

Knowledge

John Turri

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1. Introduction

Epistemology is the branch of philosophy that studies knowledge. Often ‘epistemology’ and ‘theory of knowledge’ are used interchangeably, but this is misleading. Knowledge is just one of the topics studied in epistemology, though many epistemologists focus exclusively on knowledge, and even when epistemologists turn their attention to other topics – such as justification, reasons, evidence, testimony, experience, epistemic duty, epistemic value, and intellectual virtue – much of their work relates closely to knowledge.

2. General Overviews

We find several good overviews of recent work on knowledge. Steup and Sosa 2005 is the most accessible. Moser 2002 offers a good mix of accessibility and comprehensiveness. Hendricks and Pritchard 2008 is best in its coverage of formal work in the discipline. Dancy, Sosa and Steup 2010 offers the most comprehensive and current overview. The essays in Greco and Sosa 1999 offer a mix of exposition and partisanship. The Epistemology Research Guide is a helpful tool, freely available online. The Internet Encyclopedia of Philosophy and Stanford Encyclopedia of Philosophy are indispensable, high-quality, peer-reviewed, freely available, frequently updated and ever-expanding online reference works containing dozens of articles relevant to the philosophical investigation of knowledge.

Dancy, Jonathan, Ernest Sosa and Matthias Steup, eds. *A companion to epistemology*, 2ed. Malden, Mass.: Wiley-Blackwell.

A current, comprehensive and authoritative overview of the field, containing hundreds of entries, running anywhere from a couple hundred to several thousand words, ten review essays covering major topics and trends, and twenty “self-profiles” by leading contemporary epistemologists.

Greco, John and Ernest Sosa, eds. 1999. *The Blackwell guide to epistemology*. Malden, Mass.: Blackwell.

A collection of original essays by leading figures, summarizing developments on many central questions in the theory of knowledge. Partly dedicated to survey and exposition, but also dedicated to advancing the authors' views.

Hendricks, Vincent F. and Duncan Pritchard, eds. 2008. *New waves in epistemology*.

A collection of original essays that provide a “snapshot” of cutting-edge work in the discipline, and a good indication of where research will be headed in the near future. Especially good in its coverage of formal epistemology.

Moser, Paul K., ed. 2002. *The Oxford handbook of epistemology*. Oxford: Oxford University Press.

A collection of original essays by leading figures, summarizing developments on many central questions in the theory of knowledge. Primarily dedicated to survey and exposition. The most thorough overview.

Steup, Matthias and Ernest Sosa, eds. 2005. *Contemporary debates in epistemology*. Malden, Mass.: Blackwell.

A lively and accessible collection of debates on several central questions in epistemology. A good mix of exposition and partisanship.

The epistemology research guide.

<http://www.ucl.ac.uk/~uhs001/ERG_Bibliography.html>. Accessed 18 May 2010.

A helpful annotated bibliography, freely available online, maintained by Keith Korcz.

The internet encyclopedia of philosophy.

<<http://www.iep.utm.edu/>>

An excellent, freely available, peer-reviewed online resource, with many entries on topics in epistemology. Edited by James Fieser and Bradley Dowden.

The stanford encyclopedia of philosophy.

<<http://plato.stanford.edu/index.html>>

Another excellent, freely available, peer-reviewed online resource, with numerous entries on topics in epistemology. The Principal Editor is Edward Zalta.

3. Textbooks

We find many excellent textbooks devoted to the theory of knowledge, all of which treat other central topics in epistemology. Fumerton 2006 is narrow but the most accessible. Morton 2003 is broader and also highly accessible. Zagzebski 2009 is historically informed, engaging and innovative in its motivation of the subject matter. Pritchard 2009 is authoritative in its coverage of recent developments. Feldman 2003 is careful and thorough in its presenta-

tion from a traditional perspective. BonJour 2009 offers broad and thorough coverage of the central traditional issues, advocating a Cartesian perspective.

BonJour, Laurence. 2009. *Epistemology: classic problems and contemporary responses*, 2 ed. Lanham, Maryland: Rowman and Littlefield

An introduction to the theory of knowledge, with an emphasis on its relation to justification, and espousing a broadly internalist, foundationalist, Cartesian perspective, which it applies to a wide range of traditional problems and puzzles, including induction, a priori knowledge, external world skepticism, other minds, testimony and memory.

Feldman, Richard. 2003. *Epistemology*. Upper Saddle River, New Jersey: Prentice Hall.

Careful and thorough in its coverage of central themes, it defends a fallibilist, foundationalist, evidentialist theory of knowledge, according to which we know most of what we ordinarily take ourselves to know, in pretty much the way we take ourselves to know it. It devotes a chapter to epistemic relativism, and discusses experimental evidence of human irrationality.

Fumerton, Richard. 2006. *Epistemology*. Malden, Mass.: Blackwell.

Brief, focused on traditional problems, and accessible even to the novice, it defends a traditional, internalist foundationalist theory of knowledge and justification. Not entirely inhospitable to skepticism. It devotes a chapter to metaepistemological themes.

Lehrer, Keith. 2000. *Theory of knowledge* 2 ed. Cambridge Mass.: Westview Press.

A masterful work, providing an overview of traditional and contemporary debates, all while further developing Lehrer's own ingenious and intricate coherence theory of knowledge.

Morton, Adam. 2003. *A guide through the theory of knowledge*, 3 ed. Malden, Mass.: Blackwell

Wide-ranging and engagingly written. In addition to covering standard themes, it includes a discussion of moral knowledge and an accessible introduction to Bayesian epistemology. Also notable for the extensive and thoughtful "reading" and "thinking" questions at the end of each chapter.

Pritchard, Duncan. 2009. *Knowledge*. New York: Palgrave.

Succinct and authoritative in its coverage of more recent developments, especially concerning luck, skepticism, virtue epistemology, and the value of knowledge. It favors an “anti-luck virtue epistemology.” Could profitably be read alongside another text that emphasizes more traditional concerns.

Zagzebski, Linda. 2009. *On epistemology*. Belmont, California: Wadsworth.

An historically informed and engaging introduction to epistemology, which in many ways seeks to redefine the way we approach the subject, by making clear how epistemological questions are motivated by what we care about, including morality, the good life, and self-trust. Questions about the value of knowledge and the role of intellectual virtues loom large throughout.

4. Weblogs

Certain Doubts is a general epistemology blog, and the premier epistemology blog, with frequent posts on knowledge and related matters. Epistemic Value is an epistemology blog with a narrower remit, focusing mainly on epistemic value and virtue. Both blogs post important announcements of interest to those working on knowledge. Thoughts, Arguments and Rants covers topics across metaphysics and epistemology broadly construed, with frequent posts on epistemology.

Certain doubts <http://el-prod.baylor.edu/certain_doubts/>

A general epistemology weblog administered by Jonathan Kvanvig, its contributors include many leading figures working on knowledge and related matters. Frequent substantive posting. The premier epistemology weblog.

Epistemic value <<http://epistemicvaluestirling.blogspot.com/>>

Administered by Duncan Pritchard and nominally devoted to epistemic value, it is a great source of information on conferences, workshops and calls-for-papers on knowledge and closely related topics.

Thoughts, arguments and rants <<http://tar.weatherson.org/>>

Administered by Brian Weatherson, it frequently features posts on epistemological topics.

5. Anthologies

There are a number of excellent anthologies collecting influential papers on the theory of knowledge. All cover epistemological themes aside from knowledge proper. Sosa et. al. 2008 is the most comprehensive, challenging and representative of recent developments. Bernecker and Dretske 2000 is just as challenging, contains greater coverage of the sources of knowledge, and contains very little of the most recent scholarship. Huemer is a bit more accessible and offers greater historical coverage, at the expense of covering recent developments. Neta and Pritchard 2009 is accessible and offers a good, innovative mix of coverage for traditional and recent topics.

Bernecker, Sven and Fred Dretske, eds. 2000. *Knowledge: readings in contemporary epistemology*. Oxford: Oxford University Press.

Forty-one selections in five parts, each with an introduction, with further subdivisions, for a total fifteen sections. (I) Justified true belief: the Gettier problem; responses to Gettier. (II) Externalism and Internalism: externalism; internalism; criticisms and compromises; (III) Foundations and norms: foundations; normativity. (IV) Skepticism: motivations; relevant alternatives; semantic approaches. (V) Sources of knowledge: perception; introspection; memory and testimony; induction; a priori knowledge. All selections are from the twentieth century.

Huemer, Michael, ed. *Epistemology: contemporary readings*. 2002. London: Routledge.

Fifty-one selections in three parts, sub-divided into nine sections, each with an introduction. (I) Sources of justification and knowledge: perception; memory; reason and the a priori; testimony. (II) The structure and growth of justification and knowledge: inference in general; inductive inference; the architecture of knowledge. (III) The nature and scope of justification and knowledge: the analysis of “knowledge”; skep-

ticism. About one-fifth of the selections date from before the twentieth century.

Neta, Ram and Duncan Pritchard, eds. 2009. *Arguing about knowledge*. New York: Routledge.

Forty-four selections in ten parts, each with an introduction: What is knowledge? What is the value of knowledge? What evidence do we have? How should we distribute our confidence? What is it to be justified in believing something? What is the structure of justification and knowledge? What is the nature of the epistemic 'ought'? What are the sources of knowledge? What can we know? Is knowledge in the eye of the beholder? A judicious mix of standard and innovative selections, most from the twentieth and twenty-first centuries.

Sosa, Ernest, Jaegwon Kim, Jeremy Fantl and Matthew McGrath, eds. 2008. *Epistemology: an anthology*, 2 ed. Malden, Mass.: Blackwell.

Sixty selections in nine parts, each with an introduction: skepticism; the structure of knowledge and justification; defining knowledge; epistemic closure; theories of epistemic justification; virtue epistemology and the value of knowledge; naturalized epistemology and the a priori; knowledge and context; and testimony, memory and perception. All selections are from the twentieth and twenty-first centuries.

6. Precursors

A vast number of earlier works inform contemporary research on knowledge, the following being among the most important. Austin 1961 prefigures relevant-alternatives and contextualist approaches. Chisholm 1989 [orig. 1966] was a touchstone for a generation of epistemologists. Gettier 1963 is probably the most influential epistemology paper published in the twentieth century. Moore 1959 advances a refreshingly direct response to skepticism. Russell 1948 prefigured many developments in epistemology in the second half of the twentieth century. Wittgenstein 1969 responds to Moore, and proposes that some empirical propositions are beyond doubt, because they make doubt possible. Sellars 1956 is a challenging and

enigmatic approach to knowledge, combining elements of coheren-
tism and foundationalism, internalism and externalism. Goodman
1954 introduces the “new riddle of induction” and the method of
reflective equilibrium.

Austin, John L. 1961. Other minds. In *Philosophical papers*. Edited
by J.O. Urmson and G.J. Warnock. Oxford: Oxford University
Press.

Articulates a version of what later came to be called a “relevant alterna-
tives” theory of knowledge, which enables a distinctive response to
radical skeptical challenges.

Chisholm, Roderick. 1989. *Theory of knowledge*, 3 ed. Englewood
Cliffs, New Jersey: Prentice-Hall.

The first edition of this extremely influential text was published in
1966, the second edition in 1977, and the third in 1989. It was a touch-
stone for an entire generation of philosophers studying the theory of
knowledge. It defends a subtle version of internalist foundationalism,
and alternates between accessible, concise prose and formidable for-
malism.

Gettier, Edmund. 1963. Is justified true belief knowledge? *Analysis*
23: 121–3.

Gives two counterexamples to the view that knowledge is justified true
belief. Perhaps the most influential epistemology paper published in
the twentieth century.

Goodman, Nelson. 1954. *Fact, fiction and forecast*. Cambridge,
Mass.: Harvard University Press.

Famously presents the “new riddle of induction”: the quality of induc-
tive inferences depends on more than their form. Some predicates can
be “projected” from a sampling, whereas others cannot – what distin-
guishes them? Also advocates the philosophical method that came to be
known as “reflective equilibrium”: we should balance our considered
judgments about particular cases and general principles. Beautifully
written.

Moore, G.E. 1959. *Philosophical papers*. New York: Collier.

Includes Moore’s famous proof of an external world (here is one hand;
and here is another; so external objects exist), and the classic
“Moorean” response to skepticism (it’s more plausible that I know that
this is a pen than that all the skeptic’s premises are true). A model of
clarity and precision. Enormously influential.

Russell, Bertrand. 1948. *Human knowledge: Its scope and limits*. London and New York: Routledge.

This tour de force prefigures many significant developments in epistemology during the second half of the twentieth century, including the Gettier problem, externalism, and a bi-level epistemology that distinguishes animal from reflective knowledge.

Sellars, Wilfrid. 1956. Empiricism and the philosophy of mind. In *Science, perception and reality*. Atascadero, Calif.: Ridgeview Publishing, 1963.

Extremely challenging and influential. The foundation of all our worldly knowledge is the set of perceptual and inferential dispositions instilled in us through “a long history of acquiring piecemeal habits of response to various objects in various circumstances.” Knowledge requires that you know that you’re reliable.

Wittgenstein, Ludwig. 1969. *On certainty*. Edited by G.E.M. Anscombe and G.H. von Wright, and translated by Denis Paul and G.E.M. Anscombe. Oxford: Blackwell.

Primarily a response to Moore’s (1959) work on common sense and anti-skepticism. Certain empirical propositions (“hinge” propositions, our “inherited background” that constitutes our “picture of the world”) are beyond doubt, because they make doubt possible. Doubt presupposes certainty. Some belief is “groundless.” Enigmatic, suggestive, extremely influential, and at times hilarious.

7. The Nature of Knowledge

One central question in epistemology is ‘What is knowledge?’, and the contemporary literature presents us with an abundance of different answers. Goldman 1985 views knowledge as reliably produced true belief. Williamson 2000 argues that knowledge is the most general factive mental state. Kornblith 2002 argues that knowledge is a natural kind. Craig 1990 argues that to know something is to be an approved source of information on it. Plantinga 1993 claims that knowledge is true belief produced by properly functioning faculties. Klein 2003 argues that knowledge is genu-

inely undefeated justified true belief. Harman 1973 proposes that knowledge is justified true belief not essentially based on falsehood. Zagzebski 1996 claims that knowledge is an ethical concept, and identifies it with true belief arising out of intellectual virtue.

Goldman, Alvin. 1985. *Epistemology and cognition*. Oxford: Oxford University Press.

Knowledge is reliably produced true belief. Reliability is understood in terms of a good truth-over-falsehood ratio in actual and relevant counterfactual circumstances. A refined statement of Goldman's enormously influential process reliabilism, replete with subtle responses to a range of objections, all developed with an eye toward better integrating epistemology with cognitive science.

Williamson, Timothy. 2000. *Knowledge and its limits*. Oxford: Oxford University Press.

Knowledge is a mental state, indeed the most general factive stative propositional attitude. We cannot state a non-circular set of necessary and sufficient conditions for knowledge. Knowledge may be used to analyze other notions, such as belief and evidence. Perhaps the most influential epistemology book published in the last fifty years.

Kornblith, Hilary. 2002. *Knowledge and its place in nature*. Oxford: Oxford University Press.

Knowledge is a natural kind, one already long studied by cognitive ethologists (i.e. scientists who study animal cognition). We should be studying knowledge, not the concept of knowledge. This needn't drain epistemology of normativity.

Craig, Edward. 1990. *Knowledge and the state of nature*. Oxford: Clarendon Press.

Drawing inspiration from "state of nature" theories of political authority, it argues that the point of our concept of knowledge is to flag approved sources of information.

Plantinga, Alvin. 1993. *Warrant and proper function*. Oxford: Oxford University Press.

Knowledge is warranted true belief. Warranted belief is belief produced by a faculty functioning properly, in an appropriate environment, according to a design plan successfully aimed at truth.

Klein, Peter. 2003. Knowledge is true, non-defeated justified belief. In *Essential Knowledge*. Edited by Steven Luper. New York:

Longman.

Knowledge is genuinely undefeated justified true belief. A defeater is a fact that, when combined with the evidence that justifies your belief, fails to justify your belief. A genuine defeater is a defeater that defeats, but not by rendering a false proposition plausible.

Harman, Gilbert. 1973. *Thought*. Princeton: Princeton University Press.

Knowledge is justified true belief that is not essentially based on any falsehoods.

Zagzebski, Linda. 1996. *Virtues of the mind: an inquiry into the nature of virtue and the ethical foundations of knowledge*. Cambridge: Cambridge University Press.

Knowledge is best understood as an aretaic ethical concept, amenable to analysis broadly in line with Aristotelian virtue ethics. Definitions of knowledge should be “theoretically illuminating and practically useful.” Knowledge is true belief “arising out of” intellectual virtue. “Normative epistemology is a branch of ethics.”

8. The Structure of Knowledge

If you know something, then you must do so based on a reason. That reason might be some further bit of knowledge. But then it must be based on a reason too. If it too is a bit of knowledge, then it too must be based on a reason. And so on. A regress threatens. Must this process ever end, and if so, how does it end? Infinitists deny that it must end: every bit of knowledge is based on an infinite, non-repeating set of reasons. Coherentists say that it can circle back upon itself, provided it has the right overall structure. Foundationalists say that it ends when we reach knowledge based on something other than knowledge or belief, and usually they cite experience, introspection or rational insight as sources of this foundational knowledge. BonJour 1985 contains a detailed and influential defense of coherentism, along with a withering critique of founda-

tionalism, whereas BonJour 2003 contains a withering critique of coherentism, along with a detailed and subtle defense of foundationalism. Kvanvig 2003 provides an excellent summary of coherentism. Klein 2005 provides an admirable and succinct argument for infinitism. Haack 1993 argues for a hybrid account, blending elements of foundationalism and coherentism.

BonJour, Laurence. 1985. *The structure of empirical knowledge*. Cambridge, Mass: Harvard University Press.

The most sophisticated and influential defense of coherentism about empirical knowledge.

BonJour, Laurence. 2003. *Epistemic justification: internalism vs. externalism, foundations vs. virtues* (with Ernest Sosa). Malden, Mass.: Blackwell.

Motivates and then sketches an ambitious foundationalist project, which tries to recover our knowledge of the external world by explaining how it can be inferentially known based on the content of sensory experience.

Cohen, Stewart. 2002. Basic knowledge and the problem of easy knowledge. *Philosophy and phenomenological research* 65: 309–329.

Presents the problem of easy knowledge. A theory has a basic knowledge structure if it allows us to gain knowledge from a source S prior to our knowing that S is reliable. We could then use our knowledge from source S, along with reflection on the fact that S is the source, to conclude that S is reliable. This is counterintuitive. Holistic coherentism provides some relief from the problem.

Haack, Susan. 1993. *Evidence and inquiry*. Oxford: Oxford University Press.

Advocates an irenic position, “foundherentism,” which blends elements of foundationalism and coherentism. To help illustrate her view, Haack uses the very apt and memorable metaphor of a crossword puzzle.

Klein, Peter. 2005. Infinitism is the solution to the regress problem. In *Epistemology: contemporary debates*. Edited by Matthias Steup and Ernest Sosa. Malden, Mass.: Blackwell.

Argues that infinitism is the only solution to the regress problem, because knowledge is inconsistent with circular reasoning, which rules

out coherentism, and inconsistent with arbitrariness, which rules out foundationalism. (Also worth reading in the same volume are the accompanying critique by Carl Ginet, and the further exchange between Klein and Ginet.)

Kvanvig, Jonathan. 2007. Coherentist theories of epistemic justification. *Stanford encyclopedia of philosophy*, fall 2007 edition. Edited by Edward N. Zalta.

<<http://plato.stanford.edu/archives/fall2007/entries/justep-coherence/>> Accessed 18 May 2010.

An accessible and skillful overview, which also develops some resources for coherentism by explaining how it can accommodate the role experience plays in generating knowledge.

Pryor, James. 2000. The skeptic and the dogmatist. *Noûs* 34: 517–549.

A careful statement and defense of a modest form of foundationalism. It is very plausible that some beliefs are foundationally justified, and no objection to this plausible claim ultimately succeeds. Follows G.E. Moore's thought that you can know something even if you can't prove it.

9. The Value of Knowledge

Beginning with Plato's *Meno*, philosophers have wondered about the value of knowledge. Some central questions here include, is knowledge more valuable than true belief, and if so, why? Is knowledge more valuable than any proper subset of its parts which falls short of knowledge (e.g. justified true belief), and if so, why? Kaplan 1985 argues that knowledge is no better than justified true belief. Kvanvig 2003 argues that knowledge is not better than every proper subset of its parts. Sosa 2003 argues that knowledge is more valuable than mere true belief, because of the way knowledge is produced. Zagzebski 2003 argues that virtue epistemology is ideally placed to explain knowledge's value. Hawthorne and Stanley 2008

tie knowledge's value to its role in licensing action. Haddock, Millar and Pritchard 2009 is a collection of cutting-edge essays on epistemic value. Riggs 2008 explains the "value turn" in recent epistemology. Pritchard 2007 is an excellent survey of recent work on the topic.

Haddock, Adrian, Alan Millar and Duncan Pritchard, eds. 2009. *Epistemic value*.

A collection of new, state-of-the-art essays on epistemic value.

Hawthorne, John and Jason Stanley. Knowledge and action. *Journal of philosophy* 105: 571–590.

Knowledge's value derives from its distinctive role in licensing action.

Kvanvig, Jonathan. 2003. *The value of knowledge and the pursuit of understanding*. Cambridge: Cambridge University Press.

Argues that knowledge isn't more valuable than any proper subset of its conditions that falls short of knowledge. Philosophers have mistaken the value of understanding for that of knowledge.

Kaplan, Mark. 1985. It's not what you know that counts. *Journal of Philosophy* 82: 350–363.

Proper reflection on the Gettier problem reveals that knowledge is no better than justified true belief.

Pritchard, Duncan. 2007. Recent work on epistemic value. *American Philosophical Quarterly* 44: 85 – 110.

An excellent survey by a leader in the field.

Riggs, Wayne. 2008. The value turn in epistemology. In *New waves in epistemology*. Edited by Vincent F. Hendricks and Duncan Pritchard. New York: Palgrave Macmillan.

"Value-driven" epistemology takes epistemology to be a normative domain, tasked in part with identifying epistemic values, the items that can bear such values, and the relations by which such values are transmitted.

Zagzebski, Linda. 2003. The search for the source of epistemic good. *Metaphilosophy* 34: 12–28.

Knowledge must possess value independently of how it was produced, and indeed independently of anything "external" to it. Virtue episte-

mology is ideally placed to explain knowledge's distinctive value.

10. Knowledge as Achievement

An increasingly popular view is that knowledge is best thought of as an intellectual achievement. The basic idea is that knowledge is true belief due to the operation of an appropriate disposition. Greco 2010, Sosa 2007 and Zagzebski 1996 promote variations on this theme. Riggs 2007 and Pritchard 2009 develop the underlying idea in interestingly different ways, focusing on the significance of epistemic luck. Lackey 2009 summarizes and further advances an important challenge to the idea of knowledge as achievement, by arguing that we don't necessarily deserve credit for what we know.

Greco, John. 2010. *Achieving knowledge*. Cambridge: Cambridge University Press.

Integrates and supersedes Greco's influential work over the previous decade. Knowledge is a type of "success from ability" or "achievement." A non-deontological, non-evidentialist, externalist and contextualist virtue epistemology that is sensitive to knowledge's social and practical dimensions, and promises to answer a host of philosophical questions. Sure to be a touchstone for researchers for years to come.

Lackey, Jennifer. 2009. Knowledge and credit. *Philosophical Studies* 142: 27–42.

Pace a major theme in contemporary virtue epistemology, we do not deserve credit for everything we know. Lackey presents counterexamples involving testimonial and innate knowledge, and defends her argument from several recent objections.

Pritchard, Duncan. 2009. Knowledge and understanding. In *The nature and value of knowledge* (with Alan Millar and Adrian Haddock). Oxford: Oxford University Press.

The authoritative statement of Pritchard's sophisticated "anti-luck virtue epistemology," which aims to gain all the advantages of a safety-based response to skepticism on the one hand, and virtue epistemology on the other, while avoiding many problems afflicting these views respectively.

Riggs, Wayne. 2007. Why epistemologists are so down on their luck. *Synthese* 158: 329–344.

Why does knowledge preclude luck? The hypothesis that knowledge is “credit-worthy true belief” (i.e. “an accomplishment”) best explains why knowledge precludes luck. The hypothesis also explains why knowledge is better than true belief.

Sosa, Ernest. 2007. *A virtue epistemology: apt belief and reflective knowledge, volume 1*. Oxford: Oxford University Press.

Develops a general theory of performance assessment, and shows how to understand knowledge as a particular kind of intellectual performance: “apt belief,” or belief whose truth manifests the believer’s cognitive competence. Sosa deploys this theory to explain the nature of epistemic normativity and illuminate a host of other epistemological issues, including the nature of intuitions and skepticism.

Zagzebski, Linda. 1996. *Virtues of the mind: An inquiry into the nature of virtue and the ethical foundations of knowledge*. Cambridge: Cambridge University Press.

Virtue epistemology, properly informed by virtue ethics, can illuminate epistemic normativity, epistemic value, justification, knowledge, understanding and wisdom. Knowledge is true belief “arising out of” intellectual virtue.

11. Knowledge as Norm

Recently there has been much work arguing that knowledge functions as a norm, and this has led to new thinking about the value of knowledge, and its relation to other important things. Sartwell 1992 argues that knowledge is the norm of inquiry, and uses this to argue that knowledge is mere true belief. Williamson 2000 argues that knowledge is the norm of assertion. Weiner 2007 provides a helpful overview of the arguments for and against various views about the epistemic norms of assertion. Sutton 2007 argues that knowledge is the norm of belief. Stanley and Hawthorne 2008 argue that knowledge is the norm of action.

Hawthorne, John and Jason Stanley. 2008. Knowledge and action. *Journal of philosophy* 105: 571–590.

Defends the view that knowledge is the norm of action – for any decision for which it is relevant whether p , you ought to act on p only if you know that p .

Sartwell, Crispin. 1992. Why knowledge is merely true belief. *Journal of Philosophy* 89: 167–180.

Knowledge is the goal of inquiry. And we want nothing more from inquiry than true belief. So knowledge is true belief.

Sutton, John. 2007. *Without justification*. Cambridge, Mass.: MIT Press.

Defends the view that knowledge is the norm of belief. A belief is justified only if it amounts to knowledge.

Weiner, Matt. 2007. Norms of assertion. *Philosophy compass* 2: 187–195.

A helpful, succinct summary of the major literature on the knowledge norm of assertion, along with an overview of its competitors.

Williamson, Timothy. 2000. *Knowledge and its limits*. Oxford: Oxford University Press.

Chapter 11 contains Williamson's influential argument for the knowledge account of assertion, "One must: assert p only if one knows p ." Williamson also advances the view that knowledge is the norm of belief.

12. Skepticism

Skepticism looms large in contemporary epistemology, as it has in Western philosophy for at least the past five hundred years. Greco 2008 includes a set of essays that together provide a comprehensive overview of historically important figures, as well as contemporary developments. Unger 1975 offers a simple and powerful argument for skepticism. Frances 2005 argues that we face a skeptical threat from the fact that experts disagree with us on much of what we believe. Stroud 1984 is a sympathetic presentation of Cartesian skept-

ticism, which has had noteworthy influence on subsequent work. DeRose 1995 concisely presents a skeptical puzzle about our knowledge of the external world, as well as DeRose's influential contextualist treatment of the problem. Dretske 2005 argues that we best respond to skepticism by rejecting the claim that knowledge is closed under known entailment. Williams 1996 argues that skepticism is rooted in a badly mistaken theory of epistemological facts.

DeRose, Keith. 1995. Solving the skeptical problem. *Philosophical review* 104: 1–52.

DeRose's highly influential semantic contextualist response to external world skepticism. Effective skeptical challenges affect the linguistic context so that we can no longer truly say 'I know that I have hands', but this leaves untouched the truth of our ordinary knowledge ascriptions. Preserves epistemic closure in all contexts.

Dretske, Fred. 2005. The case against closure. In *Contemporary debates in epistemology*. Edited by Matthias Steup and Ernest Sosa. Malden, Mass.: Blackwell.

Responds to skepticism by denying that knowledge is closed under known entailment. We cannot knowledgeably infer the "heavyweight implications" of the things we know.

Greco, John, ed. 2008. *The Oxford handbook of skepticism*. Oxford: Oxford University Press.

A comprehensive collection of new articles on skepticism. Broad in its coverage of historically important arguments and figures, as well as contemporary developments, it's sure to be a touchstone for researchers and students alike.

Frances, Bryan. 2005. *Skepticism comes alive*. Oxford: Oxford University Press.

Experts accept many things that are inconsistent with much of what we think we know. And we're in no position to rule out expert opinion, which undermines our warrant for much of what we think we know. Intelligent and pleasant reading.

Stroud, Barry. 1984. *The significance of philosophical skepticism*. Oxford: Oxford University Press.

A sympathetic discussion of skepticism, heavily inspired by Descartes's *Meditations*. Some seemingly obvious principles appear to lead inevita-

bly to extreme skepticism. But extreme skepticism is hard to take seriously, and may even be unintelligible. It's not clear that there's any satisfactory resolution.

Unger, Peter. 1975. *Ignorance: A case for skepticism*. Oxford: Oxford University Press.

You know something only if it's all right for you to be absolutely certain of it. But it's never all right for anyone to be absolutely certain of anything. So no one ever knows anything.

Williams, Michael. 1996. *Unnatural doubts: epistemological realism and the basis of skepticism*. Princeton: Princeton University Press.

The most influential contemporary neo-Wittgensteinian response to skepticism. Skepticism is rooted in a badly mistaken theory of epistemological facts. Beliefs have no epistemic status independently of the topic under discussion, the direction of our inquiry and the broader needs and interests of those involved in the discussion.

13. Contextualism and Invariantism

Epistemic contextualism is the view that the truth-conditions of knowledge ascriptions, such as 'S knows that P', are context-sensitive. Roughly, the attributer's context determines how strong an epistemic position S must be in with respect to P in order for 'S knows that P' to express a truth in the attributer's mouth. Thus an attributer in one context could truly say 'S knows that P', while simultaneously an attributer in a different context could refer to the same person at the same time with respect to the same proposition, and truly say 'S does not know that P'. Epistemic invariantism denies that the truth-conditions of knowledge ascriptions are context-sensitive. Cohen 2005 is a highly accessible introduction to the principles of and motivation for contextualism. DeRose 2009 is a detailed exposition and defense of DeRose's influential version of

contextualism. Fantl and McGrath 2009, Hawthorne 2004 and Stanley 2005 all defend versions of invariantism that link knowledge to practical matters in one way or another. Turri 2010 argues that epistemic invariantism, when coupled with contextualism about speech acts, withstands contextualist arguments. Schaffer 2004 argues that we should prefer a contrastivist theory of knowledge to a contextualist theory of ‘knowledge’.

Cohen, Stewart. 2005. Contextualism defended. In *Contemporary debates in epistemology*. Edited by Matthias Steup and Ernest Sosa. Malden, Mass.: Blackwell.

A highly accessible statement of Cohen’s influential version of contextualism, which also responds to some popular objections. See also the paper by Early Conee, and the further exchange between Cohen and Conee, in the same volume.

DeRose, Keith. 2009. *The case for contextualism*. Oxford: Oxford University Press.

Integrates and updates DeRose’s enormously influential work on contextualism over the previous two decades. It provides two main positive arguments for contextualism, one from the ordinary use of ‘knows’, and another from the knowledge account of assertion. DeRose also defends contextualism from a host of objections.

Fantl, Jeremy and Matthew McGrath. 2009. *Knowledge in an uncertain world*. Oxford: Oxford University Press.

Presents an innovative argument that links knowledge to practical stakes and action, vindicating both invariantism and fallibilism. Even supposing that you and I both believe p and have the same evidence for p, if it matters more to you than it does to me whether p is true, then it might turn out that I know p, whereas you don’t.

Hawthorne, John. 2004. *Knowledge and lotteries*. Oxford: Oxford University Press.

Presents “sensitive moderate invariantism” as an alternative to traditional forms of invariantism, and the semantic contextualism of DeRose and Cohen. Knowledge is sensitive to the subject’s “practical environment.”

Schaffer, Jonathan. “From Contextualism to Contrastivism.” *Philosophical studies* 119: 73–103.

Provides a wealth of linguistic and philosophical arguments for thinking that knowledge is a three-place relation: to know is to know that P rather than Q, where context serves to fix the relevant contrast (i.e. the value for 'Q'). Argues that contrastivism is more principled, precise and predictively successful than standard forms of contextualism.

Stanley, Jason. 2005. *Knowledge and practical interests*. Oxford: Oxford University Press.

Presents a detailed critique of the linguistic evidence for contextualism, of the sort defended by Cohen and DeRose, and defends "interest-relative invariantism" against both contextualism and relativism. Knowledge is sensitive to "practical facts about the subject's environment."

Turri, John. 2010. Epistemic invariantism and speech act contextualism. *Philosophical review* 119.1: 77–95.

Argues that invariantists can overcome arguments for contextualism about 'knows', as well as for skepticism, by embracing speech act contextualism, which is the view that which speech act you perform depends on features of your context.

14. Sources of Knowledge

Where does knowledge come from? Commonsense identifies various categories, refined by philosophy and cognitive science. Fish 2010 provides an introduction to the philosophy of perception, paying close attention to the epistemology of perception. McDowell 1994 argues for an influential view of the nature of perception, perceptual content, and perceptual knowledge. Carruthers 1992 makes the case for innate knowledge. Gertler 2008 covers the various views about how we know things about our own mind, including through introspection. Lackey 2008 provides a good, partisan entry into the literature on testimony as a source of knowledge. Senor 2009 is an accessible introduction to the epistemology of memory, including knowledge from memory. BonJour 1998 articulates a very

influential case that intuition must be a source of knowledge. Huemer 2005 likewise argues that intuition is a source of knowledge, specifically moral knowledge.

BonJour, Laurence. 1998. *In defense of pure reason: a rationalist account of a priori justification*. Cambridge: Cambridge University Press.

A vigorous defense of a moderate rationalist theory of knowledge. We have at least some substantive knowledge that doesn't depend on experience, but instead on intuition – what is often called rational a priori insight. If, upon careful consideration, a claim seems to be necessarily true, then that provides us with at least some good reason to think that it is true.

Carruthers, Peter. 1992. *Human knowledge and human nature: a new introduction to an ancient debate*. Oxford: Oxford University Press.

An insightful overview of the debate among empiricists, rationalists and nativists, which makes the case for innate knowledge, and demonstrates how it can be reconciled with empiricism. Carruthers has recently edited (with Stephen Laurence and Stephen Stich) a three-volume collection entitled *The Innate Mind*, which contains very recent work by an interdisciplinary team of scholars, which could be profitably read after, or even alongside, this introduction.

Fish, William. 2010. *Philosophy of perception: a contemporary introduction*. New York: Routledge.

An introduction to the general philosophy of perception, with good coverage of core epistemological issues.

Gertler, Brie. 2008. Self-knowledge. *Stanford encyclopedia of philosophy*, fall 2008 edition. Edited by Edward N. Zalta. <<http://plato.stanford.edu/archives/fall2008/entries/self-knowledge/>>. Accessed 26 May 2010.

An excellent overview of the major theories of self-knowledge, including the unmediated observation, inner sense, transparency, and expressivist models, among others.

Huemer, Michael. 2005. *Ethical intuitionism*. New York: Palgrave Macmillan.

A wide ranging and thorough defense of the view that we know at least some moral truths through intuition. This excellent work provides the reader with a thorough overview of the terrain in moral epistemology.

Lackey, Jennifer. 2008. *Learning from words: testimony as a source of knowledge*. Oxford: Oxford University Press.

We can gain knowledge from someone's words even if she doesn't know that what she is saying is true, so long as her words are a reliable indication of the truth on the matter at hand. Testimonial justification and knowledge doesn't reduce to other sorts of knowledge or justification, such as perceptual or inferential or some combination thereof. An excellent entryway into the knowledge on testimony and testimonial knowledge.

McDowell, John. 1994. *Mind and world*. Cambridge, Mass.: Harvard University press.

Argues that for perceptual experience to enable knowledge, and indeed for us to even think about the empirical world in the first place, experience must have propositional content – that is, it must have as its content the sort of thing we could judge to be true, e.g. that this is an apple.

Senor, Thomas D. 2009. Epistemological problems of memory. *Stanford encyclopedia of philosophy*, Spring 2010. Edited by Edward N. Zalta.

<<http://plato.stanford.edu/archives/spr2010/entries/memory-episprob/>> Accessed 25 May 2010.

A good, accessible introduction to the epistemology of memory.

15. Knowledge-wh

Philosophers typically ask what it is to have *knowledge that* something is the case. But aside from knowledge-that, there is also *knowledge-what*, *knowledge-when*, *knowledge-who*, *knowledge-why*, *knowledge-where*, and *knowledge-how*. These are collectively referred to as 'knowledge-wh'. What is the nature of knowledge-wh, and how does it relate to knowledge-that? Ryle 1949 argued that knowledge-how is different from knowledge-that, and that knowledge-how has a certain kind of priority over knowledge-that. Stanley and Williamson 2001 claim otherwise, arguing that knowledge-how is just a special kind of knowledge-that. Fantl 2008 provides a

helpful overview of the debate about the relationship between knowledge-that and knowledge-how. Schaffer 2007 argues that knowledge-that reduces to knowledge-wh.

Fantl, Jeremy. 2008. Knowing-how and knowing-that. *Philosophy compass* 3: 451–470.

An excellent overview of the literature about the relationship between knowledge-how and knowledge-that from Ryle 1949 to Stanley and Williamson 2001. Distinguishes different grades of knowledge how.

Ryle, Gilbert. 1949. *The concept of mind*. Chicago: Chicago University Press.

Famously argues that knowledge-how differs from, and is in some important sense prior to, knowledge-that. See chapter 2.

Schaffer, Jonathan. Knowing the answer. 2007. *Philosophy and phenomenological research* 75.2: 383–403.

Offers a unified view of knowledge that, who, what, where, when, how and why. All knowledge is question-relative. To know that P is to know that P, as the true answer to question Q. Context sets the value for 'Q'. Marshals an impressive number of arguments based on linguistic data.

Stanley, Jason and Timothy Williamson. Knowing how. *Journal of Philosophy* 98: 411–444.

Argues that, pace Ryle, knowledge-how really is a kind of knowledge-that.

16. Approaches to Knowledge

We find many different approaches to knowledge in contemporary philosophy. Goldman 2002 explains naturalized epistemology's motivation and some applications. Tanesini 1999 provides an introduction to feminist epistemology. Greco and Turri 2009 offers an overview of virtue epistemology. Hendricks 2007 provides an introduction to formal epistemology, its methods, and its relation to mainstream epistemology. Fuller 2002 accessibly introduces the field of social epistemology. The website for the Experimental Epis-

temology Research Group is a good resource for keeping current on developments in the branch of experimental philosophy focusing specifically on knowledge and epistemology more broadly.

Experimental Epistemology Research Group.

<<http://eerg.buffalo.edu/>>. Accessed 25 May 2010.

A helpful website for keeping up to date on the new and burgeoning field of experimental philosophy, a branch of experimental philosophy. James Beebe directs the research group.

Fuller, Steve. 2002. *Social epistemology*, 2 ed. Bloomington, Indiana: Indiana University Press.

A comprehensive and accessible introduction to the field of social epistemology, emphasizing its relation to naturalized epistemology, as well as its normativity.

Goldman, Alvin. 2002. The sciences and epistemology. In *The Oxford handbook to epistemology*. Edited by Paul K. Moser. Oxford: Oxford University Press.

Distills the project of naturalized epistemology, and how it relates concretely to the cognitive and social sciences.

Greco, John and John Turri. 2009. Virtue epistemology. *Stanford encyclopedia of philosophy*, spring 2010 edition. Edited by Edward N. Zalta.

<<http://plato.stanford.edu/archives/spr2010/entries/epistemology-virtue/>>. Accessed January 2010.

Provides historical and topical discussion of the central themes and figures of virtue epistemology.

Hendricks, Vincent F. 2007. *Mainstream and formal epistemology*. Cambridge: Cambridge University Press.

A thoughtful introduction to formal epistemology and how it contrasts with mainstream epistemology, with an emphasis on the underlying “forcing” techniques they share in common when responding to skepticism, and the shared interest in justification, inference and reliability.

Tanesini, Allesandra. 1999. *An introduction to feminist epistemologies*. Malden, Mass.: Blackwell.

Introduces the motivation for and main tenets of feminist epistemology in its several varieties, including its critique of standard epistemological and scientific method and assumptions.

