Introduction

The concept of know-how is at the core of our self-understanding as creatures both theoretical and practical, as beings who care about getting things right both in thinking and in doing. This book is an investigation of this central concept, an attempt to explain what it is to know how to do something.

The concept of know-how is intertwined with at least three other notions: knowledge, understanding, and ability. In the first step of this Introduction, I will present these interconnections and employ them in order to introduce the most prominent views about know-how currently under discussion. My second step will be a discussion of the methodology with which to approach the topic of know-how. I close with a note on the structure of this book and on the different paths one may wish to take in reading it.

The first conceptual connection leads from know-how to *propositional knowledge*, i.e. to knowing that something is the case, knowing a truth or a fact. Intuitively, knowing how to do something is related to the knowledge of facts about doing so or ways or methods to do so. Second, there is the concept of *understanding*. Again, there is an intuitive relation between knowing how to do something and having an understanding or, equivalently, a conception of how to do so or of certain ways or methods to do it. Third, there is the concept of *ability* or, equivalently, of capacity. Knowing how to do something is intuitively connected with having a capacity, with being able to do what one knows how to do.[1]

Can these intuitions be maintained? And what do these relations amount to exactly? These questions are at the core of the problem of know-how.

The most prominent views in the debate about know-how[2] can be understood as attempts to identify *one* of these three conceptual relations as the *whole* of the explanation of the concept of know-how.

[1] I will continue to use 'true propositions' and 'facts' interchangeably, similarly for 'an understanding of x' and 'a conception of x', and for 'ability' and 'capacity'.

[2] For an overview, see Fantl (2008; 2012), Bengson & Moffett (2011b), Jung (2012), Brown & Gerken (2012b), and Pavese (2016b).

The position which has come to be called *intellectualism* can be understood as the claim that know-how consists in a purely intellectual state largely independent from actual ability. The traditional version of this position, *propositionalist intellectualism*, holds that knowing how to do something is a species of knowing that something is the case, i.e. that know-how is just a special kind of propositional knowledge or propositional knowledge of a special kind of truth. By contrast, *objectualist intellectualism* is the view that knowing how to do something is a species of understanding something, i.e. that know-how is just a special kind of conception or a conception of a special kind of thing. The complementary view has come to be called *anti-intellectualism*. This is the claim that know-how consists in a state of actual ability largely independent from belief or understanding.

The central thesis I shall defend is that all of these positions identify a crucial necessary condition of know-how, but falsely claim that this condition is also sufficient for know-how. Knowing how to do something requires an understanding of how to do so, propositional knowledge about doing so, and the actual ability to do so, but none of these are individually sufficient for know-how. Instead, the concept of know-how requires all of these elements, and it requires them to interact with each other in the right way. Intellectualists and anti-intellectualists are both doubly mistaken – first, because they believe that a mere ingredient of know-how constitutes the whole of the phenomenon, and second, because they believe that their opponents' accounts about know-how fail to even give necessary conditions. In other words, the central thesis of this book is that we can, and should, maintain all three of the intuitive conceptual connections with which I began.[3]

In order to make this case, I will discuss the most prominent accounts of know-how which are currently maintained – the propositionalist intellectualism defended by Jason Stanley and Timothy Williamson, the objectualist intellectualism defended by John Bengson and Mark Moffett and, albeit less prominently, the anti-intellectualism defended by Hubert Dreyfus.[4]

While these philosophers are paradigmatic proponents of these positions, the *terms* 'intellectualism' and 'anti-intellectualism' do not have a completely uniform use in the current debate about know-how.[5]

[3] These conceptual connections are also expressed in a remark by Ludwig Wittgenstein which I quote as the motto of Part One of this book on page 11. This is inspired by Eva-Maria Jung who also quotes from this as the motto of her book *Gewusst wie?* (2012), even if she omits the last point about understanding and mastery of techniques.

[4] I mainly rely on Stanley (2005a; 2011a; 2011b; 2011c) as well as Stanley & Williamson (2001; 2016) and Stanley & Krakauer (2013), on Bengson & Moffett (2007; 2011c), and on Dreyfus (2002; 2005; 2007; 2013) as well as Dreyfus & Dreyfus (1986).

[5] Of course, these terms are also used elsewhere. But in this book, every use of 'intellectualism' refers to intellectualism about know-how and likewise for anti-intellectualism.

For example, intellectualism is often identified with propositionalist intellectualism (cf. e.g. Fantl 2008, 451), simply because objectualist intellectualism is comparatively young. Further, while I restrict the intellectualist position to the view that know-how is something exclusively intellectual, an influential article on the state of play of the debate defines intellectualism as the view that know-how "is or involves" some state of the intellect (cf. Bengson & Moffett 2011b, 7–9). On this definition, the account I will propose is an intellectualist account.

Conversely, while I restrict the anti-intellectualist position to the view that know-how is something exclusively practical, other conceptions of anti-intellectualism hold this position merely to assert the explanatory primacy of practical ability with respect to knowledge and understanding (cf. e.g. Fantl 2011, 128; Dickie 2012, 741). On this definition, the account I will propose is an anti-intellectualist account.

Of course, what counts in the end is not the use of labels but the content of positions. Still, the way I conceive of the position defended here, it is neither intellectualist nor anti-intellectualist, but precisely in the middle ground between these views. In other words, I propose a rapprochement between intellectualism and anti-intellectualism, and I hope to show that both views stand to gain from this.

There are many different methodological strands in the debate about know-how. How can this concept be expressed in ordinary language? Which cases exemplify know-how intuitively? What is the relationship between this concept and terms like 'practical knowledge' or 'procedural knowledge'? And what, precisely, are the *phenomena* which we want to capture with a conception of know-how? What is it we aim to explain? Let me develop the approach pursued in this book by briefly walking through these interconnected questions.

The contrast between know-how and propositional knowledge is often understood in terms of the contrast between what we express as 'knowing that' and as 'knowing how' in English. But this can be misleading. Know-how is knowledge *how to do* something, i.e. a state expressed paradigmatically with the verb 'to know', followed by 'how' and infinitive. A sentence like 'I know how tall Leonhard is' does not involve the concept of know-how so understood because in involves a finite verb phrase. Instead, it seems to express propositional knowledge. Likewise, propositional knowledge is knowledge *that something is the case*, i.e. a state paradigmatically expressed in English with the verb 'to know', followed by the complementizer 'that' and an embedded proposition. A sentence like 'I know that smell' does

not involve the concept of propositional knowledge so understood because it uses the demonstrative article 'that' rather than the homophone complementizer and introduces a noun phrase rather than a proposition. Instead, it seems to express knowledge in the sense of objectual acquaintance.[6]

Given these difficulties, it is sometimes suggested that the contrast between know-how and propositional knowledge can be expressed more clearly as the contrast between 'theoretical' and 'practical' knowledge.[7] But what one may know how to do also includes intuitively 'theoretical' things like solving mathematical problems, and what one may know to be true also includes intuitively 'practical' propositions, i.e. that I am currently running or that it is good for me to take a run regularly. Further, the term 'practical knowledge' has come to be used in a number of different senses only one of which is equivalent to know-how. Further concepts discussed under this heading include the 'practical' knowledge of what I am currently doing, a special kind of non-observational knowledge of action (cf. Anscombe 1957). The contrast between 'theoretical' and 'practical' knowledge is therefore less helpful than the contrast between know-how and propositional knowledge.

A further methodological commitment is that a philosophical account of the concept of know-how must be answerable to ordinary intuitions as to when it is appropriate to apply the phrase 'knows how to'. But it would be a mistake to assume that all of these intuitions will necessarily have to be preserved, let alone shown to be accurate. To take an analogy with propositional knowledge, it is perfectly acceptable to say, of a candidate in a quiz show, that she 'knew' the correct answer, even if her true belief was everything but sufficiently justified and therefore does not amount to a case of full-blown propositional knowledge in the sense discussed by many epistemologists.[8] The same should also be allowed in cases of 'knows how to'. Loose talk is perfectly fine. It is perfectly acceptable to speak of machines, robots and of all kinds of simple-minded animals as 'knowing how to' and 'knowing that' such and such. Still, it remains an open question whether they possess genuine know-how or genuine propositional knowledge.

At this point, one may turn to cognitive science where a cognate distinction between 'declarative' and 'procedural' knowledge plays an important role. It is a natural, and plausible, thought to seek clarity on the philosophical problem of know-how in terms of these scientific concepts. However, this

[6] These distinctions are discussed in detail in chapter 7.

[7] This strategy is considered e.g. by Glick (2011), Fantl (2012) and Stanley (2012c).

[8] Of course, some epistemologists hold that such attributions are actually true and not just loose talk. But these complications can be left open here. We can accept how people use the verb 'to know' without *settling* these philosophical questions.

is not the approach I will pursue in this book. The concept of know-how is entangled with scientific discourse, and an account of this notion is answerable to these interconnections. But as philosophers, we should seek the most important criteria for assessing an account of our core concepts in the explanatory roles which they play in the whole of our self-understanding. To employ a famous distinction by Wilfrid Sellars, the manifest image of ourselves and our position in the world is essentially interrelated with the scientific image of ourselves and our position in the world (cf. Sellars 1962). But a philosophical attempt to account for a core concept of the manifest image must stay true to the role of this notion within this framework.

The methodology to be pursued in this book begins with the manifest image. For it is here that we encounter the crucial phenomenon for which the concept of know-how is supposed to provide an account – 'intelligence' or 'intelligent practice'. This name for the explanandum of know-how stems, of course, from Gilbert Ryle, the modern classic of the debate about know-how. And despite many changes and further methodological considerations, the aim to explain what Ryle calls 'intelligence' continues to be a core commitment throughout the debate.

In this book, the phenomenon of intelligent practice takes center stage. The core criterion for assessing an account of know-how is its role in explaining what Ryle called 'intelligence'. All the other questions touched upon in this Introduction are also important, but they are secondary to this central theoretical aim. This methodology will show a clear path through the complex thicket of methodologies and topics in the debate about know-how.

This book is not only Rylean in its methodology, but also in the account of know-how it defends. In his Presidential Address to the Aristotelian Society, entitled "Knowing How and Knowing That" (1945a), and in a chapter with the same title in his celebrated book *The Concept of Mind* (1949), Ryle has made a strong case for the relevance of know-how:

> Philosophers have not done justice to the distinction which is quite familiar to all of us between knowing that something is the case and knowing how to do things. In their theories of knowledge they concentrate on the discovery of truths or facts, and they either ignore the discovery of ways and methods of doing things or else they try to reduce it to the discovery of facts. (Ryle 1945a, 5)[9]

> The advance of knowledge does not consist only in the accumulation of discovered truths, but also and chiefly in the cumulative mastery of methods. (Ryle 1945a, 15)

[9] I would like to use the first quotation in this book to make the general typographical remark that all emphases in quoted passages are taken over from the original texts.

Ryle's position has received both support and criticism, and the interpretation of his texts has remained one of the central themes in the debate about know-how. Part of my project in this book consists in a favorable reassessment of Ryle's legacy. Maybe Ryle never intended to give a comprehensive account of the concept of know-how (cf. Hornsby 2011, 81), and maybe this topic even turned into a mere stepping stone of the larger project in *The Concept of Mind*. Still, Ryle's texts already contain at least the firm foundation of a very attractive conception of know-how.[10] To see this, it will prove important to broaden the textual scope of Ryle's works beyond the widely and often exclusively read chapter II of *The Concept of Mind*, particularly to also include chapter V on dispositions and chapter IX on the intellect, as well as Ryle's Presidential Address, where he is occupied more exclusively with know-how.

I will propose an interpretation of these texts intended to deepen some of Ryle's insights and to correct some of his errors, and I will defend such a Rylean account of the concept of know-how against the main contenders in the current debate. Among other things, this will consist in an argument against the widespread view that Ryle is an anti-intellectualist in the sense just distinguished.[11] Though a dedicated critic of intellectualism, Ryle does not believe that know-how is *merely* an ability, as the anti-intellectualist position states. Instead, he argues that know-how is a special *kind* of ability – a skill or, equivalently, a competence. However, the explanation of this concept also requires appeal to intellectual states such as understanding and propositional knowledge in order to explain intelligent practice through responsible control of one's acts. At the very least, this is the most faithful and most plausible Rylean position which will emerge from my interpretation – a Rylean responsibilism.

This book is organized in two Parts, but it can be read in many different ways. Part One develops and defends my Rylean responsibilist proposal out of an engagement with Ryle's own texts and a number of independent considerations. This also includes a discussion of anti-intellectualism and its shortcomings. Part Two considers the range of candidate cases and examples of know-how, the linguistic expressions of know-how, and it engages in detail with intellectualist views.

Since every chapter begins with an overview and since dependencies between the material in the individual chapters and sections are mentioned and cross-referenced, readers familiar with the debate about know-how will

[10] This has recently been noted by Kremer (2016) and Elzinga (2016).

[11] To name just two examples among many, this view is explicitly held by Stanley & Williamson (2001, 416) and Bengson & Moffett (2007, 45 fn. 25).

hopefully be able to read this book in any way and in any part. However, there is one terminological, or conceptual, thing to bear in mind. In this book, I follow Ryle in speaking of know-how *as* competence. That is, I use 'know-how', 'competence', and 'skill' largely interchangeably. This is highlighted and justified in § 1.1. Readers who are unhappy with this may immediately jump to chapter 7, which deals with the linguistics of 'knows how to', or to chapter 5, which discusses alleged counterexamples.

Before presenting a short overview of all chapters, let me also mention that this book does not only end with an index of subjects on page 325, but also with two other indices. Readers who are interested in my take on a specific author or on a particular puzzle case may consult the index of persons on page 319 or the index of cases on page 317.

Part One consists of four chapters. The first pair of these offers the groundwork of a Rylean account of know-how while the second pair adds further independent considerations with which this project can be continued in order to reach the explanatory aim of accounting for intelligent practice.

Chapter 1 introduces the concepts of know-how and of ability and gives an account of the phenomenon of intelligent practice as essentially normative. Further, it provides a sketch of what an explanation of this phenomenon must achieve, namely by understanding know-how, skill, or competence, as an *intelligent* ability rather than a *mere* ability. Chapter 2 goes on to discuss Ryle's remarks on the intellectual part of an intelligent ability, the role of understanding and propositional knowledge. At times, following Ryle's declared arguments will require correcting inconsistencies, and I will conclude this chapter by assessing where the Rylean view I propose departs from Ryle's texts, and where it stands with respect to other important themes in their reception, such as the question of behaviorism.

Chapter 3 discusses the question what it is to exercise know-how, and comments on the interrelations between practice, intentionality, and automaticity. Along the way, I will also discuss and reject some considerations in favor of anti-intellectualism. While these topics are largely independent from more specifically Rylean positions, chapter 4 builds on these results in order to complete the line of thought laid out earlier. Ryle himself failed to provide the crucial final element in the explanation of intelligent practice. But I will offer an account which is congenial to Ryle's position, a Rylean responsibilist account of normative guidance as responsible control.

Part Two consists of five chapters. The first pair of these discusses the range of examples and puzzle cases which have been proposed as candidate examples of know-how and shows how Rylean responsibilism can account for them. The three final chapters are concerned with the linguistics of 'knows

how to' and related expressions, with the way in which intellectualists have used linguistic considerations in support of their positions, and with these positions themselves.

Chapter 5 reconsiders and defends the Rylean conception of the relationship between know-how and ability and offers explanations of the relevant counterexamples and puzzle cases. This also includes an analogy with structurally identical cases from the independent debate about dispositions, and a discussion of the question if competences or abilities are themselves dispositions. These considerations are complemented by chapter 6 which addresses the puzzle cases which pertain to the *cognitive* rather than the *practical* nature of know-how. This includes crucial semantic and epistemic properties of know-how, as well as certain themes from cognitive science, including the notion of 'procedural knowledge' and some clinical cases which have been discussed with respect to know-how.

Chapter 7 considers the question how the concept of know-how is expressed in ordinary language, and it defends my Rylean use of the expression 'knows how to' as expressing competence against a number of objections. After both pragmatic and semantic considerations, I will eventually suggest that 'knows how to' is polysemous. Such linguistic considerations are continued in chapter 8, but brought to bear on the position of intellectualism which has prominently been supported with linguistic theory. I discuss and eventually reject this line of thought, but I also present an argument for the claim that there is substantial common ground between intellectualism and Rylean responsibilism, including the question of compatibility with the linguistic data. The final chapter 9 addresses the question if intellectualism can succeed at the explanatory task of accounting for intelligent practice. I argue that the positive intellectualist proposals fail at this task, and I defend Ryle's famous regress objection as an argument which establishes a principal problem for such attempts. In the end, however, I suggest that the way in which intellectualists have reacted to this argument speaks in favor of the rapprochement advertized in this book.