adjust our moral theories against our individual moral judgements, until we reach a stable and coherent set of moral beliefs.

The metaphor of Neurath’s boat can also be used to make a claim about the relationship between science and philosophy. Many foundationalist philosophers, including Descartes, have proposed that all of our scientific knowledge ultimately rests on indubitable truths that we can know by philosophical reflection, prior to any empirical observation of the world. On this view, philosophy uses non-empirical methods to arrive at necessary truths, whereas science uses empirical methods to arrive at contingent truths about the world. This distinction between science and philosophy is called into question by philosophers like Willard van Orman Quine, who propose a ‘naturalistic’ view of philosophy as continuous with science. Quine (1960) suggests that philosophers, like scientists, are in the position of the sailors aboard Neurath’s boat: just as Neurath’s sailors can’t rebuild their boat on dry land, so philosophers don’t have a privileged independent position from which to evaluate scientific methodology and knowledge. On Quine’s view, there is no difference between the kinds of knowledge sought by scientists and by philosophers, and philosophy has no distinctive non-empirical methodology.

**Discussion questions**

1. Are all of our beliefs about the world justified by other beliefs? How would this lead to an infinite regress? Foundationalism and coherentism are two strategies for avoiding infinite regress: can you think of any others?
2. How do you understand the difference between philosophy and science? Descartes proposed that reflecting on our own thoughts can provide us with truths that are more certain than any of our empirical knowledge. Do you agree?

**Recommended reading**

Neurath, Otto (1932/1983), ‘Protocol Statements’, in O. Neurath (1983), Philosophical Papers 1913-1946, R.S. Cohen and M. Neurath, eds., Dordrecht: Reidel.

Quine, Willard Van Orman (1960). *Word and Object*. MIT Press.

Schlick, Moritz 1934/1979, ‘The Foundation of Knowledge’, in M. Schlick (1979), Philosophical Papers Vol. II (1925–1936), H. L. Mulder and B. van de Velde-Schlick (eds.), Dordrecht: Reidel.

Sosa, Ernest (1980). The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge. Midwest Studies in Philosophy 5 (1):3-26.