

Knowing How and Knowing That

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Ryle (1945, 1949) famously highlighted the distinction between knowing that something is the case (e.g., knowing *that* Antarctica is a continent) and knowing how to do things (e.g., knowing *how* to traverse Antarctica). This distinction is sometimes said to be related to others: for example, *epistêmê* and *technê*, reflection and habit/practice/craft, explicit knowledge and tacit/implicit knowledge, and declarative knowledge and procedural knowledge. However, the precise relations between these distinctions is contentious and a matter of substantive debate (e.g., contrast Anderson 1980, 223 and Stillings et al 1995, 369 on the last).

There are at least two ways in which knowing that and knowing how might be considered distinct. First, they might be said to be *inequivalent* (perhaps because not all instances of knowing that are instances of knowing how). Second, and more strongly, they might be said to be *exclusive* or *strongly contrastable*. The second is stronger in that it entails, but is not entailed by, the first.

The stronger claim was the centerpiece in Ryle's attack on "intellectualism", a position that views internal, non-overt intellectual states (e.g., belief, opinion, knowledge that and other propositional or factual attitudes) and intellectual operations (e.g., reasoning) as the key to intelligence and intelligent action, understood to include skill and expertise. Ryle contended that intellectualism entails a "vicious regress", which he proposed to avoid by maintaining that knowing how, unlike knowing that, is a type of power to act (e.g., an ability or disposition to behavior). Hence Ryle's anti-intellectualism, which views such a power to act—rather than propositional attitudes or reasoning—as the key to intelligence and intelligent action (compare Noë 2005).

It is, however, important to keep separate the following four Rylean theses (the first two we already distinguished):

- (i) knowing how and knowing that are not equivalent;
- (ii) knowing how and knowing that are strongly contrastable;
- (iii) knowing how is a power to act;
- (iv) knowing how is the key to intelligence and intelligent action.

In Ryle's view, (iv) is a neglected but important truth, to be explained in terms of (iii); the latter can be seen as a further specification of (ii), which as noted above entails (i). But these four theses can come apart. For example, one might reduce all knowing that to (a type of) knowing how, and all knowing how to (a type of) ability (Hartland-Swann 1958, White 1982, Hetherington 2006): one version of such a position would accept (iii) and (iv) while rejecting (i) and (ii).

Intellectualism, by contrast, rejects both (ii) and (iii). In defense of (ii), it is argued that knowing how lacks "standard marks" of knowing that, such as expressibility, explicitness, justification,

and non-accidental truth (Ryle 1949, Carr 1981, Haugeland 1998, Wallis 2008, Poston 2009, Wiggins 2009, Cath 2011, Glick 2011, Hornsby 2011, Kumar 2011; cf. Snowdon 2011, Stanley 2011a). In defense of (iii), it is argued that intellectualist alternatives “over-intellectualize” everyday knowing how, skill, and expertise, as well as the mental lives of infants and non-human animals (Dreyfus 2002, Schiffer 2002, Noë 2005, Wallis 2008; cf. Bengson, Moffett, and Wright 2009, Stanley 2011b). And there is also Ryle’s regress argument, mentioned above (cf. Ginet 1975, Stanley and Williamson 2001, Hetherington 2006, Williams 2008).

Yet, while (ii) and (iii) were long regarded as orthodoxy, it is fair to say that at the time of writing the increasingly dominant (though by no means consensus) view among epistemologists working on knowing how is that these theses cannot be sustained.

Several reasons have been offered for this intellectualist conclusion. First, Snowdon (2004, 12) argues that many instances of knowledge how involve substantive knowledge that: for example, knowing *how* to get from London to Swansea before midday depends on “knowing *that* one first catches the 7.30 a.m. train to Reading from Paddington, and then one . . . , etc.” Second, a standard approach to the syntax and semantics of embedded questions within contemporary linguistics treats ascriptions of knowing how as equivalent to ascriptions of knowing that: thus, in an influential paper, Stanley and Williamson (2001) argue that ‘S knows how to A’ is true if and only if, for some W such that W is a way of A-ing, S knows *that* W is a way to A. Third, several counterexamples have been offered against thesis (iii). To illustrate: King (credited by Stanley and Williamson 2001; cf. Noë 2005, Devitt 2011) describes a ski instructor who knows how to perform ski stunts, which he teaches his students, even though he is not able to do them himself; Hawley (2003) describes a hiker who does not know how to escape avalanches although, given her “accidental success” when an avalanche occurs, she is nevertheless able to do so.

Other considerations motivating rejection of (ii) and (iii) include the causal-explanatory significance of rules and symbolic representations in cognitive science (Fodor 1968), differences between practical knowledge and mere “knacks” (Annas 2001; cf. Heidegger 1926/1962, Dewey 1933, Piaget 1947/1950), and the role of know-how in (performing, learning, practicing) intentional action and our knowledge thereof (Bengson and Moffett 2007, Stanley 2011b; cf. Setiya 2008).

Such intellectualist challenges are compatible with (i). How do they cohere with the datum, which seems to underlie thesis (iv), that knowing how is intimately tied to action? It is open to intellectualists to treat some instances of knowing that—and intellectual states or operations more generally—as likewise intimately tied to action (Ginet 1975; Bengson and Moffett 2011a, 2011b; Brogaard 2011; Stanley 2011b). From this perspective, theses (ii) and (iii) fail not because knowing how is “theoretical”, or action-neutral, but rather because intellectual states such as knowing that are sometimes “practical”, or action-oriented.

But we must keep separate the position that (ii) and (iii) are false from the following, further thesis:

- (v) knowing how is (a type of) knowing that.

It is often assumed that there are only two options: knowledge how is a power to act (iii) or it is knowledge that (v). However, there may be other possibilities: for example, knowing how might be *familiarity with a practical universal* (Price 1946, Carr 1981, Annas 2001) or a kind of *non-propositional understanding* (Bengson and Moffett 2011b). Such views reject (ii) and (iii) while also denying (v).

Debate over knowing how and knowing that has impacted philosophical discussion of, e.g., linguistic, logical, moral, and experiential knowledge and has the potential to inform research in psychology and cognitive science (e.g., skill learning, AI), linguistics, and theory of education, among other areas.

—John Bengson

See also ACTION, PHILOSOPHICAL THEORY OF; AGENCY; BEHAVIORISM, PHILOSOPHICAL CONCEPTION OF; CAUSES VS. REASONS IN ACTION EXPLANATION; EPISTEMOLOGY; PHILOSOPHY OF EXPERTISE; INTELLIGENCE; TACIT KNOWLEDGE

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