

Introduction to Philosophy: Epistemology

INTRODUCTION TO PHILOSOPHY:
EPISTEMOLOGY

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The Rebus Community



Introduction to Philosophy: Epistemology by Guy Axtell; Brian C. Barnett; Todd R. Long; Jonathan Lopez; Daniel Massey; Monica C. Poole; William D. Rowley; K. S. Sangeetha; Brian C. Barnett (Book Editor); and Christina Hendricks (Series Editor) is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), except where otherwise noted.

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WHAT IS AN OPEN TEXTBOOK?

CHRISTINA HENDRICKS

An open textbook is like a commercial textbook, except: (1) it is publicly available online free of charge (and at low-cost in print), and (2) it has an open license that allows others to reuse it, download and revise it, and redistribute it. This book has a [Creative Commons Attribution](#) license, which allows reuse, revision, and redistribution so long as the original creator is attributed (please see [the licensing information for this book](#) for more information).

In addition to saving students money, an open textbook can be revised to be better contextualized to one's own teaching. In a recent study of undergraduate students in an introductory level physics course, students reported that the thing they most appreciated about the open textbook used in that course was that it was customized to fit the course, followed very closely by the fact that it was free of cost ([Hendricks, Reinsberg, and Rieger 2017](#)). For example, in an open textbook one may add in examples more relevant to one's own context or the topic of a course, or embedded slides, videos, or other resources. Note from [the licensing information for this book](#) that one must clarify in such cases that the book is an adaptation.

A number of commercial publishers offer relatively inexpensive digital textbooks (whether on their own or available through an access code that students must pay to purchase), but these may have certain limitations and other issues:

- Access for students is often limited to a short period of time;
- Students cannot buy used copies from others, nor sell their own copies to others, to save money;
- Depending on the platform, there may be limits to how students can interact with and take notes on the books (and they may not be able to export their notes outside the book, so lose access to those as well when they lose access to the book).

None of these is the case with open textbooks like the *Introduction to Philosophy* series. Students can download any book in this series and keep it for as long as they wish. They can interact with it in multiple formats: on the web; as editable word processing formats; offline as PDF, EPUB; as a physical print book, and more.

See the next section, [“How to Access and Use the Books,”](#) for more information on what the open license on this book allows, and how to properly attribute the work when reusing, redistributing, or adapting.

HOW TO ACCESS AND USE THE BOOKS

CHRISTINA HENDRICKS

We hope the books (or chapters in the books) will be adopted for introductory-level courses in philosophy, as part of required readings. You may use the books as they are, or create adaptations or ancillaries. One of the important benefits of the *Introduction to Philosophy* series is that instructors can mix and match chapters from various books to make their own customized set of readings for their courses.

Be sure to read [the licensing information](#) carefully and attribute the chapters or book properly when reusing, redistributing, or adapting.

Each book can be read online, and is also downloadable in multiple formats, from their respective book home pages (e.g., [Introduction to Philosophy: Ethics](#)).

- The .odt format can be opened by Open Office, Libre Office, or Microsoft Word. Note that there may be some issues with formatting on this format, and hyperlinks may not appear if opened with MS Word.
- The PDF files can be edited with Adobe Acrobat (the full program, not just the Reader) or printed out. The print version of the PDF does not have hyperlinks.
- The EPUB file can be loaded onto digital reading platforms like Adobe Digital Editions, Apple Books, and Kindle. It can also be edited using Pressbooks or tools like Calibre.
- Edits can be made using the XHTML format or via the Pressbooks XML format (for easier adaptation in Pressbooks).
- The book is also available for download as a Common Cartridge 1.1 file (with web links) for import into your learning management system (see [instructions for importing Common Cartridge files](#), from the Pressbooks User Guide).

The multiple editable formats allow instructors to adapt the books as needed to fit their contexts. Another way to create adaptations is to involve students in contributing to open textbooks. Students may add new sections to an adapted book, link to other resources, create discussion questions or quiz questions, and more. Please see Rebus Community's [A Guide to Making Open Textbooks with Students](#) for more information and ideas.

If you plan to use or adapt one or more books (or chapters), we'd love to hear about it! Please let us know on [the Rebus Community platform](#), and also on [our adoption form](#).

And if you have [feedback or suggestions about the book](#), we would really appreciate those as well. We have a separate [form for keeping track of issues with digital accessibility](#), so please let us know if you find any.

INTRODUCTION TO THE SERIES

CHRISTINA HENDRICKS

This book is part of the *Introduction to Philosophy* open textbook series, a set of nine (and counting?) open access textbooks that are designed to be used for introductory-level, survey courses in philosophy at the post-secondary level.

OVERVIEW OF THE SERIES

This set of books is meant to provide an introduction to some of the major topic areas often covered in introductory-level philosophy courses. I have found in teaching students new to philosophy that many struggle with the new ideas, questions, and approaches they find in introductory courses in philosophy, and that it can be helpful to provide them with texts that explain these in relatively straightforward terms.

When I began this project there were few textbooks that I was happy enough with to ask students to purchase, and even fewer openly licensed textbooks that I could pick and choose chapters from, or revise, to suit my courses. This series was created out of a desire to provide such resources that can be customized to fit different contexts and updated by instructors when needed (rather than waiting for an updated version from a publisher).

Each book is designed to be accessible to students who have little to no background in philosophy, by either eliminating jargon or providing a glossary for specialized philosophical terms. Many chapters in the books provide examples that apply philosophical questions or concepts to concrete objects or experiences that, we hope, many students are familiar with. Questions for reflection and discussion accompany chapters in most of the books, to support students in understanding what to focus on as they are reading.

The chapters in the books provide a broad overview of some of the main discussions and debates in the philosophical literature within a topic area, from the perspective of the chapter authors. Some of the chapters focus on historical approaches and debates, such as ancient theories of aesthetics, substance dualism in Descartes, or classical utilitarian versus Kantian approaches in ethics. Others introduce students to questions and topics in the philosophical literature from just the last few decades.

The books in the series are listed below (those without hyperlinks are still in production):

- *Aesthetics* (Ed. Valery Vinogradovs): chapters include ancient aesthetics; beauty in art and nature; the nature of art; art and emotions; art and morality; aesthetics and politics
- [Epistemology](#) (Ed. Brian Barnett): chapters include epistemic justification; sources of knowledge; skepticism; epistemic value, duty, and virtue; epistemology, probability, and science; social epistemology; feminist epistemologies
- [Ethics](#) (Ed. George Matthews): chapters include ethical relativism; divine command theory and natural law; ethical egoism and social contract theory; virtue ethics; utilitarianism; Kantian Deontology; feminist ethics; evolutionary ethics
- [Logic](#) (Ed. Benjamin Martin): chapters include what is logic?; evaluating arguments; formal logic; informal fallacies; necessary and sufficient conditions
- *Metaphysics* (Ed. Adriano Palma): chapters include universals; finitism, infinitism, monism, dualism, pluralism; the possibility of free action; experimental metaphysics
- [Philosophy of Mind](#) (Ed. Heather Salazar): chapters include Descartes and substance dualism; behaviourism and materialism; functionalism; qualia; freedom of the will
- [Philosophy of Religion](#) (Ed. Beau Branson): chapters include arguments for belief in God; reasons not to believe; arguments against belief from the cognitive science of religion; from philosophy of (mono)theism to philosophy of religions
- *Philosophy of Science* (Ed. Eran Asoulin): chapters include empiricism; Popper's conjectures and refutations; Kuhn's normal and revolutionary science; the sociology of scientific knowledge; feminism and the philosophy of science; the problem of induction; explanation
- *Social and Political Philosophy* (Eds. Sam Rocha and Douglas Giles): chapters include the ideal society; the state of nature and the modern state; human rights, liberty, and social justice; radical social theories

We envision the books as helping to orient students within the topic areas covered by the chapters, as well as to introduce them to influential philosophical questions and approaches in an accessible way. The books may be used for course readings on their own, or in conjunction with primary source texts by the philosophers discussed in the chapters. We aim thereby to both save students money and to provide a relatively easy route for instructors to customize and update the resources as needed. And we hope that future adaptations will be shared back with the rest of the philosophical community!

HOW THE BOOKS WERE PRODUCED

Contributors to this series have been crowdsourced through email lists, social media, and other means. Each of the books has its own editor, and multiple authors from different parts of the world who have expertise in the topic of the book. This also means that there will inevitably be shifts in voice and tone between chapters, as well as in perspectives. This itself exemplifies the practice of philosophy, insofar as the philosophical questions worth discussing are those that do not yet have settled answers, and towards which there are multiple approaches worthy of consideration (which must, of course, provide arguments to support their claim to such worth).

I have been thrilled with the significant interest these books have generated, such that so many people have been willing to volunteer their time to contribute to them and ensure their quality—not only through careful writing and editing, but also through extensive feedback and review. Each book in the series has between five and ten authors, plus an editor and peer reviewers. It's exciting to see so many philosophers willing to contribute to a project devoted to helping students save money and instructors customize their textbooks!

The book editors, each with expertise in the field of the book they have edited, have done the bulk of the work for the books. They created outlines of chapters that were then peer reviewed and revised accordingly, and they selected authors for each of the chapters. The book editors worked with authors to develop a general approach to each chapter, and coordinated timelines for their completion. Chapters were reviewed by the editors both before and after the books went out for peer review, and the editors ensured revisions occurred where needed. They have also written introductions to their books, and in some cases other chapters as well. As the subject experts for the books, they have had the greatest influence on the content of each book.

My role as series editor started by envisioning the project as a whole and discussing what it might look like with a significant number of philosophers who contributed to shaping it early on. Overall, I have worked the Rebus Community on project management, such as developing author and reviewer guidelines and other workflows, coordinating with the book editors to ensure common approaches across the books, sending out calls for contributors to recruit new participants, and updating the community on the status of the project through the Rebus Community platform. I have reviewed the books, along with peer reviewers, from the perspective of both a philosopher who teaches introductory-level courses and a reader who is not an expert in many of the fields the books cover. As the books near publication, I have coordinated copyediting and importing into the Pressbooks publishing platform (troubleshooting where needed along the way).

Finally, after publication of the books I and the book editors will be working on spreading the word about them and encouraging adoption. I plan to use chapters from a few of the books in my own Introduction to Philosophy courses, and hope to see many more adoptions to come.

This project has been multiple years in the making, and we hope the fruits of our many labours are taken up in philosophy courses!

PRAISE FOR THE BOOK

NOAH VALDEZ AND KELE DOUGLAS KELI'IMAKEKAUONU'UANUOKONA PERKINS

“Brian Barnett’s meticulously crafted collection is everything that an introduction to epistemology should be: ferociously erudite and stunningly perspicacious; concise and succinct, yet also expansive; and accessibly written, without forsaking rigor or complexity. In eight intellectually captivating and easy-to-read chapters, *Introduction to Philosophy: Epistemology* takes philosophy students through the basic questions of epistemology: “What is knowledge and what can we know?,” “What makes a belief reasonable, rational, or justified?,” and “What are the ultimate sources of knowledge or justification?” Barnett and the other chapter authors employ a medley of graphs, tables, and illustrations that make notoriously recondite concepts and problems clear, and each lesson ends with an assortment of different resources and tools for further study. Furthermore, each chapter contributes something new, interesting, and diverse to epistemology, and I am certain that these efforts will leave an indelible mark on Barnett’s readers. In short, I have the utmost respect for what Barnett and his authors have accomplished here, and I am positive that the reader will as well.”

– Noah Valdez, Doctoral Student, Cornell University

“As a teacher, I have a great appreciation for this text, which provides a wide range of different voices and perspectives over an even wider range of topics, but does so in a clear and well-organized format. Moreover, the text manages both a high level of accessibility to non-experts without sacrificing any of the rigor necessary at the college introductory level. Most important to an instructor, however, is the consistency with which the text provokes the reader to consider, and then reconsider, the issues upon which many apparently straightforward questions crucially depend. In doing so, this text naturally promotes the kind of critical thinking that is characteristic not only of much of the best work in the discipline of philosophy itself but also of the best pedagogical practices in general.”

– Kele Perkins, MA (CSU Long Beach); Instructor, Whittier High School & Long Beach City College

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BRIAN C. BARNETT AND CHRISTINA HENDRICKS

BRIAN C. BARNETT, BOOK EDITOR

A multi-year volunteer project, this book was the collaborative effort of a constellation of remarkable individuals who graciously lent their considerable time, energy, patience, and expertise to make it happen. First and foremost, the contributing authors and I acknowledge Christina Hendricks for envisioning the series and working relentlessly and masterfully in her multifaceted role as Series Editor to realize that vision. We also acknowledge Apurva Ashok, our Project Manager at The Rebus Foundation, whose knowledge, skill, and dedication were indispensable in coordinating efforts and ensuring steady progress through her willingness to step in anywhere and everywhere she was needed.

In the order of their chapters, I would like to recognize the authors for their exceptional work: Todd R. Long, K. S. Sangeetha, Daniel Massey, Guy Axtell, Jonathan Lopez, William D. Rowley, and Monica C. Poole. The revision process required the difficult task of fine-tuning drafts to meet a delicate balance of rigor, accessibility, and concision. The perseverance overwhelmingly paid off, culminating in submissions that I could not be more honored to include, and which will benefit students and instructors indefinitely into the future.

At the earliest stages of the project, I profited greatly from insightful comments by Jill Fellows, Adriano Palma, and Nathan Nobis on my initial draft of the book outline. In the later stages, the authors and I were aided tremendously in our chapter revisions by the astute feedback on the book manuscript from our peer reviewers: Kele Perkins, Noah Valdez, and Joseph Shieber.

My gratitude goes to Guy Axtell—an esteemed epistemologist whom we are fortunate to count as one of our authors—for his trial run of the book in his epistemology course at Radford University. I likewise extend gratitude to my students in several classes at St. John Fisher College and SUNY Geneseo for being my first audience for teaching select chapters. In both cases, the positive student reception conveyed the reassuring validation that this book accomplished its overarching aims: to be engaging, thought-provoking, resourceful, and accessible.

As she has done for my academic writing since early college, my dear friend and accomplished content

editor Linda Mills Boyd made helpful suggestions on most of the parts I've written for this volume. I also credit the inestimable influence of my philosophical mentors, in particular those who inspired my interest in epistemology and from whom I learned how to do epistemology well: Wayne Riggs, Jim Hawthorne, Linda Zagzebski, Rich Feldman, and Earl Conee. I draw from each of you perpetually in my writing, teaching, and thinking. This book is a case in point.

Last but far from least, I'm grateful to my friends and family, including my parents, Jane and Charles, and to Sheila, my partner in love and life. You are my guiding light. The unwavering support of each of you sustained me through this long-term endeavor, and I couldn't have done it without you.

Thank you to everyone who has taken this journey with me and seen it through—amidst the COVID-19 pandemic, no less! Our combined forces have managed to turn this project into a great success. The finished product is a text that fills the previous lacuna for a well-researched, comprehensive, contemporary yet historically grounded, engaging, accessibly written, and freely available introduction to one of the foundational branches of philosophy. I hope that teachers and students alike find the book not only valuable but also enjoyable. Happy reading, happy learning, happy thinking!

CHRISTINA HENDRICKS, SERIES EDITOR

I would like to thank the authors in this book for their patience and perseverance as we worked through the process of conceiving the book and getting it to publication. When I started the project that became this book series, I had no idea it would turn into nine separate books, nor did I really appreciate how long each book would take (particularly when working on several books at once). Finalizing this book during the COVID-19 pandemic also meant some delays. I am excited to see this book now published!

Special thanks to book editor Brian Barnett, who dedicated an enormous amount of time, energy, and passion to choosing authors, editing chapters, finding images to use in the text, and much more. He helped make already strong chapters even stronger, clearer, and more accessible for an introductory audience. I deeply appreciate his dedication to this book, his flexibility, attention to detail, patience when I take a while to get things done on my end, and just generally being wonderful to work with.

Also instrumental to the success of this book are the peer reviewers, Kele Perkins, Noah Valdez, and Joseph Shieber, who volunteered their time and expertise to read through a draft of the book and provide constructive comments and suggestions.

Jonathan Lashley has done an amazing job with the design of the book covers for this series, using original artwork by Heather Salazar (who is the editor for the [Philosophy of Mind](#) book in this series). The book covers are exceptionally well done, and really bring the series together as a whole.

Leanne Page has done excellent work copyediting the book. I am very grateful for her thorough and detailed efforts, which made a significant contribution to the readability and consistency of the final book. And thank you to Apurva Ashok for inputting and formatting the content into Pressbooks so that it looks and reads well. Apurva stepped in so that we could get the book published quickly during

a time when I was working on another book in the series, and I am very grateful for how much work she did in on a very short timeline!

When I started this project there were many discussions amongst philosophers from various parts of the world on the Rebus Community platform, and their ideas and suggestions contributed significantly to the final products. There were also numerous people who gave comments on draft chapter outlines for each book. Thank you to the many unnamed philosophers who have contributed to the book in these and other ways!

This book series would not have gotten beyond the idea stage were it not for the support of the Rebus Community. I want to thank Hugh McGuire for believing in the project enough to support what we both realized at the time was probably much bigger than even our apprehensions about its enormity had led us to believe. Zoe Wake Hyde was instrumental in getting the project started, particularly in helping us develop workflows and documentation. And I'm not sure I can ever thank Apurva Ashok enough for being an unfailingly enthusiastic and patient supporter and guide for more months than I care to count. She spent a good deal of time working with me and the book editors to figure out how to make a project like this work on a day-to-day level, and taught me a great deal about the open publishing process. Apurva kept me on track when I would sometimes drop the ball or get behind on this off-the-side-of-my-desk project. She is one of the best collaborative partners I have never (yet!) met in person.

Finally, I want to thank my family for understanding how important this work is and why I have chosen to stay up late so many nights to do it. And for their patience on the many groggy, pre-coffee mornings that followed.

A NOTE ON THE COVER ART

Heather Salazar was kind enough to create the cover art for the *Introduction to Philosophy* series. Her wonderful piece for this book, titled *Here Is a Hand*, was inspired by G. E. Moore's famous "Proof of an External World" from his 1939 essay by that title. Moore's "proof" is featured in Chapter 4 of this volume. The cover design for this book and others in the series is by Jonathan Lashley.

Moore's Hands

I can prove now, for instance, that two human hands exist. How? By holding up my two hands, and saying, as I make a certain gesture with the right hand, "Here is one hand," and adding, as I make a certain gesture with the left, "and here is another." And if, by doing this, I have proved ipso facto the existence of external things, you will all see that I can also do it now in numbers of other ways: there is no need to multiply examples.

—G. E. Moore

["Proof of an External World"](#)

In *Philosophical Papers* (New York: Collier Books, 1962): 144–8.

INTRODUCTION TO THE BOOK: WHAT IS EPISTEMOLOGY?

BRIAN C. BARNETT

Learning Outcomes

Upon completion of the book introduction, readers will be able to:

1. *Define* “epistemology.”
2. *Identify* the central questions of epistemology.
3. *Distinguish* the epistemic from the non-epistemic.
4. *Trace* the development of epistemology as it gradually expanded beyond its traditional boundaries through several major “turns” or shifts, each establishing an important new branch of the field.

Epistemology: An Explanation in Verse

*Epistemology! “What can I know?”
And why does it matter and how does it go?
This stuff is important for one cannot travel
The road of the wise if one can’t unravel
The true from the false, the sense from the babble
The solid and firm from the dribble and drabble. (xxi)*

— Jacob M. Held
“Unsettled Meddling: An Introduction in Verse”
In *Dr. Seuss and Philosophy: Oh, the Thinks You Can Think!*

PART I – TRADITIONAL EPISTEMOLOGY: CHAPTERS 1–4

Epistemology—as traditionally construed—is the study of knowledge. Its name derives from the

Greek *epistēmē*, which translates as “knowledge” or “understanding.” This study includes four main questions:

- The What-Is-It Question: What *is* knowledge?
- The Justification Question: What makes a belief reasonable or rational or *justified*?
- The Source Question: What are the ultimate sources of knowledge (or justification)?
- The Scope Question: What, if anything, do (or can) we know?

Part I of this volume covers each question in turn. In [Chapter 1](#), Brian C. Barnett addresses the What-Is-It Question, beginning with Plato’s view that knowledge is “justified true belief” (to phrase it in standard modern terms). A justified belief is a belief backed by good reasons. More specifically, knowledge requires reasons that are indicative of the truth, as opposed to practical, aesthetic, or moral reasons. Truth-directed reasons (and the kind of justification they supply) are **epistemic**, meaning that they pertain to knowledge. Epistemic justification receives special attention in epistemology, in part because it is the component of knowledge unique to the field. In contrast, truth and belief are topics shared by other philosophical domains (truth in the philosophy of language and logic, and belief in the philosophy of mind).

The What-Is-It Question thus leads directly to the Justification Question. In [Chapter 2](#), Todd R. Long theorizes about epistemic justification, including “internalist” theories (in which justification is determined solely by factors internal to the mind) and “externalist” theories (which admit factors external to the mind). Internalists and externalists alike typically recognize both reason and experience as justificatory sources. But can all justification ultimately be traced to one fundamental source?

The Source Question dominated much of early modern British philosophy. In [Chapter 3](#), K. S. Sangeetha referees the classic dispute between “empiricists” (who take experience to be primary) and “rationalists” (who posit an innate rational capacity prior to experience) that culminated in Immanuel Kant’s synthesis of the two positions. Debates over the interpretation and success of Kant’s view triggered the (in)famous analytic-continental split in philosophy¹. These debates were also partly responsible for reinvigorating the ancient position of “skepticism,” or, significant doubt about our capacity for knowledge (or justification). This takes us to the Scope Question.

Skepticism comes in a variety of forms, ranging from “domain-specific skepticism” (doubts about, for example, religious or moral knowledge) to “global skepticism” (the view that we know nothing at all). In [Chapter 4](#), Daniel Massey spotlights an influential intermediate form: skepticism about a mind-independent world. After explaining the most popular argument for this “external-world skepticism” (owing to René Descartes), Massey assesses two prominent strategies for being skeptical about such skepticism.

PART II – EXPANDED EPISTEMOLOGY: CHAPTERS 5–8

A familiar fact about philosophy is that answers tend to generate further questions. Traditional

1. See Jones (2009) for a brief but insightful overview of the analytic-continental split.

epistemology is no exception. New puzzles emerged directly from the traditional project. New questions also arose when connections were established between epistemology and other areas of thought (both inside and outside of philosophy). Moreover, some epistemologists grew dissatisfied with traditional assumptions and priorities. These developments did not displace traditional epistemology as much as expand it. Part II of the volume is devoted to this expanded epistemology.

The traditional boundaries of epistemology were stretched in several new directions or “turns.” A “turn,” in the intended sense, is a major shift in the focus of an academic discipline to a new or previously underappreciated approach or topic. Turns need not occur in distinct historical succession, and they are not necessarily discipline-wide, but they are significant enough to have lasting impact. The **value turn** in epistemology revived Plato’s original motivation for pursuing the What-Is-It Question: to explain why knowledge is valuable². The expanded goal is to explain “epistemic value” generally (including the value of truth, justification, inquiry, and intellectual virtue). A full account of epistemic value must address the relationship between it and value in other domains (e.g., practical, aesthetic, and moral). The value turn thus brought epistemology and ethics into close dialogue and instigated the debate over the “ethics of belief.” Guy Axtell navigates these normative issues in [Chapter 5](#).

While some seek to connect epistemology with ethics, others prefer to make epistemology more rigorous by importing “formal” methods from linguistics, logic, and mathematics. An important development in this **formal turn** linked justification with the degree to which one’s belief is made probable by the evidence, which can be modeled by formulae (e.g., Bayes’s theorem) in the mathematical theory of probability. Applying this idea to empirical hypothesis testing results in a theory of scientific confirmation, which can be utilized in the philosophy of science. Jonathan Lopez “formalizes” epistemology and examines its scientific application in [Chapter 6](#).

Formal and value-driven epistemology initially inherited from traditional epistemology its focus on individuals considered in the abstract. This idealization ignores that people are epistemically affected by their social situatedness. We exchange knowledge with others, disagree with one another, and engage in collaborative inquiry and decision-making. Accounting for social dimensions yields the **social turn** in epistemology. William D. Rowley lays the foundations of “social epistemology” in [Chapter 7](#).

In its early phases, even social epistemology ignored “epistemic standpoint”—how one’s “social location” (e.g., gender, sexual orientation, race, ethnicity, culture, religion, dis/ability, economic status) influences one’s perspective on the world. Standpoint is epistemically significant because it shapes experience, how one thinks, the information to which one has access, and how others judge one’s credibility. Although feminist epistemologists brought epistemic standpoint to the fore, their work can provide a framework for epistemologies from a range of social locations. For this reason, we may take “feminist epistemologies” (plural) as representative, extending beyond feminist perspectives. Monica C. Poole concludes this volume in [Chapter 8](#) with an introduction to feminist epistemologies broadly construed.

2. I borrow the suggestion of a “value turn” in epistemology from Riggs (2008), which I here extend to other significant developments in epistemology.

As epistemology expanded, real-world applications became increasingly apparent. While epistemologists historically fixated on highly theoretical questions far removed from real life, some recent work attends to everyday problems: political/religious/moral disagreement, fake news, echo chambers, discerning experts from novices, ignorance-induced discrimination, communal standards for inquiry, and more. Since applied issues are best considered together with the epistemological theories suited to address them, this **applied turn** is exemplified not in its own chapter, but via examples that occur throughout this volume.

Epistemology Reconstructed

It should be clear by now that the expanded project far outstrips the traditional one. What is epistemology, then, exactly? Unfortunately, the traditional definition remains in common usage. But should philosophers of justification, inquiry, or understanding be expelled from the epistemological community if they don't also philosophize about knowledge per se? Surely not. Such philosophers consider themselves epistemologists, teach epistemology courses, give epistemology talks, publish in epistemology journals, and are counted as fellow epistemologists even by committed traditionalists. So, a more inclusive definition is desirable.

The key plausibly lies in the recognition that all epistemologists study subjects *pertaining* to knowledge in *some* respect or another, even if only loosely or indirectly. For example, justification is required for knowledge, the aim of inquiry is to achieve knowledge (or dispel ignorance), and intellectual virtues (e.g., understanding, curiosity, humility, and open-mindedness) facilitate inquiry. Knowledge may therefore continue to serve as the touchstone for *identifying* the relevant topics, even though one needs *neither to study nor to prioritize* knowledge itself. This shift is subtle but crucial: *Epistemology began as the study of knowledge, but it has become the study of the epistemic*³.

3. For an alternative attempt to characterize what I call “expanded epistemology,” see Steup and Neta (2020). On their approach, “epistemology seeks to understand one or another kind of ‘cognitive success’ (or, correspondingly, ‘cognitive failure’).” It would be a worthwhile exercise to compare and contrast the virtues and vices of their approach with the one offered here.

Questions for Reflection

1. The question “Does God exist?” is *not* an epistemological question. First explain why. Then identify four related questions that *are* epistemological—one for each of traditional epistemology’s four main questions.
2. Consider two scenarios, only one of which exhibits an *epistemic* reason for belief. Which one and why?
 - Scenario A: They believe that their favorite sports team will win the game—merely because they desperately want this to happen.
 - Scenario B: They believe that their favorite sports team will win the game—this time because their team has a better track record than the other team.
3. Name and describe the four “turns” in the history of epistemology. How did they—both individually and collectively—transform the field?
4. In what way is the shift from the traditional to the expanded definition of epistemology “subtle”? What does the expanded definition add? Why is this “crucial”?

REFERENCES

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PART I.

TRADITIONAL EPISTEMOLOGY

CHAPTER 1.

THE ANALYSIS OF KNOWLEDGE

BRIAN C. BARNETT

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Identify* the main types of knowledge, the relationships among them, and their distinguishing characteristics.
2. *Evaluate* analyses of concepts, in particular the traditional analysis of knowledge.
3. *Assess* the value of conceptual analysis, including its relevance to other topics in epistemology.
4. *Explain* the role of analysis in shaping the history of the field.

INTRODUCTION: CONCEPTUAL ANALYSIS

Knowledge is the central concept of traditional epistemology. But what *is* knowledge? This is the most basic question about the central concept, and so the appropriate starting place. Answers traditionally come in the form of **conceptual analysis**: a set of more basic concepts out of which the analyzed concept is built, arranged to form a definition. The concept “square,” for example, is analyzable into components such as “four-sided figure,” “right-angled,” and “equilateral.”¹ Our focus here is the analysis of knowledge. But we’ll also consider critiques of this focus, which yield useful insights and prompt new directions of inquiry. The chapter closes with a reflection on the value of epistemological conceptual analysis.



Plato as depicted in Raphael's *The School of Athens* (detail) via Wikimedia Commons. This work is in the public domain.

KINDS OF KNOWLEDGE

Before undertaking analysis, our target concept needs refinement. “Knowledge” is an umbrella term, capturing a family of related meanings:

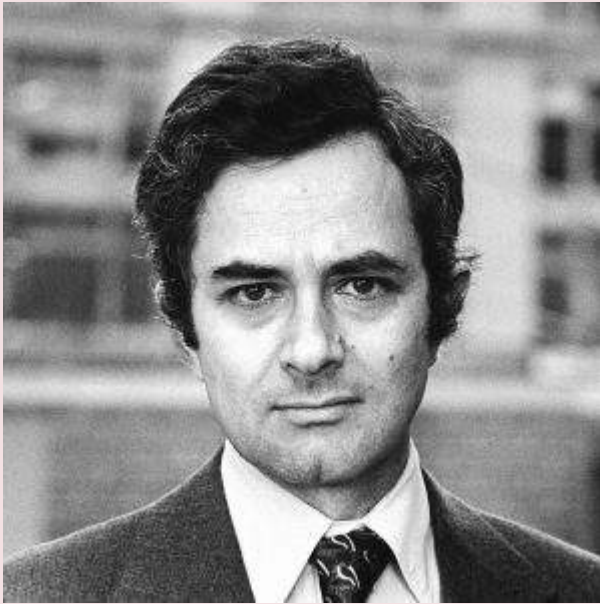
1. **Ability (procedural) knowledge:** knowledge-*how* (e.g., I know how to ride a bike.)
2. **Acquaintance knowledge:** knowing a person, place, or thing (e.g., Plato knew Socrates. He also knew Athens well.)
3. **Phenomenal knowledge:** knowing “what it’s like” to have a given experience (e.g., Stella knows what strawberries taste like.)
4. **Propositional knowledge:** knowledge-*that* (e.g., Everybody reading this chapter knows that it is about knowledge.)

What the first three have in common is that they require direct experience with their objects. I know how to ride a bike because I’ve had practice; I don’t know how to fly a plane, since I lack training—despite having memorized the manual. Plato knew Socrates and Athens because he studied under the man and lived in the city; Plato knew neither Homer nor London because he neither met the poet nor visited the place. Plato knew *of* Homer, and propositions *about* him, but nothing concerning London. Stella knows what strawberries taste like (having eaten them before), but not what it’s like to be a bat given her lack of batty experiences (see Box 1).²

1. See K. S. Sangeetha, [Chapter 3](#) of this volume, for more on concepts and their relationship to truth and knowledge.

2. The view expressed here (that experiential knowledge does not reduce to propositional knowledge) has been widely (though not universally) held ever since Ryle’s pioneering paper on ability knowledge (1949).

Box 1 – Nagel's Bat



[Thomas Nagel](#) by Nagelt via Wikimedia Commons. License: [CC BY-SA 4.0](#)

In his influential 1974 paper “What Is It Like to Be a Bat?” philosopher Thomas Nagel explains that for something to be conscious, “there is something it is like to *be*” that thing—“something it is like *for*” that thing to be (436). Thus, consciousness essentially has a “subjective character” in that it requires a first-person “point of view.” As such, no conscious state can be fully grasped or explained from the purely objective third-person perspective (nor from a God’s eye “view from nowhere”). From this, Nagel draws a metaphysical conclusion: that the mental cannot be reduced to the physical. More pertinent to this chapter is an important epistemological implication: that we cannot *know* “what it’s like” to have experiences that are radically unlike those we’ve actually had. He uses his now-famous bat example to illustrate:

Bats, although more closely related to us than those other species, nevertheless present a range of activity and a sensory apparatus so different from ours that the problem I want to pose is exceptionally vivid (though it certainly could be raised with other species). Even without the benefit of philosophical reflection, anyone who has spent some time in an enclosed space with an excited bat knows what it is to encounter a fundamentally alien form of life.

I have said that the essence of the belief that bats have experience is that there is something that it is like to be a bat. Now we know that most bats (the microchiroptera, to be precise) perceive the external world primarily by sonar, or echolocation, detecting the reflections, from objects within range, of their own rapid, subtly modulated, high-frequency shrieks. Their brains are designed to correlate the outgoing impulses with the subsequent echoes, and the information thus acquired enables bats to make precise discriminations of distance, size, shape, motion, and texture comparable to those we make by vision. But bat sonar, though clearly a form of perception, is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine. This appears to create difficulties for the notion of what it is like to be a bat. (438)

Whereas Eastern and some recent Western epistemology emphasize experiential knowledge (see Monica C. Poole on feminist epistemologies in [Chapter 8](#) of this volume), traditional Western epistemology emphasizes propositional knowledge.³ Such knowledge can be expressed with a *that*-clause, which expresses a **proposition**: a statement or claim with a **truth value** (that is, something

3. Zen emphasizes non-conceptual, non-dualistic awareness. Daoism emphasizes *wuwei* (action that flows freely and spontaneously from one’s nature without interruption by propositional deliberation). Confucianism emphasizes learning-*how* over (or in addition to) learning-*that*, as well as ritual participation to achieve ethical cultivation (training one’s emotions and habits of action) rather than propositional argumentation about ethical truths.

that is either true or false).⁴ The proposition that this chapter is about knowledge is true; the proposition that it's about waterfall photography is false.⁵

Propositional knowledge can be interpersonally communicated or acquired by evidence or argument. By contrast, experiential knowledge can be neither argued for nor linguistically transferred. Try as I might to describe the taste of strawberries, it's not the same as knowing what they're like. Someone who has never had the pleasure will still learn something new upon their first bite.

Despite the importance of experiential knowledge, we'll explore the traditional approach in this chapter. For brevity's sake, then, "knowledge" here refers to the propositional variety.

THE TRADITIONAL ANALYSIS

The most influential analysis of propositional knowledge derives from Plato (ca. 428–347 BCE). In his *Meno* dialogue, Plato's character Socrates (modeled after his real-life teacher) argues that "knowledge differs from correct opinion in being tied down" by "an account of the reason why" ([ca. 380 BCE] 2009, 98a).⁶ Table 1 shows how this translates into modern parlance.

Table 1 - Platonic to Modern Translation

Platonic Term	Modern Term	Abbreviation
Opinion	Belief	B
Correct	True	T
Account of the reason why (<i>logos</i>)	Justification	J
Knowledge	Knowledge	K

This translation yields the **traditional analysis of knowledge**, or "**JTB**" analysis: knowledge is "justified true belief." On this account, there are three concepts that pairwise overlap, and knowledge is the convergence of all three (see Figure 1). Let's consider each in turn.

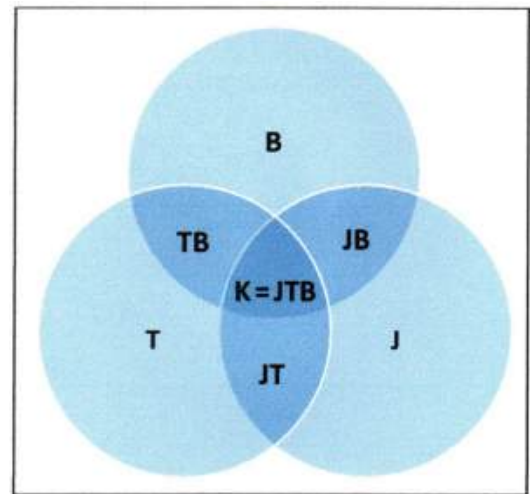


Figure 1 - The Traditional Analysis

A. Belief

Belief (specifically **belief-that**⁷) means accepting the proposition as true (equivalently: *assenting* to

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- The "that" is sometimes omitted from the *that*-clause in statements about propositional knowledge, but such sentences can always be accurately rephrased with the "that" included: "Readers know this chapter is about knowledge" means "Readers know *that* this chapter is about knowledge."
 - I have omitted knowledge-*wh*: knowledge *-who*, *-what*, *-where*, *-when*, *-why*, *-which*, *-whether*, and *-how*. Some subtypes of knowledge-*wh* are identical to those I already cover (e.g., knowledge-*how*). The others arguably reduce to the kinds I cover. For example, to know-*why* is to know-*that*, where the *that*-clause expresses a correct answer to the *why*-question. I have also omitted self-knowledge. The inscription at the Oracle at Delphi directed readers to "Know thyself." Clearly, this is more than acquaintance with oneself. It is arguable whether it consists merely in knowing certain truths about oneself, or requires some special self-illuminating experience. Finally, there is no discussion in this chapter about "group knowledge" (e.g., what the scientific community knows)—a recent and controversial topic in social epistemology. Traditional epistemology focuses on an individual's knowledge.
 - The *Meno* is Plato's earliest presentation of this analysis, but there it is very brief. In *Theaetetus*, a later dialogue widely considered his greatest epistemological work, Plato more fully develops the same analysis of knowledge ([ca. 369 BCE] 2013, 206c–210b).
 - This is belief-*that*, which takes propositions as objects. I set aside belief-*in*, which can have non-propositional objects (e.g., "I believe

the proposition, *thinking* that it's true, *agreeing* with it, or holding it as an *opinion/view*). Belief can range from a slight leaning to moderate assurance to absolute certainty—the entire positive half of the confidence spectrum (see Jonathan Lopez on degrees of belief in [Chapter 6](#) of this volume).⁸ Belief excludes both the negative half of the spectrum (**disbelief**, or belief that the proposition is false) and the neutral, halfway point (**suspending/withholding judgment**).⁹ Belief, disbelief, and suspension are the main **doxastic attitudes** (stances on the truth value of a proposition).

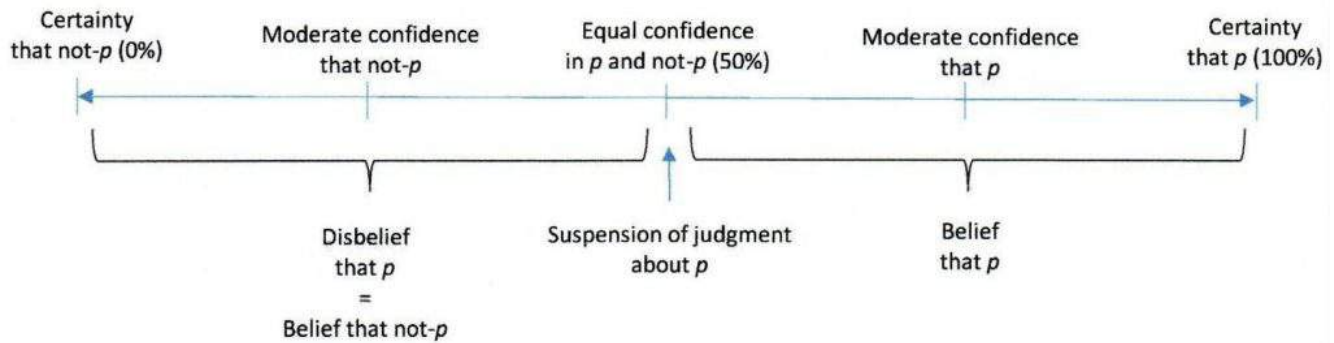


Figure 2 - The Doxastic Spectrum

On the traditional analysis, knowing a proposition requires believing it. If a truth you've never thought of is "out there" awaiting discovery, you don't know that truth. If you are now thinking about it but form no opinion (suspension), you still do not know. This is why, when asked about the truth value in cases of suspension, the natural answer is "I don't know." And if you have settled your opinion *against* the proposition (*disbelief*), you again do not know it. Suppose I ask, "Do you know that Marie Curie led the underground railroad?" You won't say, "Yes, I do know that." Instead, you'll deny it, perhaps offer a correction. This reaction is not best explained by what is *actually* correct but by what you *believe* is correct, since you would respond in the same manner if the question were instead about a matter on which you were convincingly misled (say, by reading a misprint in a seemingly trustworthy textbook).

Bringing these points together gives us a process-of-elimination argument. So far, we have determined that you lack knowledge of (a) propositions you have not considered, (b) propositions on which you suspend judgment, and (c) propositions you disbelieve. The only remaining candidates for

in you."). Belief-*in* isn't purely cognitive. It has an affective component (e.g., hope or trust). This is an important distinction in religious epistemology, since many religious believers emphasize the kind of faith that requires belief-*in* rather than mere belief-*that*.

8. Compare Moon (2017), who argues that beliefs do not come in degrees. Even assuming that they do come in degrees, it may be that the kind of belief required for knowledge is restricted to a specific degree of confidence. For example, if one is barely inclined to think a proposition is true, perhaps one doesn't really *know* it's true. Alternatively, perhaps one does know—just not *for sure*. This approach would have "knowing for sure" as only one type of knowing generally. Aside from matters of degree, a further unclarity pertaining to belief arises when we aren't thinking about a proposition (e.g., Do you know that $2 + 2 = 4$ while you're asleep?). One may say that we hold unconscious (stored) beliefs. Another possibility is that we have mere dispositions to believe, which are activated into beliefs when the propositions come to mind. This is a contentious issue. But whatever one thinks of it, one can plausibly say the same thing about justification and knowledge (unconscious justification/knowledge vs. a disposition to have justification/knowledge when prompted). So, there shouldn't be a problem here for the analysis of knowledge per se.

9. Rather than pinpoint suspension of judgment to an exact 50% degree of confidence, some epistemologists prefer to extend it to a range (perhaps one with vague or contextually determined boundaries). It is also possible to be off the doxastic map altogether, avoiding even suspension—for example, if one has never even considered the proposition in question.

knowledge are propositions you do believe, such as that Marie Curie did *not* lead the underground railroad but Harriet Tubman *did*.

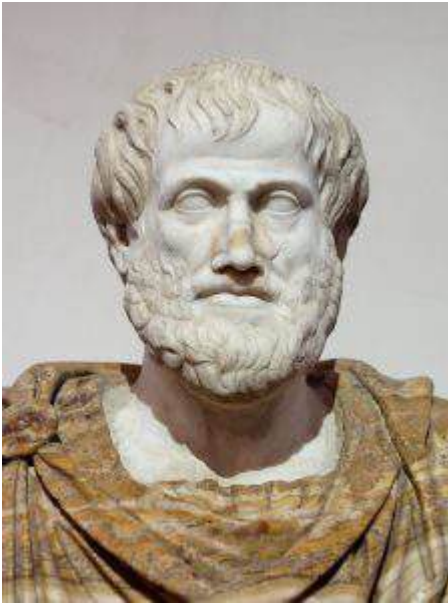
A word of caution: people often speak loosely. **Loose talk** is language that is inaccurate by strict literal standards—such as metaphor, hyperbole, approximation, and ellipsis (word omission). This phenomenon sometimes causes mistaken evaluations of conceptual analyses, since the aim of analysis is the strict literal truth. Consider the expression “I don’t believe it; I know it.” A natural interpretation is that one doesn’t *merely* believe it, where “merely” is omitted to achieve brevity (and for rhetorical effect). We use such elliptical speech routinely. Consider: “She’s not good at math; she’s great!” But if she’s not even good, she’s not great, since greatness is a degree of goodness. Let’s rephrase: “She’s not *just* good at math; she’s great.” This illuminates what was previously disguised—that the “not” negates a lesser degree rather than goodness altogether.¹⁰

B. Truth

Belief is one thing; truth is another. There are unbelieved truths (the earth was an oblate spheroid long before it occurred to anyone) and believed falsehoods (such as Ptolemy’s geocentric model of the universe). The problematic phrase “true for me” confuses this issue. Ptolemy’s view may have been “true for him,” but this merely means he accepted it, not that it was actually true.

Acceptance and truth can come apart because human opinion is not a perfect measure of reality. We are capable of mistakes. Acknowledging this is not a weakness but an expression of **intellectual virtues** (such as intellectual honesty and humility) that motivate inquiry, open-mindedness, and collaboration. Just as we sometimes recognize our own mistakes, we sometimes recognize that others are mistaken. The situation may require speaking up about this (in an appropriate fashion); in other cases, we should keep it to ourselves. Either way, prospective falsehood is why it’s a bad idea to believe just anything anyone says. We often need to reflect for ourselves and formulate beliefs independently. Between intellectual deference and autonomy lies virtuous inquiry. (For more on social dimensions, see William D. Rowley on social epistemology in [Chapter 7](#) of this volume.)

10. Compare Radford (1966), who abandons orthodoxy by challenging the belief requirement.



[Bust of Aristotle](#) from the Ludovisi Collection.
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But what is truth? In Aristotle’s famous words, “To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true” ([ca. 350 BCE] 2009, 1011b). This is an ancient precursor to a popular modern starting point—the **correspondence theory**: a proposition is true if it corresponds to reality, and false otherwise. While there are alternative theories, it is possible to interpret them as different takes on “correspondence.” Details won’t matter here.¹¹

Only true beliefs can qualify as knowledge on the traditional analysis. Suppose you claim to know the answer to a trivia question. The answer is revealed and you got it wrong. Your friend exclaims, “See, you didn’t know it!” This reaction is perfectly natural because false belief isn’t knowledge. This explains why teachers often grade factual questions based on whether students give correct answers: their purpose in such cases is to test knowledge, and whether students answer correctly is such a test—precisely because of the truth condition on

knowledge.

Again, loose talk skews intuition. Several books and a Weird Al Yankovic album are titled *Everything You Know Is Wrong*. Even Mark Twain purportedly quipped, “It ain’t what you don’t know that gets you into trouble. It’s what you know for sure that just ain’t so.” However, Shakespeare’s King of Denmark had it right when he proclaimed, “what we know must be” ([ca. 1600] 1998, I.ii.98). For, if it ain’t so, you don’t really know it. At best, you merely *think* you know it. Knowledge is **factive** (entails truth), whereas belief is non-factive (possibly wrong).¹²

C. Justification

We’ve seen that knowledge requires true belief. But even true beliefs can be unjustified. A **justification** is a good reason for belief (see Todd R. Long in [Chapter 2](#) of this volume for theoretical accounts). On the traditional analysis, justification is necessary for knowledge. To understand why, suppose you are playing trivia again (apparently, you’re hooked):

11. For an overview of the various theories of truth, and their pros and cons, see Glanzberg (2018).

12. Compare Hazlett (2010), who abandons orthodoxy by challenging the truth requirement on knowledge.

“What is the name of those tiny bumps on blackberries?”

Your guess: Choice D – Druplets.

Desperate to win, you rationalize: “Yeah, this *has* to be right.”

The answer is revealed, prompting your proud reaction: “See, I *knew* it!”

Your friend remarks, “No, you didn’t. You were just guessing!”

Your friend’s response is natural. Absent good reason, one does not know.

Plato offered an analogy. Consider the statues of the mythical inventor and sculptor Daedalus, which were said to be so realistic they could run away. Unless they were tethered down, you never knew where to find them. Mere true beliefs are akin to the untethered statues: they are sometimes found by sheer luck. Justification is similar to the tethering: it anchors true beliefs in good reasons, turning them into knowledge. Another oft-used analogy is that justification functions as a good road map to the desired destination (truth). Knowledge, like the successfully navigated journey, like the tethered statues, enjoys a kind of stability. This makes evident why justification plays a crucial role in the value of knowledge (see Guy Axtell in [Chapter 5](#) of this volume on epistemic value).



Daedalus and Icarus by Antonio Canova.
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Here, too, loose talk misleads: “The thermometer ‘knows’ the temperature”—but surely lacks justification. The justification condition is also dubious if inflated, as in Plato’s description. Knowledge doesn’t require “an account of the reason *why*” a belief is true so much as a reason *that* it’s true.¹³ One can know *that* a computer works but be clueless *why*. A reason-*that* need not be sophisticated. No argument or scientific demonstration is necessary. Just turn on the computer and see it working, recall this from memory, or be told by the technician testing it. Nor do good reasons have to be perfect. The concept *good* is weaker than *perfect* (maximally good). If perfect reasons were required, justification would be impossible (mere mortals are always subject to error).¹⁴ Tolerating imperfect reasons fits everyday judgments. In grade school, I had reason to believe Newtonian physics: I had testimony from trustworthy teachers and textbooks and no reason to suspect oversimplification. My belief was justified—a belief I now recognize as false given quantum mechanics and Einsteinian relativity. Justified beliefs can be false—a view called **fallibilism about justification** (to be distinguished from **fallibilism about knowledge**).¹⁵ For this reason, a separate truth condition on knowledge is not redundant.

13. To be fair, in his *Theaetetus*, Plato’s Socrates considers—and rejects—three ways of defining “account” (*logos*), sometimes translated “explanation” (206c–210b). The dialogue ends (210b–d) with no solution.

14. Global skeptics embrace this conclusion, but very few are attracted to such a strong form of skepticism. See Daniel Massey in [Chapter 4](#) of this volume for an overview of skepticism.

15. It may be that knowledge requires an especially high level of justification (knowledge-level justification). If so, there are justified beliefs that aren’t knowledge-level justified. The view that justified beliefs can be false is *fallibilism about justification*. The view that even knowledge-level justified beliefs can be false is *fallibilism about knowledge*. This form of fallibilism is likewise plausible: you know you are reading this sentence right now despite the small chance that you’re merely dreaming somehow. Or do you? Explore [Chapter 4](#) (Massey on skepticism) to consider this further.

Another challenge to the justification condition is the common attribution of knowledge to infants and (non-human) animals. Are such attributions mere loose talk? It's unclear. Do infants and animals have a kind of weak justification? Difficult to say. Perhaps they know without justification. If so, we can distinguish two kinds of knowledge. Infants and animals have **lightweight knowledge** (true belief) but lack **heavyweight knowledge**—the kind we seek beyond mere correct opinion, where guessing and poor reasoning are precluded (Hawthorne 2002). The traditional analysis is meant to capture this heavyweight variety.

Table 2 – Justification: The Fine Print

It is a simplification to equate the justification condition on knowledge with having good reasons. This table summarizes the standard fine print.

The justification condition on knowledge requires:	Explanation	Examples
Belief that is properly based on ...	It is possible to have a justification but fail to use it. One might instead base one's belief on something unjustified. Knowledge requires believing <i>because of</i> good reasons.	I know a mathematical proof of the Pythagorean theorem. But suppose I don't care about that. I like the word "Pythagorean" and have an odd habit of believing anything appealingly expressed. My belief would not be properly based.
good epistemic reasons ...	Pragmatic (prudential) reasons are considerations that provide a practical benefit. Pragmatic reasons provide pragmatic (prudential) justification . Knowledge, specifically its epistemic justification component, requires epistemic reasons (ones that are truth-directed).	I believe my favorite sports team will win because the thought makes me happy. This is a pragmatic reason, not epistemic: it won't help me know who will win. If I discover the game has been rigged in my team's favor, I won't be happy. This reason is not pragmatic, but it is epistemic: it could give me knowledge of who will win.
of sufficient strength ...	Good epistemic reasons can be weak (e.g., making the proposition more slightly probable than not). Knowledge may require sufficiently strong justification (though how this degree is determined is up for debate).	There is a 51% chance that the next marble randomly drawn from the urn will be blue. I have a weak epistemic reason but do not <i>know</i> that it will be blue.
that are undefeated.	Even strong epistemic reasons can be outweighed or undermined by competing reasons (defeaters). If so, one's justification is defeated. Only undefeated justification can supply knowledge.	I see the flower before me. It appears rose-colored. I have strong epistemic reason for believing it is rose-colored—until I realize someone has planted rose-colored glasses on my face. My initial reason is defeated, and I don't know whether the flower is really rose-colored (even if luckily it is).

COUNTEREXAMPLES TO THE TRADITIONAL ANALYSIS



[Edmund L. Gettier III](#) by DaveGettier via Wikimedia Commons. License: [CC BY-SA 4.0](#)

Since justification seems to distinguish mere true belief from (heavyweight) knowledge, its addition completes the analysis—or so it seemed to many for 2400 years! The JTB analysis became Western philosophical heritage until Edmund Gettier (1927–2021) with his three-page article in 1963.¹⁶

Gettier argued against the traditional analysis by **counterexamples** (examples that refute). His counterexamples are cases of JTB that aren't knowledge. Since the original examples are intricate, we will consider more straightforward examples with the same gist. Such examples are called **Gettier cases**.

You're driving through sheep country. Passing a field, you seemingly see a sheep and think, "There's a sheep in the field." Normally, this suffices for knowledge: you have a belief, a visual perception supports it, and there's a sheep in the field. The kicker: you're looking at a sheep-shaped rock, or a wolf in sheep's clothing!¹⁷ There's no way to tell from your angle. You have no reason to suspect. How is it true, then, that there's a sheep in the field? Unbeknownst to you, there happens to be one out of sight, in some

far-off corner of the field. Intuitively, you don't know there's a sheep.



[Sheep in a Field](#) by Sydney John Bunney via Wikimedia Commons. This work is in the public domain.

You may not initially share this intuition (I didn't at first). Sometimes intuitions need to be massaged or pumped before they surface. Here's an **intuition pump**. Consider a revised scenario: the real sheep has been removed. Since it was out of sight, you won't be able to detect any change. So, *for all you know*,

16. Plantinga (1992, 6) gives an alternative perspective on Gettier's historical significance: that it is mere contemporary "lore."

17. Chisholm's (1966) famous example.

nothing has changed. This means your state of knowledge should be the same as before. But in the revised scenario, it's clear you don't know: a sheep you don't know about can't help you know there's a sheep. Since your state of knowledge is untouched by the revision, you didn't know in the first place.



[Sheep-Shaped Amulet](#) from Peru. Photo by Coyau via Wikimedia Commons.



[Wolf in Sheep's Clothing](#) by SarahRichterArt via Pixabay. This work is in the public domain.

Thinkers had discovered this **Gettier problem** long before Gettier rediscovered it and made it famous, including the fourteenth-century Italian logician Peter of Mantua (Boh 1985). As early as the eighth century, the Buddhist philosopher Dharmottara devised a case: a desert traveler seeing a water mirage where there is real water underneath a rock has a justified true belief without knowledge (Dreyfus 1997). Spanning time and culture, such intuitions are widely and independently attested.

Box 2 – The Lottery Problem

Lottery cases present a further challenge to the JTB analysis. Suppose you have a ticket in the state lottery. You haven't checked whether it has won. But you reason that it's a losing ticket, given that it's only one of many millions. And you're right: you lost. You have a justified true belief, but as the New York State lottery motto says, "Hey, you never know."

Assuming the motto is apt, one might explain lack of knowledge via the JTB analysis by denying justification for the belief that you lost. Perhaps what's justified is merely the belief that you *probably* lost. Unfortunately, this subtle move doesn't clearly solve the problem so much as shift it to a separate problem for justification. Just as you can be wrong about whether you lost, you can be wrong about the probability of losing. So, the very same move plausibly suggests that what's justified is merely the belief that it's *probable that you probably* lost—a belief which then succumbs to the same problem all over again. An infinite regress is generated, leaving no belief unscathed.

Questions about justification aside, what's fundamentally troubling here is that like lottery beliefs, *all* beliefs seem based on some uncertainty (assuming fallibilism). Even after you check the ticket numbers, you could have misread them, they could have been misreported, or you are dreaming the results. **The lottery problem**, noted Gilbert Harman (1968), thus potentially threatens that we literally "never know"—*anything*.

One escape route is to maintain that we *do* know in lottery cases. After all, many people never bother with lottery tickets. When explaining why, it can seem natural to say something like, "There's never a real chance of winning those things. To be realistic, I *know* I'd lose." On the other hand, few would bother purchasing tickets if they *knew* they'd lose ahead of time. So, it appears, intuition can cut both ways.

What do *you* think about knowledge attributions in lottery cases?

REVISED ANALYSES



[Alvin Plantinga](#) by [Jonathunder](#) via [Wikimedia Commons](#). License: [CC BY-SA 3.0](#)

Gettier never published a solution to his own problem, but he did prompt others to search for a fourth condition on knowledge. The idea is that knowledge is JTB *plus* some extra condition that rules out the problematic cases—**JTB+ accounts**. There's insufficient space to review these proposals here. Suffice it to say that the extra condition remains elusive. Perhaps the problem is that JTB+ carves up knowledge such that the plus fails to match any natural concept. Cut out all the best-decorated pieces from a birthday cake; those portions may be nice. But the remainder has no identifiable shape.

Returning to Plato's footsteps, it may be more promising to seek what distinguishes true belief from knowledge—a **TB+ account**. As Alvin Plantinga defined the term, **warrant** is that "elusive quality or quantity enough of which, together with truth and belief, is sufficient for knowledge" (1993, v). It follows that knowledge is sufficiently warranted true belief, yielding an **sWTB account**. Now our question shifts: What is warrant?

This shift has potential advantages. First, while the sWTB approach is compatible with JTB+ accounts, it is also compatible with abandoning the justification condition, as some prefer.¹⁸ So, sWTB may bypass this debate. Second, there’s a kind of unity to warrant that justification lacks. To see this, we need to explore the concept of **epistemic luck**: the kind of luck that affects one’s epistemic status.

Let’s take stock of the various forms of epistemic luck. Gettier cases are ones in which good luck cancels bad (Zagzebski 1994). In the sheep case, you’re unluckily misled by a sheep shape over here, but luckily this mistake is corrected by a real sheep over there. By contrast, lottery cases seem better construed as involving a single element of chance. Luck in Gettier and lottery cases doesn’t threaten justification. So, plausibly, the luck involved in acquiring truth via unjustified belief (e.g., pure guesswork) is yet another kind.

Matters aren’t so simple. Some epistemic luck *contributes positively* to knowledge. Suppose you read a newspaper and tell me all about it. I attribute knowledge to you. When I find out that you only read it because you luckily won a free subscription, I am not inclined to retract my knowledge attribution. This knowledge is founded on *good* epistemic luck, the kind which enables one to be lucky to know. **Veritic luck** is the knowledge-precluding kind, which includes all of the various forms identified in the previous paragraph: Gettier-luck, lottery-luck, and lucky guessing (Engel 1992). One fascinating aspect of warrant, unlike justification, is that warrant rules out all and only veritic luck.

But what connection between belief and truth accomplishes this? What exactly are the conditions that secure warrant and exclude veritic luck, resulting in knowledge? We don’t have space to explore all candidates. I’ll mention one promising direction as an example, which draws the parallel between belief and action. Imagine an expert archer, Artemis (the Greek goddess of wild animals and the hunt, also known as the Roman goddess Diana). Her aim is perfect. Her release is perfect. The arrow is going to hit the bullseye—until Poseidon (the Greek god of the sea) mischievously slams his trident into the seabed, causing an earthquake, which shifts the target. A simultaneous gust of wind from the breath of Aeolus (the keeper of the winds) alters the arrow’s path, serendipitously correcting course. In this scenario, skilled Artemis sees success, yet her skill is not the reason for success. Whenever her success is instead attributable to skill, it is to her credit rather than luck. Similarly, perhaps knowledge is “credit for true belief” (Greco 2003). Knowledge is achieved when



[Diana as Personification of Night](#) by Anton Raphael Mengs via Wikimedia Commons. This work is in the public domain.

18. The justification condition was abandoned primarily by those who use “justification” in a certain way. There are those who inflate it (as described earlier). There are also those who inflate the concept of “good reasons” to something unnecessary for knowledge (usually externalists who understand reasons as exclusively internalist—see Todd R. Long in [Chapter 2](#) of this volume). Still others came to use “justification” so that it is by definition a requirement on knowledge—whatever distinguishes true belief from knowledge (rendering it equivalent to warrant). However, there is at least one way of using these terms that neither inflates nor trivializes. This is the most common usage, which I adopt in this chapter.

intellectual skill/excellence/virtue manifests in success (truth). So, knowledge is virtuously achieved true belief (Sosa 1980). From this observation originates **virtue epistemology**, the study of intellectual virtue and its relationship to knowledge.

CONCLUSION: POST-GETTIER EPISTEMOLOGY

Fast-forward several decades. Thousands of pages of ink have been spilled on the fourth condition, warrant, veritic luck, the knowledge-yielding virtues, and so forth. Some believe they have the solution. Others continue to pursue new solutions. Perhaps you will be the one to find it! For now, there's no agreed-upon answer. We live in a post-Gettier age: the problem no longer occupies center stage. Still, it inspired what came next.



[Professor Timothy Williamson](#) by Easyox via Wikimedia Commons. License: [CC BY-SA 4.0](#)

In the aftermath, some epistemologists came to suspect that knowledge is not subject to analysis—that no component can be added to (J)TB to get knowledge (Zagzebski 1994). If true, this doesn't render knowledge mysterious. Some concepts are basic, and perhaps knowledge is one of them. Yes, knowledge may entail JTB, but this does not mean it can be divvied into neat chunks that seamlessly reassemble without remainder. This gave birth to **knowledge-first epistemology**, advocated most prominently by Timothy Williamson (2000).

Others abandoned concern with knowledge altogether. What Gettier (and lottery) cases reveal, they say, is that knowledge is a concept with quirks. Who cares whether one is Gettiered (or “lotteried”)? What matters is acquiring the truth, having good reasons, or achieving intellectual virtue more generally (e.g., understanding, open-mindedness, curiosity, humility).¹⁹ Thus, virtue epistemologists began investigating the intellectual virtues in their own right (Zagzebski 1996).

Whatever tack one takes, there is one remarkable thing on which we can agree: Gettier's little paper permanently transformed the world of epistemology. It planted seeds in an ever-growing garden of fruitful new directions, producing some of the most fascinating work the field has seen: work on epistemic luck, epistemic value, intellectual virtue, and more. Thus, conceptual analysis, even when unsuccessful, reveals insight. Much of what follows in this book we owe in large part to that.

19. Others prefer to bite the bullet, dig in their heels, and revert to pre-Gettier tradition. Gettier and lottery, they say, have led us astray. Yes, intuitions favor them. But sometimes intuitions are wrong. By utilizing standard explanatory criteria for evaluating theories (e.g., overall theoretical simplicity, coherence, and other explanatory virtues), Weatherson (2003) argues that the JTB analysis is the best theory of knowledge and dismisses intuitive counterexamples as weird conceptual hiccups.

Questions for Reflection

1. Practice conceptual analysis. Choose a concept that seems relatively easy to break into a short list of components (e.g., a mathematical object). First, produce a simplistic analysis. Second, offer a counterexample to it. Third, revise the analysis to avoid the counterexample. Repeat the process until you are satisfied with the result.
2. Return to Figure 1. Notice that there are eight distinct bounded regions in the Venn diagram (including the space outside all three circles, which represents unjustified false non-beliefs). State one proposition that you can confidently place in each region.
3. In Philosophy 101, students are often reluctant to formulate their own philosophical views. One oft-cited reason is that the arguments for a given view, though strong, are not “definitive” or “conclusive.” They don’t “prove” the conclusion with “100% certainty.” Given what was said about justification in this chapter, what epistemological mistake(s) might this exhibit?
4. People often use sentences of the form “I don’t believe such-and-such.” Is it clear which doxastic attitude this expresses? Or is it ambiguous between multiple doxastic attitudes? Explain your answer.
5. This chapter states the JTB analysis as an identity: knowledge *is* justified true belief. Another common way to state a conceptual analysis is in terms of necessary and sufficient conditions: justification, truth, and belief are (individually) necessary and (jointly) sufficient for knowledge. Do you agree that they are necessary? Do you agree that they are sufficient? Explain and defend your answers. (For more on necessary and sufficient conditions, see [Chapter 5](#) of the Logic book in this series: [Introduction to Philosophy: Logic.](#))
6. Consider the following speech excerpt from former US Secretary of State Donald Rumsfeld (during a 2002 press conference about weapons of mass destruction and the War in Iraq):

As we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don’t know we don’t know. (Graham 2014)

Write a few paragraphs analyzing Rumsfeld’s claims about knowledge. What do they mean (setting aside political context)? Do you agree? Try to use examples and the JTB analysis (as an approximation to knowledge) to justify your view.

7. Construct your own Gettier case. Hint: Use Zagzebski’s recipe: (a) start with something you think you know but could possibly be wrong about; (b) add an element of bad luck to make your belief turn out false; then (c) add an element of good luck to cancel out the bad luck, making it true after all.
8. The Gettier Game: Whenever you or someone you know has good reason to believe something but finds out later that something weird happened that made it turn out to be true by some sheer act of dumb luck, record it on a sheet of paper. Do this until you’ve found several Gettier cases. Then reflect on the rate. How common do such cases occur in real life? Given the frequency, do you think JTB is at least a good working approximation for knowledge? (Note: In graduate school at the University of Rochester, my fellow grad students and I played something like this game. We kept a running tally in our department lounge of days since one of us had been Gettiered. As soon as it happened, we’d reset the tally to zero. It never got very high.)
9. Is “lucky knowledge” possible? If so, what types of luck are compatible with knowledge? How do these

types relate to the distinction between justification and warrant?

10. Explore the Hetherington article in the Further Reading section below. In your own words, explain (a) one of the proposed solutions to the Gettier problem discussed there and (b) one of the objections to that solution.
11. What is the value of analyzing concepts? Would an analysis of knowledge (whether partial or complete) be useful for answering other epistemological questions? Can failed attempts to provide an analysis nevertheless provide some illumination? Keep these questions in mind as you read further chapters in this volume.

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CHAPTER 2.

EPISTEMIC JUSTIFICATION

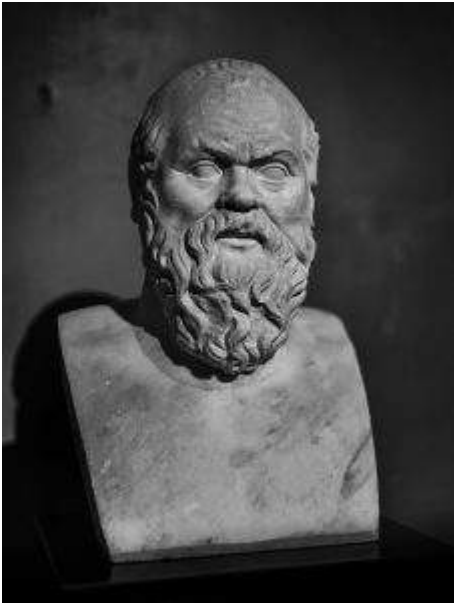
TODD R. LONG

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Identify* the distinctive epistemic kind of justification.
2. *Distinguish* internalist theories of epistemic justification from externalist theories of epistemic justification.
3. *Explain* the characteristic features of popular theories of epistemic justification.
4. *Recognize* an explanatory challenge for each theory of epistemic justification.

THE BASIC IDEA OF EPISTEMIC JUSTIFICATION



[Bust of Socrates](#) by Norto Mendez via Wikimedia Commons. License: [CC BY-SA 3.0](#)

In Plato's *Meno*, the ancient philosopher Socrates (ca. 469–399 BCE) raised the most important question in the history of epistemology: what must be added to true belief for a person to know something? Socrates was asking about what epistemologists call **epistemic justification**, which is widely thought to be a *requirement* for **propositional knowledge**. And it's not just any old requirement: epistemic justification provides a crucial "knowledge-contributing link" between a person and a person's believing that a proposition is true.¹ What this knowledge-contributing link amounts to is a matter of some controversy: debates among epistemologists are sometimes framed in terms of how correctly to interpret the truism that epistemic justification is "truth-conducive" (that is, justification makes the belief likely to be true).²

To appreciate its importance, consider an example: suppose a police officer knocks on Kim's door and informs Kim that her husband has been in a horrendous, massive automobile accident.

Kim immediately finds herself believing proposition *p*: "my husband has escaped unharmed." Kim believes *p* solely because she very much *wants* it to be true. Epistemologists agree that a belief based merely on wishful thinking isn't knowledge. In this case, Kim doesn't *know* that *p*, even if it happens to be true. What's missing is a knowledge-contributing (i.e., *epistemic*) justification for believing that *p* is true.

But what exactly is epistemic justification? In Plato's *Meno* (98a), Socrates says knowledge is true belief plus *an account of the reason why*. Socrates's idea helps us see that epistemic justification is supposed to be what makes believing **rational** (i.e., pertaining to reasons) in the way that counts toward knowledge. When you have epistemic justification for believing a proposition *p*, you thereby have a knowledge-contributing entitlement or right or warrant or good reason to believe that *p* is true.

This focus on *aiming at* or *getting at the truth* distinguishes epistemic justification from other kinds of justification. Perhaps the immediate comfort Kim's belief affords her gives her a "psychological" justification for believing *p*. Perhaps it's in Kim's best interest to believe *p* (in which case she has a "prudential" justification for believing *p*). Indeed, there may be many measures of the appropriateness of belief. Each measure has its particular *standard* for evaluation. The distinctive epistemic standard pertains to *rationality with respect to the truth*. Some notable approaches (discussed below) to explaining

1. However, the Gettier problem shows us that epistemically justified true belief is not entirely sufficient for knowledge. For information on the Gettier problem, as well as the various types of knowledge, see [Chapter 1](#) of this volume, "The Analysis of Knowledge" by Brian C. Barnett.

2. Internalists typically say that epistemically justified beliefs are in some sense *subjectively* likely to be true, whereas externalists typically say that such beliefs are in some sense *objectively* likely to be true. For more on this distinction, see the second section of this chapter, "Two Approaches: Internalism and Externalism."

this epistemic standard include evidentialism, strong/modest foundationalism, coherentism, explanationism, infinitism, virtue responsibilism, virtue reliabilism, process reliabilism, and proper functionalism.

Epistemic justification (hereafter, “justification”) comes in degrees. What degree is required for knowledge? Although there is no consensus, most epistemologists think knowledge-level justification has a high standard, but not so high that we rarely have knowledge. After all, many point out, “knowledge” is a term in ordinary use, and ordinary people think we often know things such as “that’s a tree” (via tree-ish visual experience), “two plus three equals five” (by thinking through the equation), and “I had breakfast this morning” (via vivid memory experience). If this common sense is correct, then having knowledge-level justification for believing p doesn’t require that p is true. This is because our justification for believing many propositions the commonsense view says we know is consistent with the falsity of those propositions. For example, suppose a tree-ish visual experience is the source of Jane’s knowledge that p : “there’s a tree.” Because a realistic *hallucination* could mimic Jane’s visual experience, the character of Jane’s tree-ish experience doesn’t guarantee p ’s truth. Therefore, the commonsense view implies **fallibilism**: it’s possible to be justified in believing a false proposition.³

Box 1 – Justification & The Doxastic Attitudes

Doxastic attitudes (stances on the truth value of a proposition) include belief, disbelief, and suspension of judgment. Discussions about epistemic justification often single out beliefs, as this chapter does. An important reason for this is that the justificatory status of the other attitudes can be defined in terms of the justificatory status of beliefs. This is because the attitudes themselves are inter-definable.

To **believe** p is to think that p is true (i.e., to think that reality is as p says it is).

To **disbelieve** p is to believe that p is false; thus, to disbelieve p is to believe not- p . So, it is justified to disbelieve p when it is justified to believe that p is false. For example, given modern scientific evidence, it is justified to disbelieve that the sun orbits the earth because it is justified to believe that the sun does *not* orbit the earth (that the reverse is instead the case).

To **suspend (or withhold) judgment** on p is to consider p yet neither believe nor disbelieve it: it is to be undecided on whether p is true or false. When you suspend judgment on p , you thereby suspend judgment on not- p . Accordingly, it is justified to suspend judgment on p when it is justified neither to believe p nor to disbelieve p .

Suspension of judgment raises an interesting question about justification. If one lacks reason to believe either p or not- p over the other, does this mean that one has two equally *rational options*—in other words, that it is justified for one to believe p and justified for one to believe not- p ? Although some find such “permissivism” tempting, there are powerful reasons to reject it. For example, suppose Detective Derby’s criminal investigation reveals two equally likely suspects (Devin and Kevin) in a one-person crime, and Derby declares Devin as guilty. We would rightly think Derby’s judgment is biased, because he had no better reason to think Devin is guilty than he had to think Kevin is guilty. Suspension of judgment appears to be the uniquely rational attitude to have when the scales of justification are evenly balanced. Thus, it’s worthwhile to consider what any justification theory implies about suspension of judgment.

3. This point does not imply that one can know a proposition to be true when that proposition is false. Truth is a requirement for knowledge, but it is a different requirement than justification.

TWO APPROACHES: INTERNALISM AND EXTERNALISM

Among epistemologists, the terms **internalism** and **externalism** are used in a variety of ways. Most fundamentally, *internalists* think the factors that make for justification entirely depend on what's going on *inside* a person's mind. In contrast, *externalists* think the relevant facts are settled by a person's mental states plus factors *outside* the person's mind.⁴ What's at stake? Well, internalists usually take their view to entail that, given one's mental states at a time, there's a necessary fact settling which doxastic attitude (if any) one is justified in having toward any proposition at that time. Thus, if two people were somehow exactly alike mentally, then they'd be exactly alike justificationally. *Externalists* disagree, claiming that whether a person with a particular set of mental states justifiably believes *p* is *contingent* on factors external to the person's mind. Accordingly, two people could be in exactly the same mental states and yet one's belief that *p* could be justified, and the other's belief that *p* could be unjustified. Below we will consider some illustrative examples.

INTERNALIST THEORIES

Evidentialists accept the traditional view that justification is entirely a matter of one's evidence, where **evidence** means an indication of truth to a person. Evidentialists tend to be internalists because evidence in epistemology consists, roughly, of information that can be used in thought. But since one can't use *in thought* something that is *outside* one's mind, evidentialists usually think of evidence as internal to the mind.

Because it's plausible that only an indication of truth could yield a "good epistemic reason" to believe that a proposition is *true*, evidentialists say their view plausibly explains the link justification is supposed to provide between a person and their belief that a proposition is true. When a person's overall evidence supports proposition *p* better than not-*p*, *p* is probable for that person (i.e., *p* is more likely to be true than false, given the information that person has to go on). And as evidentialists point out, when you are in that situation, it is epistemically rational for you to believe that *p* is true. Evidentialists, then, typically agree that justification is truth-conducive in the sense that a person's justified beliefs are probably true given the person's overall evidence.⁵ Nevertheless, evidentialists differ on many details, including the *structure* of justified beliefs.

A. Evidentialist Foundationalism

According to **foundationalists**, a person's justified beliefs have a foundational structure similar to a well-built house or pyramid supported by a solid foundation. Accordingly, anyone who has justified beliefs has foundational beliefs that can "support" other non-foundational beliefs. A **foundational belief** (or **basic belief**) is a belief that is not formed on the basis of other beliefs. A **non-foundational belief** (or **non-basic belief**) is a belief that is formed on the basis of other beliefs. Any non-basic belief is thus "supported" by at least one basic belief.

4. Some epistemologists use these terms to distinguish whether a theory requires a person cognitively to *access* (or to be *aware* of) the very factors that make a person's belief justified: theories requiring such access are deemed "internalist," whereas those that don't are deemed "externalist."

5. Externalists complain that this understanding of justification's truth-conduciveness is too weak, because it allows for the majority of justified beliefs to be false.

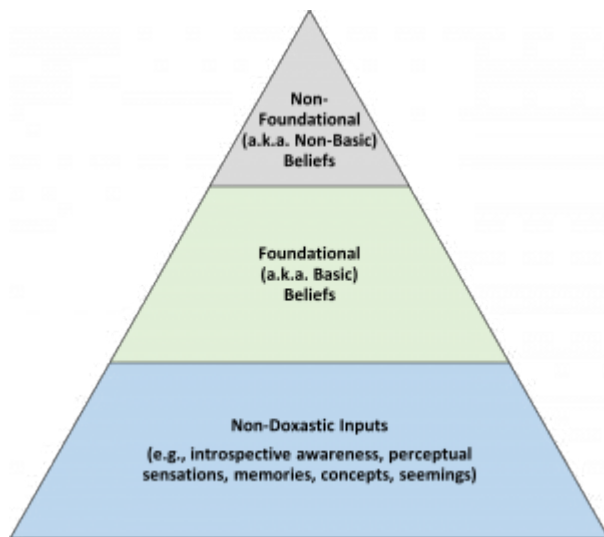


Figure 1 – The Foundational Structure of Beliefs

Evidentialist foundationalists agree that justification has a foundationalist structure, and that all justified beliefs are supported by the person’s evidence; however, they differ about how basic beliefs and non-basic beliefs get their respective justification.

Strong foundationalists think all our justified *basic* beliefs are about our own mental states (e.g., “it seems to me that there’s a tree”) or simple logical matters (e.g., “ $2 + 3 = 5$ ”) and are justified because we’re “infallible” about such matters (i.e., we can’t be mistaken about them). We can tell they are true because the evidence of their truth is given to us transparently in the very experiences that elicit foundational beliefs.

One challenge for strong foundationalism comes from therapeutic psychology. We may often be correct about our own mental states, but therapists tell us this is not always so (think of the man in a therapy session who declares “I am not angry!” while white-knuckling his chair as his red, distorted face shakes with, well, anger!). Because we can be mistaken about our mental states, strong foundationalists need a principled way to distinguish the mental states that we *cannot* be mistaken about from the mental states that we *can* be mistaken about.

Modest foundationalists avoid this problem by claiming that our basic beliefs are *any* beliefs we have immediately upon having a non-doxastic experience (e.g., sensory experience). This view allows more beliefs to count as basic. To appreciate this point, note that ordinarily, as we’re walking around outdoors, we form beliefs such as “there’s a tree” immediately upon having a particular (tree-ish) visual experience. We don’t first think, “it seems to me that there’s a tree” and then think “if it seems to me that there’s a tree, then there’s a tree,” and then finally conclude “there’s a tree”; rather, upon having the visual experience we spontaneously believe “there’s a tree.” Modest foundationalists say that such a belief is psychologically basic, because one isn’t inferring it from other beliefs one has. Now, reflection reveals that we are certainly *not* infallible about propositions such as “there’s a tree.” After all, you might have a realistic dream or hallucination that mimics ordinary sensory perception; so, you might form a basic belief that “that’s a tree” even though it’s false.

Modest foundationalism thus faces a challenge: if we’re not infallible with respect to our basic beliefs concerning external objects such as trees, then what makes our basic beliefs about external objects *justified*? Surely not *all* beliefs formed spontaneously upon an experience are justified, for what about a person who spontaneously believes “I will die tonight” immediately upon a visual experience of an arrangement of tea leaves at the bottom of a cup? This belief seems epistemically no better than does Kim’s belief (see above) based on wishful thinking. Modest foundationalists, then, need a principled way to distinguish the epistemically *proper* responses to experience from the epistemically *improper* ones.

There remains the question of how *non-basic* beliefs get their justification on the basis of justified basic beliefs. **Cartesian foundationalism**—named for the early modern philosopher René Descartes (1596–1650)—is a strong foundationalist view claiming that non-basic beliefs are justified only by **deduction** from justified basic beliefs (see Table 1 below on deduction and other forms of reasoning). Descartes insisted on this stringent requirement because he wanted a theory of knowledge implying that when one knows *p*, one is “epistemically certain” that *p* is true (i.e., your justification is so good, you can tell you couldn’t be wrong about *p*). To keep this requirement steadfastly in mind, Descartes constructed what became his famous **evil demon hypothesis**: suppose there were to exist an evil demon powerful enough to deceive you as much as you can be deceived. Only beliefs that could withstand such an evil demon’s deception would be epistemically certain for you. Accordingly, Descartes thought, non-basic beliefs can be justified only on the basis of *deduction* from perfectly certain basic beliefs, because proper deduction is the only form of reasoning that unfailingly guarantees a true conclusion on the basis of true premises.



[Portrait of René Descartes](#) by Frans Hals via Wikimedia Commons. This work is in the public domain.

A serious problem for Cartesian foundationalism is that propositions about external physical objects (e.g., “that’s a tree”) do *not* logically follow from propositions about our mental states (e.g., “it seems to me that that’s a tree”). Therefore, Cartesian foundationalism is inadequate to explain our commonsense view that we have a fair amount of knowledge about external physical objects.

Contemporary foundationalists (both strong and modest) avoid this problem by holding that non-basic beliefs can be justified not only by *deduction* but also by **induction** and **abduction** from one’s justified basic beliefs. Although properly done induction or abduction doesn’t *guarantee* the truth of one’s non-basic belief, it does plausibly give one a *good* epistemic reason to believe the proposition is true. For example, a contemporary (non-Cartesian) strong foundationalist might say that “there’s a tree” is, under usual circumstances, *probably* true when you reason to it from a belief about how things seem to you.⁶

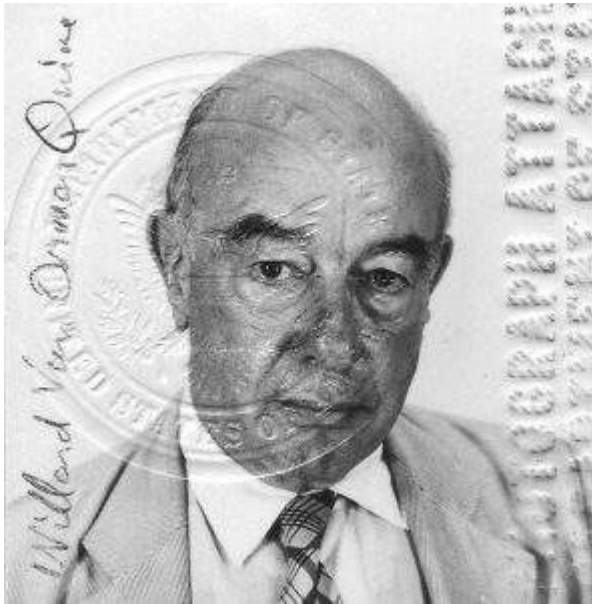
Table 1 – Forms of Reasoning

Deduction	Induction	Abduction
Form of reasoning in which the truth of the premises <i>logically guarantees</i> the truth of the conclusion.	Form of reasoning in which the truth of the premises <i>makes probable</i> the truth of the conclusion.	Form of reasoning to <i>the best explanation</i> of some data.

6. A remaining challenge for contemporary strong foundationalism: do ordinary people have *enough* beliefs about how things *seem* to them to serve as the foundations for all the things the commonsense view says people usually know?

Word of caution: Some philosophers use the term “induction” to encompass any non-deductive form of reasoning, including abduction.

B. Pure Coherentism



[Willard Van Orman Quine](#), a prominent defender of coherentism. 1975 passport photo via Wikimedia Commons. This work is in the public domain.

Pure coherentism is the idea that one’s belief is justified just when it coheres well with all the other beliefs one has. Coherentists think of the structure of justified beliefs not like a house or pyramid supported by a foundation, but like a spider web in which the various nodes of the web are mutually supported by the whole web structure. Each belief in one’s set of beliefs depends for its justification on coherence relations among *all* of one’s beliefs. Accordingly, a belief is part of its own justification.

Coherentists propose various factors that make for coherence among beliefs (e.g., logical consistency among beliefs, probabilistic connections among beliefs, or a lack of unconnected subsystems of beliefs). One prominent coherentist idea is that given a person’s set of beliefs, there is some fact about the overall value of that belief system’s coherence. If believing proposition p would, when added to the

person’s set of beliefs, *raise* the coherence value of the person’s overall system of beliefs, then believing p is justified for that person; otherwise, believing p isn’t justified.

Pure coherentists face several problems, including explaining how a belief could non-circularly be part of its own justification and explaining precisely what coherence relations are. But perhaps the most challenging is explaining how our *experiences* figure in justification. Recall that for pure coherentists, justification is entirely a matter of coherence relations among a person’s set of *beliefs*. However, it does seem possible to have a highly coherent system of beliefs even though some of one’s beliefs are way out of line with one’s experiences. Suppose I’m having an ordinary tree-in-front-of-me visual experience, but I believe there’s no tree in front of me. It seems possible for me to have a system of beliefs cohering well with my belief that there’s no tree in front of me; but in this case, in which I’m actually having an ordinary tree-ish visual experience, it seems I’m *unjustified* in believing that there’s no tree in front of me.

C. Explanationism

Explanationists think justification is a matter of which propositions provide the best explanations for a person. This view leaves open how to characterize justification’s structure. Some versions imply a hybrid of foundationalism and coherentism. One prominent version holds that justification pertains to the propositions that provide the best explanation available to the person of that person’s experiences. Suppose I’m a normal adult having a visual tree-in-front-of-me kind of experience. I have the concept “tree,” many times I’ve been in situations very similar to my current one, and the

truth of my beliefs about the presence of trees has been confirmed many times when I've been in those situations. It's plausible that the best explanation available to me of my overall experiences (including my current visual experience) includes the proposition p ("that's a tree") but does not, for example, include q ("that's a cat"). Thus, I'm justified in believing p but not q .

Explanationists say their account of justification avoids the problems we've noted with standard forms of foundationalism and pure coherentism, while incorporating what makes them theoretically attractive. Unlike pure coherentism, explanationism includes *experiences* in the constitution of justification. An explanationist might say that the best available explanation for a person involves *coherence*, not just among one's beliefs, but among the relevant explanation and propositions asserting the existence of one's experiences. Experiences themselves can serve as *foundations* that stop a regress of justification. The main challenge for explanationists is to provide a plausible, principled account of what a best explanation available to a person consists in.

Box 2 – The Regress Problem

Thinking about the possible structure of justification led the first-century philosopher Agrippa to a famous argument for global skepticism about justification (and hence knowledge). This is known as the **regress problem** or the **Agrippan trilemma**. It can be summarized as a process-of-elimination argument:

1. For a belief B to be justified, the chain of reasons ultimately leading to B must have one of three possible structures:
 - a. It is finite and linear.
 - b. It circles back on itself.
 - c. It is infinite.
2. We can rule out (c) because we don't have an infinite number of reasons.
3. We can rule out (b) because circular reasoning is unjustified.
4. We can rule out (a) because the belief B^* that is located at the bottom of B 's chain would lack justification, and therefore would be unable to justify the rest of the beliefs in the chain, which depend on B^* .
5. Therefore, no possible structure can yield justification.

Some of the theories of justification can be viewed as proposed solutions to the regress. Foundationalists defend (a) by arguing that basic beliefs can be justified by experiences rather than further beliefs. Coherentists defend something like (b) by denying that it requires defective circular reasoning. Infinitists (see "Unconventional Theories" below) defend (c) by suggesting that our reasons may be potentiality (if not actuality) infinite.



[Pyrrho of Elis](#) (ca. 360–270 BCE), founder of the Pyrrhonian school of skepticism to which Agrippa belonged. Image by Thomas Stanley via Wikimedia Commons. This photo is in the public domain.

EXTERNALIST THEORIES

Recall that externalists think justification depends not only on facts about a person's mental states but

also on factors external to a person's mind. Accordingly, externalists think of justification in terms of causes, processes, or functions that tend to get a person onto the truth. Such causes, processes, or functions do not need to have their origins in a person's mind, nor do they need to comprise evidence the person has to go on in thought (even if people usually have evidence when they satisfy externalist requirements for justification). Externalists say their theories are well-suited to explain the truth-conduciveness of justification (i.e., the link that justification is supposed to provide between a person and the person's belief that a proposition is true). On typical externalist theories, a person's justified beliefs are objectively likely to be true in the sense that justified beliefs are more often true than false.⁷

A. Reliabilism

Reliabilism is the idea that justified beliefs are reliably produced. Although there are multiple species of reliabilism, including "virtue reliabilism,"⁸ the most popular is **process reliabilism**, which holds that justification is a matter of having a belief produced by a reliable process type (i.e., a type of process that produces true beliefs more often than false beliefs). Vision is a general *type* of process resulting in many individual beliefs among many different people. If more beliefs produced by vision are true than false across all times and places, then "vision" plausibly counts as a reliable process type. The basic idea of process reliabilism is that a belief produced by a reliable process type is justified; otherwise, it's unjustified.

We can appreciate why process reliabilism is *externalist* by considering an odd example. Suppose Pat and Nat happen to have the same mental states. Pat's an ordinary human living in a world populated by physical objects, just as we take ourselves to be, but Nat is radically deceived by a powerful evil demon (see Descartes's evil demon hypothesis above). It *seems* to Nat that they're living in a world populated by physical objects, but in reality this is not the case. Now, because Pat and Nat have exactly the same mental states and are thus "introspectively identical," a typical internalist theory implies that Pat and Nat are justified in believing the same propositions. However, according to process reliabilism as described above, Pat's belief that *p* ("there's a tree") is justified, because it's produced by a reliable process type (vision), whereas Nat's belief that *p* is unjustified, because it's produced by an unreliable process type (evil demon deception). For process reliabilists, then, whether a person's belief is justified depends on contingent factors external to the person's mind.



Alvin I. Goldman, who first introduced process reliabilism. University of Michigan News and Information Services Photographs, Bentley Historical Library, University of Michigan. License: [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)

This example also illustrates a popular "new evil demon" objection to process reliabilism. It seems that

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7. Internalists complain that this understanding of justification's truth-conduciveness is too strong, for one's belief could be objectively likely to be true even if one has nothing that could provide a good reason to believe the relevant proposition; but, in that situation, internalists say, it is epistemically irrational for one to believe it.
 8. Virtue reliabilism is the view that justified beliefs are produced by reliable cognitive faculties of persons such as perception, memory, intuition, and introspection.

if Pat is justified in believing “there’s a tree,” then so is Nat; after all, things seem *exactly* to Nat as they do to Pat. In believing “there’s a tree,” Pat and Nat are relying on exactly the same information. So, if Pat’s reasons are good enough for justification, then so are Nat’s.⁹

Another challenge for process reliabilism is known as the **generality problem**. Pat’s belief that “there’s a tree” is an instance of many different process types, such as (a) sensory experience, (b) visual experience, (c) visual experience from 10 yards away, or (d) visual experience of a medium-size object in clear daylight from 10 yards away. These process types vary in reliability. *Which* process type is the relevant one that settles whether Pat’s belief is justified? The problem generalizes to all beliefs. Without a principled way to determine which process type is the *relevant* one, we can’t actually tell what process reliabilism implies about any instance of belief.

B. Proper Functionalism

According to **proper functionalism**, justification is a matter of having a belief resulting from proper cognitive function. When a heart functions properly, it pumps blood; similarly, according to proper functionalists, when our cognitive faculties function properly, they produce justified beliefs. But the epistemic story can’t be this simple, for something might function *properly* (as designed) but not function *well*. So proper functionalists need the notion of “good epistemic function.” Their solution is to add conditions pertaining to getting at the truth. The result is a theory like this: a person S’s belief B is justified if and only if the cognitive faculties producing B are (a) functioning properly, (b) aimed at truth, and (c) reliable in environments for which they were designed.

9. Is this merely a partisan objection on behalf of internalism? Arguably no: many reliabilists have been reluctant to say that your introspectively identical twin in the demon world has unjustified beliefs that are justified for you. Their challenge is to provide a plausible reliabilist-centric explanation of this that does not concede too much to internalism.



[Alvin Plantinga](#), who introduced proper functionalism (initially about warrant rather than justification). Photo by WhiteKnight138 via Wikimedia Commons. License: [CC BY-SA 4.0](#)

To appreciate why proper functionalism is externalist, consider Cal and Mal. Suppose Cal’s cognitive system is designed by a god to produce belief B1 (“I’m holding a small round object”) when Cal is in mental state M1 (a tactile sensation like *we* have when holding a billiard ball), but *not* when he’s in state M2 (an olfactory sensation like *we* have when smelling a rose). In contrast, a powerful alien race has designed Mal’s cognitive system *not* to produce B1 when he’s in M1, but rather when he’s in M2. Now suppose Cal and Mal have the *same mental states*, both have belief B1, and both are in M2 but neither is in M1. Although Cal and Mal have exactly the same mental states, proper functionalism implies that Cal’s belief B1 is *unjustified* (because it isn’t the result of proper function given its design), but Mal’s belief B1 is *justified* (because it’s the result of proper function given its design, and, we may suppose, Mal’s cognitive faculties are truth-aimed and reliable). Thus, proper functionalism implies that justification is contingent on facts about the design of one’s cognitive system, which are external to one’s mind. On this view, as the table below shows, mental duplicates can differ in justification—a feature of externalism generally.

Table 2 – Cal vs. Mal

Person	Cognitive Design	Current Experience	Current Belief	Accords with Cognitive Design?	Implication of Proper Functionalism
Cal	When in M1 (a tactile sensation as of holding a billiard ball), produce belief B1 (“I’m holding a small, round object”).	M2: an olfactory sensation as of a rose	B1: “I’m holding a small round object.”	No	Unjustified
Mal	When in M2 (an olfactory sensation as of a rose), produce belief B1 (“I’m holding a small, round object”).	M2: an olfactory sensation as of a rose	B1: “I’m holding a small round object.”	Yes	Justified

A challenge can be appreciated by adding to our example. Suppose the designers of Mal’s cognitive system discovered a glitch in consequences of their design: their cognizers would function according to design by reasoning as follows whenever they’re in M2:

- a. “I’m holding a small round object.”
- b. “If I’m holding a small round object, then goblins are living under my planet’s surface.”
- c. Thus, “goblins are living under my planet’s surface.”

Caring greatly about reliable-belief formation but not wanting to fix the design glitch, the alien designers altered features of Mal’s planet so that, when cognizers are in M2, goblins usually *are* living under the planet’s surface. Consequently, when Mal reasons from (a) and (b) to (c), his belief that “goblins are living under my planet’s surface” is produced by cognitive faculties that are functioning

as designed, truth-aimed, and reliable in environments for which they were designed. According to proper functionalism, then, Mal's reasoning process is epistemically good, and his beliefs that (b) and that (c) are justified, even though, as we may suppose, he has *no reason at all* to believe (b) and (c). In this situation, it seems Mal has engaged in objectively bad reasoning even though all the conditions of proper functionalism are satisfied.

Box 3 – Justification Defeaters

Some epistemologists augment their justification theories with a **no-defeaters clause**, which says that, for a person's belief to be justified, there must be no "justification defeaters" for the belief. By definition, a **justification defeater** (hereafter "defeater") is something that prevents a belief from being justified. In other words, setting aside all of the defeaters for a person's belief, what remains is good enough for justification. That is, the belief is "justified absent defeaters." This is what epistemologists call **prima facie justification** (from the Latin for "at first glance" or "upon first inspection"). When a belief is *prima facie* justified (justified on the assumption that there are no defeaters) *and* there are in fact no defeaters, the result is **ultima facie justification**—or, justification all things epistemically considered. This is what we normally mean by "justified."

Prima facie justification plus no defeaters (required by no-defeaters clause) = *ultima facie* justification

Epistemologists sometimes distinguish between "rebutting defeaters" and "undercutting defeaters." A **rebutting defeater** is illustrated in the following example. Suppose you're in a pet shop where, in clear view, one of the store offerings catches your attention. "Tell me about that red dog," you say to the salesperson, who replies, "Oh, that's our new robotic pet. It's so realistic it fools everybody!" The testimony of the salesperson is a rebutting defeater of your *prima facie* justification for believing *p* ("that thing I'm looking at is a red-haired dog"); that is, the salesperson's testimony gives you good reason to think *p* is false. Thus, you lack *ultima facie* justification for believing *p*.

An **undercutting defeater** is illustrated by altering the story slightly. Suppose the salesperson tells you there is a strong red light shining on the object you're looking at. The salesperson's testimony is an undercutting defeater of your *prima facie* justification for believing *p*. This is because the salesperson gives you good reason to think the object would appear red even if it were not red. Even if the testimony does not give you good reason to think *p* is false, it does give you good reason to think the source of your belief (visual experience) is, in this situation, not good enough for *ultima facie* justification.

Externalist theories are in special need of a no-defeaters clause, without which they are susceptible to counterexamples. For example, suppose your belief that *p* is produced by a reliable process type but you have good reason either to think that *p* is false or to think that the process producing your belief is unreliable. Without a no-defeaters clause, process reliabilism would implausibly imply that your belief is justified. Internalist evidentialist theories do not need a no-defeaters clause, because a person's total evidence at a time already weighs in any defeaters. Nevertheless, the notion of defeaters is sometimes employed by internalists as a useful tool for thinking about what a person's *total* evidence indicates.

UNCONVENTIONAL THEORIES

Some unconventional theories have gained adherents in recent years. **Infinitism** is the idea that justification's structure is neither foundationalist nor coherentist (nor a hybrid). Instead, infinitists argue that justification consists in an infinite number of appropriately structured, available reasons on which any justified belief rests. A major challenge is explaining how a human could have an

infinite series of available reasons. A more radical departure from conventional theories is **virtue responsibilism**, which argues that justified beliefs are the result of intellectually virtuous character traits. Critics complain that, because such beliefs don't need to be likely to be true or based in evidence, virtue responsibilism focuses on moral or pragmatic justification rather than epistemic justification.

PARTING THOUGHT

All theories of epistemic justification face reasonable objections or difficult challenges. So, which theory are we justified in accepting as the correct one, and why? The question may not feel pressing, but its answer is important for those of us who desire to live fully reflective lives of wisdom. Understanding epistemic justification might help us to (a) find flaws in skeptical arguments, (b) settle tricky cases about which beliefs to hold when there is substantial disagreement (as in religion, ethics, and politics), and (c) determine what makes knowledge more valuable than true belief. Knowing the truth about the nature of epistemic justification may not be easy, but the further readings below provide excellent ways to discover more about the nuances of views discussed in this chapter, as well as possible responses to the challenges each theory faces.

Questions for Reflection

1. As noted in Box 1 of this chapter, theories of epistemic justification often focus on the conditions under which *belief* is justified. What should a theory of justified belief say about each of the other doxastic attitudes?
2. Do internalist or externalist theories better explain the widespread assumption that epistemic justification provides an *epistemic reason* for one to believe a proposition is true? Why?
3. Do internalist or externalist theories better explain the widespread assumption that justification is *truth-conducive*? Why?
4. Which theories of justification best explain what an epistemically *proper response to experience* consists in? Why?
5. What reason, if any, is there for favoring a *foundationalist* picture of the structure of justification over a *coherentist* picture, and vice versa?
6. Is there a way for a justification theory to incorporate elements of both foundationalism and coherentism? Which justification theory among those discussed in this chapter is best suited to such a project? Why?
7. Revisit the regress problem (the Agrippan trilemma) in Box 2. Which justification theory, if any, provides the most adequate response? Why?
8. Consider the view known as “phenomenal conservatism” (PC): If it seems to one that *p*, then it is *prima facie* justified for one to believe *p*. First, to demonstrate the importance of the phrase “*prima facie*,” explain how it helps proponents of PC respond to the objection that “things aren’t always what they seem.” Second, use what you learned in this chapter to construct and evaluate some other potential objections to PC.

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CHAPTER 3.

SOURCES OF KNOWLEDGE: RATIONALISM, EMPIRICISM, AND THE KANTIAN SYNTHESIS

K. S. SANGEETHA

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Identify* the main theories of the sources of knowledge, including rationalism, empiricism, and the Kantian synthesis.
2. *Employ* each theory to reconstruct the origins of a given instance of knowledge.
3. *Differentiate* the categories of knowledge that arise from the *a priori/a posteriori*, necessary/contingent, and analytic/synthetic distinctions.
4. *Evaluate* the merits of each theory.

INTRODUCTION

We all have many things going on in our minds, such as beliefs, desires, hopes, dreams, imaginary figures, knowledge, love, and hatred—to name a handful. Have you ever considered their source? How do they come to be part of the thinking process? How do they become **ideas** in our minds? Some philosophers attribute the source of our ideas to the senses, including the inward senses (such as emotions) and the five outward senses (sight, smell, hearing, taste, and touch). We might sense the world directly or indirectly through the thoughts of others. Some philosophers even claim that *all* our ideas must come from our senses. This claim holds that each of us is born with a mind that is like a *tabula rasa* (Latin for a “blank slate” or “blank tablet”) on which nothing is written and to which we add contents through experience as we become exposed to the world. Knowledge that is dependent on experience, or which arises after experience, is called *a posteriori* (Latin for “from the latter”). Since *a posteriori* knowledge is **empirical** (based on observation or experience), this view is called **empiricism**.

Opposed to empiricism is **rationalism**, the view that *reason* is the primary source of knowledge. Rationalists promote mathematical or logical knowledge as paradigm examples. Such knowledge can be grasped, they claim, through reason alone, without involving the senses directly. They argue that knowledge accessed through reasoning is eternal (i.e., it exists unchanged throughout the past, present, and future). For instance, two plus three remains five. Rationalists are impressed by the certainty and clarity of knowledge that reasoning provides, and they argue that this method should be applied to gaining knowledge of the world also. The evidence of the senses should be in conformity with the truths of reason, but it is not a prerequisite for the acquisition of these truths.

Knowledge that is independent of (or prior to) observation and experience is called *a priori* (Latin for “from the former”). Rationalists maintain that reason is the basis of ***a priori* knowledge**. But where do we ultimately get the ideas on which reason is based, if not from observation or experience? Rationalists tend to favor **innatism**, the belief that we are *born* with certain ideas already in our minds. That is, they are “innate” in us. Potential examples include mathematical or logical principles, moral sense, and the concept of God. While innatists claim that such ideas are present in us from birth, this does not guarantee our immediate awareness of their presence. Reason is the faculty that enables us to realize or access them. In what follows, innate ideas thus serve as the foundation of a model for rationalism.¹

1. Plato (ca. 428–347 BCE) can be treated as a predecessor of rationalism. In his dialogue *Meno*, Plato shows how innate ideas can be realized through reason ([ca. 380 BCE] 2009). In this dialogue, the main character Socrates (based on Plato’s real-life teacher), engages a slave boy in discussion. Through a series of questions and answers—an approach known as the Socratic Method—Socrates draws out of the boy a proof about squares. Plato argues that the boy did not learn anything new; rather, the questions merely prompted the boy to recollect knowledge he possessed prior to birth as an unembodied soul. Therefore, innate ideas are like forgotten memories; we might not be aware of them. This is Plato’s “doctrine of recollection” (as scholars have called it). In recent years, some linguists consider Noam Chomsky’s theory of language to be a modern scientific version of rationalism (though perhaps it is more accurately described as Kantian). Chomsky (1975) argues that human minds contain innate structures responsible for our capacities to process language. This is because our exposure to language itself is inadequate to account for our ability to speak and understand others. He claims that this innate ability is universal across all cultures, which reiterates the claim of the early innatists that universality is an indicator of innateness.

RATIONALISM'S EMPHASIS ON A *PRIORI* KNOWLEDGE



[Portrait of René Descartes](#) by Frans Hals via Wikimedia Commons. This work is in the public domain.

French philosopher René Descartes (1596–1650) and German philosopher Gottfried Wilhelm Leibniz (1646–1716), two important rationalist thinkers, support the existence of innate ideas and their realization through reason. They argue that the truths revealed by such ideas are eternal, necessary, and universal.

For Descartes, there are different modes through which we acquire knowledge: some ideas are innate, some are externally sourced, and others are constructed by us. Descartes gives the example of the idea of God as innate in us, as well as the idea of one's own existence ([1641] 1985, Third Meditation). According to Descartes, innate ideas like truths of geometry and laws of logic are known through reason independently of experience, because experience gives us only particular instances from which the mind discovers the universal ideas contained in them. Therefore, they are *a priori*. Descartes's innate ideas have been compared to the stored information in a book. The ideas are in us, though not always present to the mind.

Once we start reading the book, the contents reveal themselves to us, just as reasoning reveals our innate ideas to us. In other words, it is only through careful "reading" (thinking) that we come to understand which ideas are innate and which come to us from elsewhere.

Leibniz calls innate ideas "principles." Like Descartes, Leibniz maintains that principles are accessed by reason. The universal nature of mathematical truths, for example, is not revealed by the senses. It is the faculty of reason that acquires universal truths from individual instances. Leibniz argues that a collection of instances based on the senses cannot lead us to necessary truths. At the same time, it is also clear that we can grasp many necessary truths, such as mathematics. Therefore, the mind is the source, which means these truths are there innately. However, innate ideas are not full-fledged thoughts for Leibniz: he holds that our minds are structured so that certain ideas or principles will occur to us once *prompted by* the senses, although they are *not derived from* the senses. Ideas and truths are innate in us initially as *dispositions* or *tendencies* rather than as actual conscious thoughts ([1705] 2017, Preface).



[Portrait of Gottfried Leibniz](#) by Christoph Bernhard Francke via Wikimedia Commons. This work is in the public domain.

OPPOSING A *PRIORI* KNOWLEDGE BY REJECTING INNATE IDEAS

The empiricist claim that all our knowledge comes from experience is in stark contrast to the concept of innate ideas. For empiricists, all knowledge is *a posteriori*, meaning acquired through or after experience. John Locke (1632–1704), a British empiricist philosopher, adopts two approaches to question innate ideas as the basis of *a priori* knowledge. Firstly, he shows that innate ideas are based on dubious claims; secondly, along with Scottish empiricist David Hume (1711–1776), Locke shows how empiricism is able to offer a better theory of knowledge through the *a posteriori*.



[Portrait of John Locke](#) by Godfrey Kneller via Wikimedia Commons. This work is in the public domain.

Locke starts by questioning the “universal nature” of innate ideas. He opposes the claim that innate ideas are present in all of us by noting that sufficiently young children, and adults without the requisite education, lack a concept of God or knowledge of logical or mathematical principles. Therefore, it is baseless to say that innate ideas are universal. It is through experience and observation that we acquire such ideas. That is, they are *a posteriori* ([1690] 2017, Book I).

Here Leibniz defends the innatist view from Locke’s objection by showing how children and those without the requisite education are capable of employing logical and mathematical principles in their everyday lives without understanding what they are or being able to articulate them in words ([1705] 2017, Book I). A child, to use an example of my own, knows without any confusion that she cannot be sitting in both parents’ laps at the same time. Similarly, those without formal mathematical training

could still know that two adjacent triangular cornfields separated by a fence on their longest side can make a square cornfield by removing the fence that divides them. Evidently, as Leibniz argues, general principles of logic and mathematics are innate. But this does not mean that all innate ideas are universally held. It is possible that we all have innate ideas yet some of us are unaware of them.

Locke further argues, however, that there can be nothing in the mind of which it is unaware ([1690] 2017, Book II). Having innate ideas without being aware of them is not a viable position for Locke. An idea first has to be experienced or thought. How else could it be “in” the mind? On this point Leibniz disagrees with Locke: it is possible to have a plethora of ideas in our minds without being aware of them ([1705] 2017, Preface). For instance, suppose you absorb a “tune” playing in the marketplace without being consciously aware of it. The tune is not readily accessible or transparent to your mind, in that you cannot recall it; however, it may be recognizable upon hearing it again. So, it must have been “in” you somewhere in some sense. Similarly, an innate idea could be in your mind, without you yet being aware of it. We are born with the facility to realize innate ideas when favorable conditions obtain later in life, such as the ideas of beauty, justice, and mathematical truths.

Locke’s reply is that the realization of ideas or capacities in the right circumstances is applicable to

all ideas—not just those which are purportedly innate ([1690] 2017, Book I). He challenges innatists to produce a criterion to distinguish innate from non-innate ideas. Leibniz responds with such a criterion: innate ideas are **necessary** (they *must* be true, *cannot* be false), whereas non-innate ideas are merely **contingent** (possibly true, possibly false). We can distinguish truths that are necessary (and therefore eternal on Leibniz’s view) from contingent truths dependent on varying matters of fact ([1705] 2017, Preface).

EMPIRICISM’S EMPHASIS ON A *POSTERIORI* KNOWLEDGE

Locke claims to show how the mind, which is like a *tabula rasa* at birth, acquires knowledge. For empiricists, experience alone furnishes our mind with **simple ideas**, which are the basic elements of knowledge. Once shown that all ideas can come from experience, it would be redundant to additionally posit innate ideas. So, does *a posteriori* knowledge lead us to reject *a priori* knowledge? Let us find out.

For Locke, knowledge based on experience is easy to understand. He asks us to suppose that we have innate ideas of colors and that we can also see colors with our eyes. In this case, since we don’t need to rely upon both, we go with our senses, because it is easier and simpler to understand knowledge derived from sense experience than from knowledge derived from some source of which we are unaware ([1690] 2017, Book I, Chapter ii, Para. 1). Here Locke applies the principle of **Ockham’s razor**, which suggests that as far as possible we should adopt simple explanations rather than complicated ones.² Simple explanations have the advantage of being less prone to error and more friendly to testing than complicated ones that do not add explanatory value.

The next question is whether *a posteriori* knowledge alone gives us adequate knowledge of the world. Let us take an instance of experiencing and thereby knowing a flower, such as a rose. As we experience the rose, its particular color, texture, and fragrance are the ideas through which we become aware of the object. But when we are not experiencing or sensing the rose, we can still think about it. We can also recognize it the next time we see the flower and retain the belief that it is sweet smelling, beautiful to look at, and soft to the touch. This shows that, in addition to sensing, the ability to form *concepts* about the objects we encounter is crucial for knowing the world. Experience also makes it possible for us to imagine what we have not directly experienced, such as a mermaid ([1690] 2017, Book III, Chapter iii, Para. 19). Such imaginings are made possible because we have directly experienced different parts of this imagined object separately. Conjoining these experiences in the mind in an ordered manner yields the imagined object ([1690] 2017, Book II, Chapter iii, Para. 5). Had we not experienced and thereby formed the concepts of a fish and a woman separately before, we would not be able to imagine a mermaid at present.

These considerations lead Locke to categorize all our sense experiences into simple and complex ideas. Simple ideas are basic and indivisible, such as the idea of red. **Complex ideas** are formed by the mind, either from more than one simple idea or from complex impressions ([1690] 2017, Book II, Chapters ii & xii). Complex ideas are divisible because they have parts. Examples include golden

2. See [Chapter 2](#) of this volume by Todd R. Long for a discussion of the explanationist theory of epistemic justification, and [Chapter 6](#) by Jonathan Lopez (especially Box 1) on probabilistic considerations in epistemology—both of which are closely related to Ockham’s razor.

streets, an army, and the universe. My idea or concept of an object, whether simple or complex, can be ultimately traced back to its corresponding sense impressions.

Hume, another important empiricist philosopher, writes of ideas as the “copies” of “impressions.” Impressions are “vivid” and “lively” as received directly from sense experience. Hume also allows inward impressions, including jealousy, indignation, and so on. Ideas are mental copies of inward or outward impressions, rendering them “faint” or “feeble” (try comparing a perceptual experience with recalling it from memory) ([1748] 2017, Sections 1 & 2). Hume argues that where there are no impressions, there can be no ideas. A blind man can have no notion of color, according to Hume. One cannot be born with ideas that are not derived from any impressions. So, there are no innate ideas for Hume. However, he agrees that our *tendencies* to avoid pain, or to seek many of our passions and desires, are innate. Here I would argue that even these tendencies are based on our sense impressions and the corresponding ideas we form from those impressions. The mental inclination to repeatedly seek pleasure or avoid pain comes to us only after the first incident of exposure to either sensation.



[Portrait of David Hume](#) by Allan Ramsay via Wikimedia Commons. This work is in the public domain.

In contrast to Descartes, even the idea of God falls under the *a posteriori* for Hume. Since none of us has experienced God directly, Hume argues, there is no impression of God available to us from which to form the corresponding idea. In Hume’s view, our imagination forms this idea by lavishly extending our experience of the good qualities possessed by people around us ([1748] 2017, Sections 1 & 11). Given that even the idea of God can be derived from sense impressions, this lends further support to the empiricist claim that all our ideas are *a posteriori*. Therefore, according to Hume, the rationalist claims for the existence of innate ideas and *a priori* knowledge are mistaken.

THE INADEQUACY OF THE *TABULA RASA* THEORY

A weakness of the empiricist’s *tabula rasa* theory can be exposed if we can show that not all our ideas are derived from corresponding impressions. However, this would not mean we must return to the rationalist’s theory of innate ideas, as we shall see. The plan is to explore a third alternative.

The presence of general **concepts** in our minds shows there is not always a one-to-one relation between ideas and corresponding sense impressions. For example, we see different instances of the color blue around us, and from these instances we form a general concept of blue. This general concept is not copied from one particular impression of blue, nor even from a particular shade of blue. We also have abstract concepts (such as justice, kindness, and courage), which are not traceable to corresponding sense impressions. In such cases, we experience different acts or instances of justice, kindness, and courage. But if these abstract concepts are copied from their particular impressions, then only these instances—and not the concepts themselves—would be in our minds. It follows that

concepts are *formed* or *understood* rather than *copied*. Similarly, relational concepts (such as “on”-ness, betweenness, sameness, and the like) are realized not by copying the impressions involved. In fact, there are *no impressions at all* corresponding to these relational concepts. We instead receive impressions of particulars standing in such relations—the cat sitting on the mat, the English Channel flowing between the United Kingdom and Europe, one minus one equaling zero, and so forth.

In sum, the formation of general, abstract, and relational concepts in our minds shows that an uninterrupted flow of impressions would not constitute all the ideas we have. Instead, it requires that from birth the mind is at least partially equipped with a structure or architecture that enables it to make sense of the raw impressions it receives and to form concepts where there is no one-to-one correspondence between impressions and ideas. It challenges the authenticity of a *tabula rasa*. This takes us to a stage where we need to figure out the indispensable third alternative, which can facilitate a more complete knowledge of the world. This necessitates a crossover between the *a priori* and the *a posteriori*, or a reconciliation of the two.

PERCEPTS-CONCEPTS COMBINATION

The immediacy and direct nature of sensations, impressions, and perceptions make them certain.³ Let us briefly unpack this idea. Consider whether we can ever be wrong about our sensations. It is commonly thought that while we can be wrong about what the world is like, we cannot be wrong about the fact that we are having particular sensations. Even if you are dreaming this very second, and there is no actual book before your eyes, you cannot deny that you are having certain sensations resembling a white page and black font in the shape of words. Therefore, our sensations are certain and we cannot doubt that they exist. However, it is possible that sometimes we are unsure how to characterize a particular sensation. For instance, you may see a flashy car and be unsure whether the color is metallic green or gray. So, you might get into confusion in describing your sensation, but that does not affect the certainty and indubitability of the sensation itself, of what is here and now for you.

German philosopher Immanuel Kant (1724–1804) argues that for our perceptions to make sense to us, they should be received into concepts that exist within our minds. These structures of understanding allow our minds to process the impressions that we experience. Unless the manifold raw sensations we receive from experience are classified into different categories of understanding, we cannot make sense of them.

3. We find an endorsement of this view in the Anglo-Irish empiricist philosopher George Berkeley (1685–1753). His view of idealism is that only minds and their ideas (where sensations are counted as ideas) exist. We are only immediately aware of ideas, and so the physical world of objects does not exist independently of mind—only as a representation of a mind, finite or infinite. Therefore, Berkeley recommended “To be is to be perceived” (in Latin, “*Esse est percipi*”). However, we will not explore this view here, as we are focused on the more influential view that there is a mind-independent reality. For discussion of Berkeley, see Ellis (2014a).



[Immanuel Kant](#) by Johann Gottlieb Becker via Wikimedia Commons. This work is in the public domain.

For instance, the mind should have the ability to recognize whether two sensations are similar or different, to say the least. Without this ability, we cannot make sense of experience. Or consider that we also perceive that objects are in space and time, stand in cause-effect relations, and belong to the categories of unity-plurality, assertion-negation, particular-universal, and the like. Here again, we are incapable of understanding any experience that is not processed through these categories. Kant argues, therefore, that space, time, causation, quantity, quality, and the like are represented to us in innate structures or concepts that our minds are fitted with prior to experience.

According to Kant, these categories are **transcendental** in the sense that they bridge the gap between mind and world. They are hidden structures, bridges, or concepts that occupy the otherwise blank slate and mold our way of thinking and experiencing the world. Of course, these concepts also require inputs, or **percepts** (the immediate objects of awareness delivered directly to us in perceptual experience through the senses). As Kant's view is famously expressed, "Percepts without concepts are blind and concepts without percepts are empty" ([1781] 1998, 209).

So far, we have seen through various stages that rationalism and empiricism are incomplete. Kant's **transcendental idealism** (as his view is called) strikes a balance, reconciling the two accounts. He combines sensory input and inborn concepts into a unified account of how we understand the world. Before we conclude the chapter with the final step in Kant's approach, let us return to Descartes and Hume once again, the two philosophers who most influenced Kant.

SYNTHETIC A PRIORI KNOWLEDGE

Descartes thinks that reason alone can provide certainty to all human knowledge. Intuition and deduction are tools through which the faculty of reason operates. **Intuition** is the capacity to look inward and comprehend intellectual objects and basic truths. Being a geometrician, Descartes thinks that **deduction** (the type of reasoning whereby the truth of the conclusion is *guaranteed* by the truth of the premises) should be used for gaining knowledge of the world, starting with the input of "clear and distinct" ideas.⁴ Since intuition is dissociated from the evidence of the senses, the truths it unfurls can be known *a priori*. The result is that substantial knowledge of the world can be acquired *a priori* ([1701] 1985).

According to Hume, there are two ways in which reasoning aims to gain knowledge of the world: through "relations of ideas" and through "matters of fact" ([1748] 2017, Section 4). Hume thinks that the method of deduction establishes relations between the ideas we have already acquired through experience (e.g., that a mother is a woman parent). These **relations of ideas** are the kind of truths that we find in logic and mathematics (for instance, the proposition that a circle is round). They are true by definition. Such truths are *necessary* or *certain* (their denials lead to contradiction). They are

4. See [Chapter 2](#) of this volume by Long for further discussion of Cartesian foundationalism.

also known *a priori*, since they do not rely on how the world is. For this reason, relations of ideas and deduction do not yield substantive new knowledge of the world; the knowledge they impart is already understood by us (as the above examples show), even if our understanding is merely implicit within the premises of a deductive argument whose conclusion makes it explicit.

Matters of fact, for Hume, are based on observation and experience. Some of them are generalizations arrived at by **induction** from particular instances. Inductive truths are uncertain. They are at best *probable*, since they are dependent on how the world is. For instance, we have the experience of heat from fire so far; but we cannot be certain that this will be the case tomorrow also (maybe we will unexpectedly feel some other sensation like cold from fire). We *expect* that the future will resemble the past, but we cannot be *certain* about it.⁵ Matters of fact provide us with *a posteriori* truths, which are *contingently* true (their denials can be conceived without contradiction). Since matters of fact are not true by definition, they add substantive new information to our existing knowledge, unlike relations of ideas ([1748] 2017, Section 4).

A rationalist initially, Kant was influenced by the division in knowledge made by Hume. Only a combination of reason and experience can give us adequate knowledge, according to Kant. He begins by providing an account of relations of ideas, which he terms **analytic truths**. In sentences that express analytic truths, the predicate term is already “contained” in, or is the meaning of, the subject term. For example, in the sentence, “a circle is round,” the predicate “round” is contained in the subject, “circle.” To take another standard example, in “a bachelor is an unmarried man,” the predicate “unmarried man” is the meaning of the subject term, “bachelor.” We cannot deny such truths without contradiction. They are necessarily true, which means that they’re true regardless of how the world is. Since we do not need to examine the world to tell whether they’re true, analytic truths are knowable *a priori* ([1781] 1998, 146, 157).⁶

Kant terms matters of fact **synthetic truths**: the predicate term is neither contained within nor is the meaning of the subject term. Synthetic truths are not true by definition. As such, it stands to reason that they are based on observation, and therefore must be *a posteriori* (although, as we will soon see, Kant argues that this is not the case for all synthetic truths). For instance, consider the proposition, “George the bachelor is a writer.” We have new information here about a particular person named “George” being a bachelor and writer, and experience is required to find this out. Since the opposites of synthetic truths are not contradictory, they are contingent ([1781] 1998, 147, 157).⁷

Kant maintains that only synthetic truths are capable of providing substantive new information about the world. That said, our sense experiences do not passively enter our minds, but do conform to our innate mental structures to facilitate knowledge. Since these structures work independently of experience, they are *a priori*. These innate *a priori* structures of our minds—our concepts—are actively engaged in making sense of our experiences ([1781] 1998). They do so by discriminating and organizing the information received in experience. But again, the ability to perform this activity presupposes that the world which furnishes both the information and our concepts is itself structured

5. This is an aspect of “the problem of induction” that Hume is famous for. For an overview of the problem, see Vernon (2014).

6. See [Chapter 6](#) of this volume by Lopez for a discussion of analytic/necessary truths in relation to probability theory.

7. Some philosophers, following Quine (1951), object to the analytic-synthetic distinction altogether.

in a way that enables intelligibility. The particular ways in which the world must be structured—its space-time and cause-effect relations, for example—yield substantive truths about reality. These truths hold not merely because of the meanings of words or the logical forms of sentences. They are synthetic. And since we arrived at this result by way of *a priori* reflection, Kant argues that we possess “synthetic *a priori*” knowledge of the world—a previously unrecognized category of knowledge, now to be added to the standard categories of synthetic *a posteriori* and analytic *a priori* knowledge. (See Table 1 below for a summary of these categories.)

Table 1 – Categories of Knowledge
Combining the epistemological distinction (*a priori* vs. *a posteriori*) with the semantic/modal distinction (analytic/necessary vs. synthetic/contingent) yields four possible categories.

Epistemological Distinction: <i>A Priori</i> vs. <i>A Posteriori</i>	Analytic/Necessary (Relations of Ideas)	Synthetic/Contingent (Matters of Fact)
<i>A Posteriori</i> (Empirical)	<p>Category of knowledge: ANALYTIC <i>A POSTERIORI</i></p> <p>Significance: Receives minimal attention (because it is not a primary source of contention in philosophical debates).</p> <p>Examples: Mathematical truths (e.g., that the ratio of a circle’s circumference to its diameter is > 3) learned by physical measurement, a calculator, or testimony from a reliable source. (Although such truths are commonly considered analytic, Kant disagreed, classifying them as synthetic instead.)</p>	<p>Category of knowledge: SYNTHETIC <i>A POSTERIORI</i></p> <p>Significance: Emphasized by empiricists.</p> <p>Examples: Truths about the external world known immediately via the senses or scientific investigation.</p>
	<p>Category of knowledge: ANALYTIC <i>A PRIORI</i></p> <p>Significance: Emphasized by rationalists.</p> <p>Examples: The deliverance of pure logic; statements that are true by definition (known by grasping their meanings).</p>	<p>Category of knowledge: SYNTHETIC <i>A PRIORI</i></p> <p>Significance: Controversial category posited by the Kantian synthesis. While truths in this category are contingent in the strict logical sense (their denial is not logically contradictory), Kant claimed for them a kind of metaphysical necessity (in that they hold universally and are eternal).</p> <p>Kant’s candidates: Euclid’s axioms of geometry, basic features of space/time, metaphysical truths, and moral truths.</p>

There remains the question of *how* our concepts discriminate and organize the information received from the senses. These goals are achieved through acts of synthesis. By “synthesis,” Kant means “the act of putting different representations [elements of cognition] together, and grasping what is manifold in them in one cognition” ([1781] 1998, 77).

Kant explains three types of synthesis: the process starts with “synthesis of apprehension in perception,” passes through “synthesis of reproduction in imagination,” and ends with “synthesis of recognition in a concept” ([1781] 1998, 228–34). For Kant, apprehension in perception involves locating an object in space and time. The synthesis of reproduction in imagination consists in connecting different elements in our minds to form an image. And synthesis of recognition in a concept requires memory of a past experience as well as recognizing its relation to present experience. By recognizing that the past and present experience both refer to the same object, we form a concept

of it. To recognize something as a unified object under a concept is to attach meaning to percepts. This attachment of meaning is what Kant calls **apperception** (Guyer 1987).

Apperception is the point where the self and the world come together. For Kant, the possibility of apperception requires two kinds of unity. First, the various data received in experience must themselves represent a common subject, allowing the data to be combined and held together. Second, the data must be combined and held together by a unified self or what Kant calls a “unity of consciousness” or “unity of apperception.” Kant concludes that because of such unity, all of us are equally capable of making sense of the same public object in a uniform manner based on our individual, private experiences. That is, we are in an unspoken agreement regarding the mind-independent world in which we live, facilitated by our subjective experiences but regulated by the innate mental structures given to us by the world. In sum, Kant’s theory makes possible shared synthetic knowledge of objective reality.⁸ In conclusion, by considering the debate between rationalists and empiricists culminating in Kant’s synthesis, this chapter has shed light on the issue of how we achieve substantive knowledge.

8. Kant’s theory and its consequences were interpreted differently by post-Kantian philosophers, leading to the famous analytic-continental divide in philosophy. On the continental side, some philosophers interpret Kant as saying that we cannot know things as they are in themselves (the noumena). We can know only how they *appear* to us (the phenomena), resulting in a form of external-world skepticism (the view that we lack knowledge of the external world), Husserl’s phenomenology (philosophical description of inner mental life free from the traditional distinction between it and external reality), or a constructivist view (the idea that we construct reality). For a brief overview of these issues, see Ellis (2014b). For a more thorough discussion, see Critchley (2001).

Box 1 – Kant’s Copernican Revolution in Epistemology



[Astronomer Copernicus, or Conversations with God](#), painting ca. 1872 by Jan Matejko via Wikimedia Commons. This work is in the public domain.

In his *Critique of Pure Reason*, Kant sums up his epistemology by drawing an analogy to the Copernican Revolution (the shift in astronomy from a geocentric to a heliocentric model of the universe, named after Nicolaus Copernicus (1473–1543), the sixteenth-century Polish mathematician and astronomer):

Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them a priori through concepts that would extend our cognition have, on this presupposition, come to nothing. Hence let us once try whether we do not get farther with the problems of metaphysics by assuming that the objects must conform to our cognition, which would agree better with the requested possibility of an a priori cognition of them, which is to establish something about objects before they are given

to us. This would be just like the first thoughts of Copernicus, who, when he did not make good progress in the explanation of the celestial motions if he assumed that the entire celestial host revolves around the observer, tried to see if he might not have greater success if he made the observer revolve and left the stars at rest. Now in metaphysics we can try in a similar way regarding the intuition of objects. If intuition has to conform to the constitution of the objects, then I do not see how we can know anything of them a priori; but if the object (as an object of the senses) conforms to the constitution of our faculty of intuition, then I can very well represent this possibility to myself. Yet because I cannot stop with these intuitions, if they are to become cognitions, but must refer them as representations to something as their object and determine this object through them, I can assume either that the concepts through which I bring about this determination also conform to the objects, and then I am once again in the same difficulty about how I could know anything about them a priori, or else I assume that the objects, or what is the same thing, the experience in which alone they can be cognized (as given objects) conforms to those concepts, in which case I immediately see an easier way out of the difficulty, since experience itself is a kind of cognition requiring the understanding, whose rule I have to presuppose in myself before any object is given to me, hence a priori, which rule is expressed in concepts a priori, to which all objects of experience must therefore necessarily conform, and with which they must agree. ([1781] 1998, B xvi–B xviii)

Questions for Reflection

1. Given the assumption that the propositions below are known to be true, label each one as (i) analytic or synthetic, (ii) necessary or contingent, and (iii) *a priori* or *a posteriori*. If any are debatable, state your opinion and explain your reasons.
 - a. All triangles have three sides.
 - b. The figure drawn on the board is a triangle.
 - c. If the figure drawn on the board is a triangle, the figure has three sides.
 - d. It is not the case that $1 + 2 = 5$.
 - e. Some birds can fly.
 - f. All flying birds can fly.
 - g. The sun will rise tomorrow.
 - h. It is morally wrong to harm innocent people for personal gain.
 - i. The average apple is larger than the average grape.
 - j. “Mark Twain” and “Samuel Clemens” are different names for the same person.
 - k. Mark Twain is Samuel Clemens.
 - l. Water is H₂O.
 - m. Water is more abundant on Earth than on other planets in our solar system.
 - n. God either exists or does not exist.

2. Choose your own example of *a posteriori* knowledge. Then write a mini-essay that carefully traces its origins in a plausible manner. Use as many of the terms in the word bank below as possible (but feel free to also use other terms that appear in the chapter, especially those in bold). For definitions, you may wish to consult the glossary.

Impression	Simple/complex idea	Percept	Concept
Relations of ideas	Matters of fact	<i>Tabula rasa</i>	Innate
<i>A priori</i>	<i>A posteriori</i>	Deduction	Induction

3. Explain, in your own words, the main arguments for and against innatism.
4. Explain, in your own words, the main arguments for and against the *tabula rasa* theory.
5. How is it possible to avoid both innatism and the *tabula rasa*? What is the third alternative?
6. Many philosophers view synthetic *a priori* knowledge in a skeptical light. Why might this be a difficult category to make sense of? How did Kant explain and defend it? Summarize his view in your own words.
7. Consider the claim that “There is no synthetic *a priori* knowledge.” If this claim were true, could it be analytic? If it were true, could it be known *a posteriori*? If the claim is true but cannot be analytic or *a posteriori*, would it have to be synthetic *a priori*? If so, is it possible to consistently hold this claim?

8. Which do you find most plausible—rationalism, empiricism, or the Kantian synthesis? Summarize your main reasons for thinking so.

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CHAPTER 4.

SKEPTICISM

DANIEL MASSEY

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Differentiate* global skepticism and external-world skepticism by the scope of their doubts.
2. *Explain* the role of skeptical hypotheses in arguments for external-world skepticism.
3. *Construct* original skeptical hypotheses modeled on those discussed.
4. *Analyze* the Moorean and contextualist responses to skepticism, *recognizing* how Moorean responses are defiant while contextualist responses are concessive.

SKEPTICISM AND ITS SCOPE

Skeptics, as we will use the term, deny knowledge. A skeptic need not deny that free will is real or that God exists but *will* deny that anyone *knows* whether either of these is the case.

Skeptics are a variety. Some have limited targets. Some deny only that we have knowledge of what is right and wrong. Others deny only that we have knowledge about the future. But some skeptics are more ambitious, casting the skeptical net more widely. **Global skeptics** deny that we can have any knowledge at all,¹ and may even deny that we know whether skepticism is true. Such a radical skepticism is bound to elicit derision. It seems unrealistic, impractical, and perhaps even self-refuting. In fact, very few philosophers have been global skeptics. But even anti-skeptics have been enamored of the view, seeing it (and potential refutations of it) as a way of better understanding what it is to have knowledge in the first place.

1. Examples of global skeptics include the Greek philosopher Pyrrho of Elis (ca. 360–270 BCE) and his followers, most notably Sextus Empiricus (ca. second–third century), Scottish philosopher David Hume (1711–1776) on some interpretations, and the contemporary American philosopher Peter Unger.



[Sextus Empiricus](#), a leading ancient Greek proponent of global skepticism in the Pyrrhonian school (founded by the Pyrrho of Elis). Image via Wikimedia Commons. This work is in the public domain.

Our attention will be on one particular kind of skepticism—one that falls short of global skepticism while still denying that we know much of what we think we know—along with one particularly prominent style of argument in its favor.² We will then consider two influential responses to this form of skepticism.

EXTERNAL-WORLD SKEPTICISM

You likely believe a great number of things—that you are presently on or near the surface of the earth; that you are human; that there are plants, animals, and other humans; and that their lives have likewise unfolded in close proximity to the earth. These unremarkable beliefs have something in common: you believe them based on sensory experience. You have likely seen, heard, or felt dogs, people, and even planets. On the basis of such experiences, you have come to believe a great number of things about such objects. You know of their existence through your experiences, but their existence continues unabated even when you are not experiencing them. They are, philosophically speaking, **external objects**, objects that exist in the **external**

world (the world external to our minds). The skeptic we will consider denies that we can have knowledge of any such objects because all the available evidence of sense experience is compatible with no such objects existing. This form of skepticism is called **external-world skepticism** (hereafter “skepticism” for short).

Let’s start with the fact that experiences of an object are compatible with the non-existence of that object. We often have experiences of things that turn out not to exist. If nothing else, our dreams consist in experiences of objects, many of which do not exist. I may dream of a puppy and be sad to find when I wake that all my experiences of the puppy were figments of my dream. Experience alone does not entail that the things we experience exist.

2. Other forms of skepticism are discussed in chapters throughout this volume. Box 2 in [Chapter 1](#) introduces a skeptical challenge motivated by the “lottery problem.” [Chapter 2](#) considers two reasons for skepticism about epistemic justification (the view that we lack justification in some significant domain)—the first based on René Descartes’s “evil demon hypothesis”; the second based on the “regress problem” attributed to the Pyrrhonian skeptics. [Chapter 3](#) briefly introduces David Hume’s “problem of induction” as well as skeptical interpretations/implications of Immanuel Kant’s attempt to reconcile rationalist and empiricist accounts of external-world knowledge. Finally, [Chapter 7](#) examines a form of skepticism in light of pervasive peer disagreement.

Now consider the following possibility. You have had a set of experiences for some years, all of which are perfectly coherent. When you have had experiences of puppies, you at least sometimes have further experiences of those same puppies, which have grown and developed in a way consistent with their being real animals. All your experiences perfectly mesh together, and nothing about those experiences suggests anything other than that they are the experiences of external objects. But what guarantees this to be so? What guarantees that you are not having a long, perfectly coherent dream rather than the life you take yourself to have led? French philosopher René Descartes (1596–1650) famously despaired of finding some evidence that could distinguish being awake from having such a dream ([1641] 1985, First Meditation). We will call this hypothesis and others like it **skeptical hypotheses**. The skeptic contends that if you cannot eliminate such possibilities (the possibilities entertained by skeptical hypotheses), that if you cannot be absolutely certain of what you know, then you cannot know that the external world exists.



[René Descartes](#) by Gérard Edelinck via Wikimedia Commons. This work is in the public domain.

A properly crafted skeptical hypothesis is devious. You might conjecture that if your life to this point had been a dream, then you would not have felt pain and kept dreaming, knowing that pain typically wakes a sleeping human. But this alleged fact about the sleeping habits of human beings is itself something you have “learned” through experience. And it is experience itself that is being thrown into doubt. For all you know, this fact about the sleeping habits of human beings is no fact at all, but merely another figment of your dream. The skeptic claims that since experience is our only available source of evidence, and since experience cannot distinguish between being awake and dreaming, we cannot know we are awake. That is, we cannot know that the external world exists. Appeals to facts about the external world “learned” through experience will be powerless to help (Stroud 1984, 8).

Let’s represent this skeptical argument as follows:

- P. Nothing in experience can eliminate the possibility that your life has been a long, perfectly coherent dream.
- C. Therefore, you do not know that the external world exists.

This is a common style of skeptical argument. Other arguments in favor of skepticism have been put forward, and a staggering variety of responses to this argument (and other skeptical arguments) can be found throughout the history of philosophy. We will now turn our attention to two such responses from recent philosophers.

Box 1 – Famous Skeptical Hypotheses

Skeptical hypotheses are scenarios compatible with all possible evidence yet inconsistent with our ordinary beliefs. The possibility that all our experiences have been those of a long, perfectly coherent dream is one skeptical hypothesis, but others have occurred throughout the history of philosophy and even in popular culture.



[Zhuangzi's Butterfly Dream](#) by Ike no Taiga via Wikimedia Commons. This work is in the public domain.

Zhuangzi's butterfly dream.

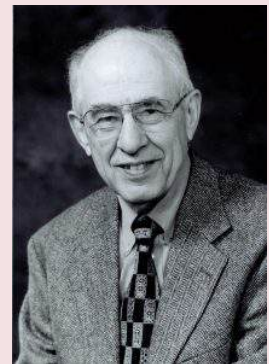
The Chinese Daoist philosopher Zhuang Zhou, also known as Zhuangzi (ca. 369–286 BCE), dreamed that he was a butterfly. Upon awakening, he considered the possibility that instead, he was in fact a butterfly dreaming he was Zhuangzi (2013, 18). No available evidence seems to be able to distinguish between his being a human dreaming he is a butterfly and his being a butterfly dreaming he is a human.

The evil demon.

Another skeptical hypothesis considered by Descartes ([1641] 1985, First Meditation). Here an evil demon with godlike powers uses those powers to deceive you in all your beliefs. What could you know if a near-omnipotent being wanted you to know nothing?

Brain in a vat.

A skeptical hypothesis formulated by the contemporary American philosopher Gilbert Harman (1973) and popularized by the American philosopher Hilary Putnam (1926–2016). In this scenario, you are a disembodied brain suspended in a nutritive inside a vat while powerful computers overseen by scientists feed you experiences of an ordinary human life (Putnam 1981). The 1999 science-fiction movie *The Matrix* adapted the brain-in-a-vat scenario, with the protagonist managing (due to the intervention of others) to escape.



[Hilary Putnam](#) via Wikimedia Commons. License: [CC BY-SA 2.5](#)

MOORE AGAINST SKEPTICISM

One important response to this style of argument comes from the British philosopher G. E. Moore (1873–1958), known for his commonsense approach to philosophical problems.³ Among his many philosophical accomplishments was to give several powerful responses to skepticism based on an appeal to common sense. We will look at two forms of this **Moorean response** to skepticism.

In his “Proof of an External World,” Moore claims to be able to demonstrate (contrary to the skeptical

3. Such an approach is a descendant of the tradition instigated by the Scottish Enlightenment philosopher Thomas Reid (1710–1796). In contemporary philosophy, Michael Huemer defends a related approach based on “phenomenal conservatism,” his influential theory of epistemic justification. According to this theory, a person is justified in believing any proposition that *seems* true to the person (absent defeaters). For a brief discussion of Reid and Huemer, see Chapman (2014).

view) the existence of the external world—to prove that the world of ordinary objects and people has an existence outside of our experiences. He gives two such “proofs” to illustrate his general approach. Holding up a hand, he claims to know that he has a hand. Holding up his other hand, he claims to also know that he has a second hand. Since hands are ordinary objects existing beyond our experiences of them, Moore infers he has proven the existence of at least two external objects. Our knowledge of the external world is secured! (Moore [1939] 1963, 144).



[George Edward Moore](#) in 1914 by Ray Strachey, born Rachel Pearsall Conn Costelloe, via Wikimedia Commons. This work is in the public domain.

This may seem to have an air of trickery about it. The skeptic challenges us to prove that we are not dreaming, that our entire life has not been a long yet perfectly coherent set of experiences corresponding to nothing beyond them. Moore’s holding up of his hands and declaring himself to know he has hands seems to entirely ignore the challenge put before him by the skeptical hypothesis, and so to miss the point. However, Moore was *not* missing the point. His aim is to challenge a sometimes-unstated assumption in the skeptic’s argument. Consider our presentation of the skeptical argument again. Moore does not challenge the *premise* (P) but instead challenges the *inference* from the premise (P) to the conclusion (C). The skeptical argument, as presented, *assumes* that *if* you cannot prove that your life has not been a long, perfectly coherent dream, *then* you do not know all those things you normally take yourself to know on the basis of your experiences. That is, it assumes that if you cannot definitively eliminate the possibility that your life is a dream, then you do not know that you are awake or that anything beyond your experiences really exists.

Moore makes the following contentions: (a) that he *can* know that external objects exist *even if* he cannot definitively eliminate the possibility that he is dreaming; (b) that our ordinary practices of taking ourselves and others to know things *do not require* that we meet such skeptical challenges; and (c) that ordinary standards are the only ones that matter, and so they are the standards of evidence in play whenever we are faced with doubts (Moore [1939] 1963, 145). Moore advocates **fallibilism about knowledge**, the view that you may know something despite the possibility of being wrong. The fallibilist does not accept the requirement that skeptical hypotheses be *definitively* ruled out before we know that the external world exists. It may suffice if we can manage to establish that they are *improbable*.

Consider again Moore’s claim that he has a hand. He holds up his hand and claims that this is sufficient proof of its existence. He knows he has a hand because, well, there it is. Someone may doubt that he has a hand. Some such doubts may be reasonable or at least intelligible. If someone were to doubt that Moore had a hand because the light in the room was dim and perhaps Moore had held up a small statue rather than his hand, then Moore would accept the need to respond to this doubt. He could not count as knowing he has a hand if he is unable to show that what he held up was not a small statue. But there are clear ways of making such a distinction. He can look more closely at his hand

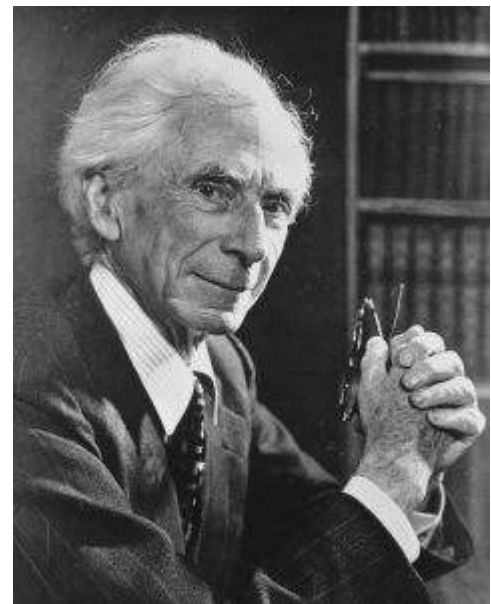
in better lighting. He can touch his hand and see whether it feels like flesh or stone. There are any number of ways he could respond to this doubt and thus retain his title to knowledge (Moore [1939] 1963, 145).

But in the case of the skeptic's doubts, no such responses are possible. This is by the skeptic's design. The skeptical hypothesis is described so that there is no way to distinguish it from being awake. Many philosophers, of course, have tried to find such a distinction. Moore's response, however, is simply to deny that such a doubt requires a response, and to deny that we must be able to distinguish the dream hypothesis from the ordinary hypothesis. We can know there is an external world because we can know we have hands. We can know we have hands because we can produce them when and if our title to knowledge of their existence comes into question. We cannot *prove* they exist in the strong sense demanded by the skeptic, but there is no obvious reason to think we must do so to count as knowing they exist (Moore [1939] 1963, 148). Fallibilism must be considered.

Moore is also known for another response to skepticism (Moore [1959] 1963). Here he considers what a skeptical argument does: it presents a series of claims which (according to the skeptic) force us to accept a skeptical conclusion. To illustrate his point, Moore borrows an example from fellow British philosopher Bertrand Russell (1872–1970):

1. I do not know immediately that the pencil exists.
2. Its existence does not follow deductively (i.e., with certainty) from anything known immediately.
3. My belief in it then is based on “analogical or inductive” (non-deductive) reasoning.
4. What is so based is not “certain knowledge.”
5. Therefore, I do not know the pencil exists.

This pattern of argument is a familiar one. Premises (1)–(4) tell us that our knowledge of a pencil cannot be based directly on experience, or deduction from anything known on the basis of experience, since we might be dreaming all our pencil experiences. It is at best based on some other (non-deductive) type of reasoning, and beliefs based on these other types of reasoning do not count as “certain knowledge.” Hence, we cannot *know* that the pencil exists.



[Bertrand Russell](#) in 1957 by Anefo via Wikimedia Commons. This work is in the public domain.

Moore notes that this argument does not establish its conclusion in the sense of showing that accepting it is the reasonable course. Arguments generally force us to choose between *either* accepting the premises (and therefore the conclusion) *or* rejecting the conclusion (by rejecting one or more premises). The choice, then, is between accepting some number of *philosophical claims* (given by the premises) or accepting our *ordinary claim* to knowledge (i.e., rejecting the conclusion). Moore maintains that, considered in this light, the reasonable choice is to reject the conclusion, hence to reject one or more premises, and to maintain our ordinary claim to knowledge.

Indeed, this understates the failure of the argument to make acceptance of the conclusion reasonable. You may not be able to identify *exactly* what is wrong with the premises, nor marshal any strong arguments against any one of them in particular, and yet you may reasonably maintain that *some-premise-or-other-I-know-not-which* is false rather than accept the conclusion that you do not know that pencils exist. It is quite reasonable to feel certain that pencils exist, more reasonable than to maintain that each and all of premises (1)–(4), a set of controversial philosophical claims, are true. If Moore is right, then a skeptical argument can only pit a set of philosophically motivated premises against our ordinary, commonsense claims to knowledge, but it can never declare victory. It will always be more reasonable to believe we know that pencils and other external objects exist than accept the difficult, abstruse, controversial premises of skeptical arguments.⁴

4. Moore's argument is sometimes construed as an inference to the best explanation, specifically via Ockham's razor: our ordinary claims to external-world knowledge more simply and straightforwardly explain our experiences than skeptical hypotheses and their philosophical presuppositions. For the connection between best explanation and justification, see [Chapter 2](#) of this volume by Todd R. Long. For the connection between best explanation and probability, see [Chapter 6](#) by Jonathan Lopez.

Box 2 – To *Modus Tollens* a *Modus Ponens*

Moore's second response to the skeptical argument employs a general argumentative technique that is very useful to learn. Take any propositions p and q . Consider the common argument form that logicians (and philosophers generally) call *modus ponens* (Latin for “mode that affirms”):⁵

Modus ponens

If p then q .

p

Therefore, q .

This is a (deductively) valid argument form. Logicians use the term “valid” differently from its everyday usage. To say that an argument is valid (in the logician's sense) means the following: under the assumption that all of the premises are true, it follows with certainty that the conclusion is also true. Apply this idea to *modus ponens*: assuming that p is true, and that if p then q , it follows with certainty that q is true.

However, it is possible to convert *modus ponens* into another (deductively) valid argument form by swapping the positions of p and q in the second and third lines, then negating them both (leaving the “if-then” premise untouched). Logicians call this form *modus tollens* (Latin for “mode that denies”):

Modus tollens

If p then q .

Not- q

Therefore, not- p .

So, upon encountering any *modus ponens* argument, one logically acceptable option is to oppose it with a corresponding *modus tollens* argument. As philosophers often say, you can always “*modus tollens* a *modus ponens*.” Of course, only one of the two arguments can be “sound” in the logician's sense (i.e., valid plus true premises—features which jointly guarantee a true conclusion). Since both arguments are valid and share a premise (“If p then q ”), choosing which argument to accept (if either) comes down to the premise on which they differ (p vs. not- q). The deciding factor then, is whether p or not- q is the more plausible proposition to take as a starting point. This is where Moore's “commonsense” strategy comes into play.

Challenge exercise: Try recasting the skeptic's argument in *modus ponens* form. Then see if you can put Moore's second response into a corresponding *modus tollens* form. After doing so, identify the premises on which the two arguments differ, then reflect on which one of them you find more plausible and why.

THE CONTEXTUALIST CONCESSION

Moore's responses are defiant. He seeks to undermine skepticism by rejecting a key premise implicitly employed in the skeptical argument and even by undermining the power of such arguments to ever make it reasonable to accept their conclusion. Many philosophers, however, have found Moore's responses unpersuasive. Canadian philosopher Barry Stroud (1935–2019) notes that much of the *ordinary practice* of taking ourselves and others to know things requires that those who know something be able to eliminate contrary possibilities (1984, 18). For instance, if I know that the yellow

5. If you are interested in learning more about logic, including deductively valid or invalid arguments, you can read the Logic book in this philosophy open textbook series: [Introduction to Philosophy: Logic](#).

bird I see outside my window is a canary, then I must know it is not a goldfinch. This is how we normally regard claims to knowledge. Someone who claims to know that the yellow bird outside her window is a canary but who also admits that it might be a goldfinch would not be regarded as someone who *knows* that the bird is a canary. Likewise, when Moore says that he knows he has a hand but also admits he cannot eliminate the possibility that he is dreaming, many philosophers regard him as confused as well. In the normal case, we require that we be able to eliminate alternatives compatible with our current evidence. Why should things be any different when the alternative is a skeptical hypothesis?

The **contextualist** response attempts to split the difference. This response admits that, by our ordinary standards of knowledge, the dream hypothesis does not need to be ruled out. In ordinary life, we can know perfectly well that tables, chairs, trees, other people, and even G. E. Moore's hands exist. But, at the same time, when skeptical doubts are raised, as they are in a philosophy classroom or while reading a philosophy book, then the standards in play *shift* and become more demanding. Indeed, they become demanding enough to vindicate skepticism. We can have knowledge of the external world, but only as long as some skeptic does not shift the standards of evidence and thereby deprive us of that knowledge. This is the contextualist response to skepticism. It concedes that skepticism is correct when we are operating under standards that would have us eliminate skeptical hypotheses but is incorrect when we are operating under the laxer standards of day-to-day life.



[David Kellogg Lewis](#) via Wikimedia Commons.
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Contextualists differ in their understanding of when and how the standards for knowledge shift, and even what it means for there to be shifting standards for knowing. We will turn our attention to just one way of working out contextualism as found in the work of the American philosopher David Lewis (1941–2001). In his view, the standards in play are those in a conversation; shifts in those standards are due to changes in the conversation. The thought that conversations can set epistemic standards may seem strange, but before digging into the details of Lewis's views, consider a simple example unrelated to knowledge. Amy, looking at a baby elephant standing next to a dog, may say, "The baby elephant is big." She will be right. Compared to the dog, the baby elephant is big. But if she were to say again, "The baby elephant is big," while it was standing next to an adult elephant, she would be wrong. Compared to the adult elephant, the baby elephant is not big. Whether or not the baby elephant counts as "big" depends on the context in which one makes the claim.

Of course, as the conversation moves along, what we should say about the baby elephant may as well. If Amy is at the zoo and her friend says, "The baby elephant is small," while pointing out both the baby and adult elephants, then her friend says something true. Once the friend brings the focus of the conversation to the adult elephant, it would be daft of Amy to say again that "The baby elephant is big." The conversation has changed what is needed for the sentence "The baby elephant is big" to count

as true, and given the change, subsequent claims that “The baby elephant is big” will be false, even as prior such claims were true. (We will return to this example of Richard Feldman’s shortly.)

In a somewhat similar way, Lewis believes that the truth of attributions of knowledge varies with shifts in the conversation. In a conversation, a speaker may attribute knowledge to herself or to some other person (including someone who is not part of the conversation). It will be perfectly proper, given the state of the conversation, to *ignore* a wide range of possibilities during the conversation (Lewis 1996, 544). If you and I have a conversation about the safety of the drinking water in our hometown, we properly ignore many possibilities even as we must attend to others. If I claim to know the water is safe to drink, I must be able to eliminate the *salient* (that is, easily noticeable) possibilities, including the possibility that the water contains unsafe quantities of lead. Yet we also presuppose that a number of possibilities are false, for instance the possibility that the fluoride in our hometown’s drinking water may have been added by a secret cabal of aliens intent on stealing our bodily fluids. Still, my utterance of “I know the drinking water is safe” will express a truth if my evidence rules out the conversationally salient possibilities contrary to that claim. I must be able to eliminate, among other things, the possibility that there are unsafe levels of lead in that water. I need not eliminate the possibility of an alien conspiracy.

But exactly *which* possibilities may we properly ignore in a conversation? Lewis’s idea is that the range of possibilities that may be ignored shifts as the conversation progresses according to a variety of conversational rules. For the sake of exposition, I will consider only one such rule:

The **rule of belief** forbids conversational partners to ignore any possibility that one or more of those partners believe. (Lewis 1996, 555–6)

It is a poor conversationalist who simply ignores what her conversational partners believe. So, while you and I may ignore the possibility that aliens have put fluoride into the drinking water of our hometown, if another person joined our conversation—someone who believed precisely that—then we would no longer be able to ignore that possibility. We would now need to eliminate that possibility using the available evidence to know that our town’s drinking water is safe. Once our conspiratorially minded friend joined the conversation, our knowledge might dissipate *unless we could eliminate his far-fetched theories*.

In Lewis’s view, the basic contextualist response to skepticism is sound. In many conversations, skeptical hypotheses will be properly ignored. Suppose we are trying to determine whether the drinking water in our hometown is safe to drink. In that case, we may properly ignore the possibility that our town and the rest of the external world is merely a figment of a long, perfectly coherent dream. We may then take ourselves to know the water is safe to drink (or not safe to drink) without attending to that far-fetched possibility. Yet if a skeptical epistemologist were to join the conversation, one who took seriously skeptical hypotheses, we could no longer properly ignore that possibility, and thus we could no longer know that our hometown and the rest of the external world exists. Or at least we could not know such things unless we can use the available evidence to eliminate the various skeptical hypotheses that have become by the rule of belief a salient part of our conversation. We have already seen how challenging that can be. The outcome is that skepticism may yet be vindicated, but only when we take it seriously. In most of life, we take neither skepticism nor the supporting skeptical

hypotheses seriously. Moreover, absent some shift in our conversation, it is entirely proper that we not take them seriously. Our knowledge of the external world is secure absent such shifts (Lewis 1996, 561).

One objection to this approach points to the way that contextualism treats the word “know” (Feldman 2003, 152–5). The contextualist response to skepticism holds that in contexts where skepticism is not an issue, proper use of the word “know” does not require us to eliminate skeptical hypotheses. Once the skeptical interlocutor challenges our title to knowledge, however, the standards have changed, and we must respond. But Richard Feldman notes that this is different from other words whose use varies from context to context. Return to the example of the baby elephant. If Amy calls a baby elephant *big* while comparing it to a dog, Amy will not see a need to revise her views when someone notes the baby elephant is not big compared to an adult elephant. Anyone who asked her to recant her view on those grounds would be misguided. Baby elephants are big *compared to dogs* but not big *compared to adult elephants*. The latter fact does nothing to challenge the former. But the skeptic does challenge our ordinary knowledge claims. I cannot simply dismiss the skeptical challenge, even if it is presented in response to my ordinary context claims about knowing. The skeptic maintains I am mistaken, and so I must respond. The person who claims Amy is wrong about the size of baby elephants is confused and can safely be ignored. Contextualism requires that the word “know” works like the word “big,” but it is not clear that it does.

CONCLUSION

As we have seen, skepticism is a considerable challenge, although there are also considerable responses. In closing, it is worth remembering that there are further arguments on both sides of external-world skepticism, not to mention many other forms of skepticism beyond the scope of this chapter. It is also worth noting that, while skepticism has a pessimistic connotation, those who count themselves skeptics of one sort or another tend to find significant value in it. The ancient Greek philosopher Pyrrho of Elis (ca. 360–270 BCE), for example, advocated global skepticism as a cure for the dogmatic certainty which he located at the root of the ills of life.⁶ Socrates, though (arguably) not a (global) skeptic, shared the conviction that true wisdom lies in recognizing what one does not know (Plato [ca. 390 BCE] 2009). In the modern era, Russell echoes similar sentiments when he writes of a “liberating doubt” delivered through the vehicle of philosophy ([1912] 2013). Let us close, then, with a passage from Russell linking the very purpose of philosophy to the value of doubt and the improvement of the self.



[Pyrrho of Elis](#) by Girolamo Olgiati via Wikimedia Commons. This work is in the public domain.

6. See Box 2 of [Chapter 2](#) of this volume by Long for the Pyrrhonian “regress problem” and prospective solutions.

Box 3 – The Value of Doubt

The value of philosophy is, in fact, to be sought largely in its very uncertainty. The man who has no tincture of philosophy goes through life imprisoned in the prejudices derived from common sense, from the habitual beliefs of his age or his nation, and from convictions which have grown up in his mind without the co-operation or consent of his deliberate reason. To such a man the world tends to become definite, finite, obvious; common objects rouse no questions, and unfamiliar possibilities are contemptuously rejected. As soon as we begin to philosophize, on the contrary, we find, as we saw in our opening chapters, that even the most everyday things lead to problems to which only very incomplete answers can be given. Philosophy, though unable to tell us with certainty what is the true answer to the doubts which it raises, is able to suggest many possibilities which enlarge our thoughts and free them from the tyranny of custom. Thus, while diminishing our feeling of certainty as to what things are, it greatly increases our knowledge as to what they may be; it removes the somewhat arrogant dogmatism of those who have never travelled into the region of liberating doubt, and it keeps alive our sense of wonder by showing familiar things in an unfamiliar aspect. (Chapter XV)

— Bertrand Russell
“The Value of Philosophy”
In *The Problems of Philosophy*

Questions for Reflection

1. As noted in the introduction to this chapter, some philosophers think that global skepticism is self-refuting. What is a self-refuting view? Why might global skepticism be subject to this charge? How might global skeptics respond?
2. Review the theories of epistemic justification discussed in [Chapter 2](#) (e.g., coherentism, modest foundationalism, and explanationism). Given the role of justification in knowledge (see [Chapter 1](#), how might each theory inform one’s response to external-world skepticism? Does any such theory provide an adequate response to the skeptical challenge? Why or why not?
3. Do you think that the Moorean treatment of skepticism is satisfactory? Why or why not?
4. Do you think that the contextualist response to skepticism is satisfactory? Why or why not?
5. Revisit the lottery problem from Box 2 of [Chapter 1](#). Some philosophers have proposed contextualism as a solution to this problem. What might such a solution look like?

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PART II.

EXPANDED EPISTEMOLOGY

CHAPTER 5.

EPISTEMIC VALUE, DUTY, AND VIRTUE

GUY AXTELL

Chapter Learning Outcomes

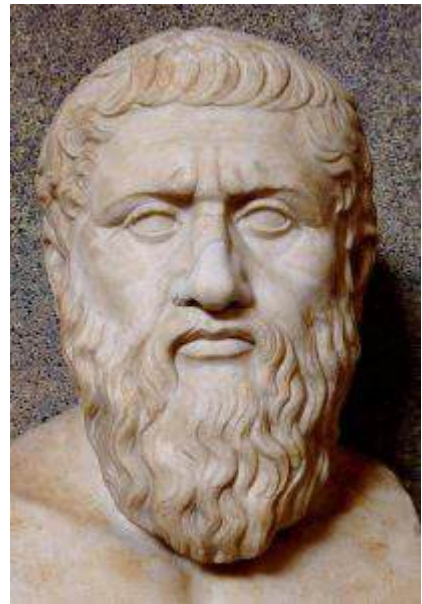
Upon completion of this chapter, readers will be able to:

1. *Identify* questions about value associated with the pursuit of knowledge and justified belief.
2. *Critically evaluate* claims about epistemic entitlement, such as the assertion that a person's beliefs or attitudes are either responsibly or irresponsibly held.
3. *Demonstrate* analytic writing and reasoning skills in articulating philosophical concepts of epistemic value, duty, and virtue or vice.

EPISTEMIC VALUE AND THE VALUE PROBLEM

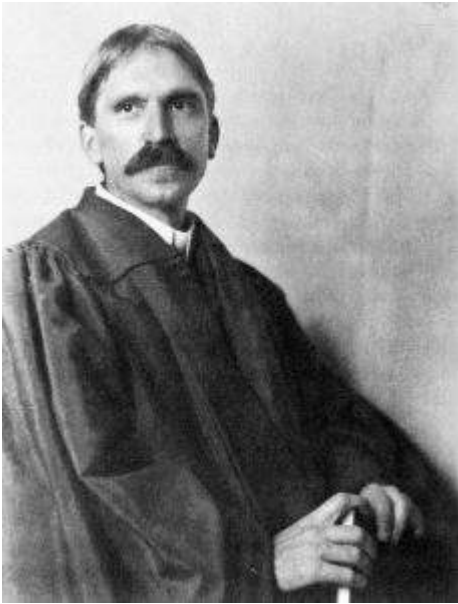
You need to go to Larissa, but you do not know the way. We can agree that someone who knows the way would be a good guide. But what about someone who has “a true opinion about which way was the right way,” but who hasn't gone there and isn't directly acquainted with the path? (Plato [ca. 380 BCE] 2015, 97b). In the Platonic dialogue *Meno*, Socrates asks his friend whether such a person with “right opinion concerning that which other people know . . . will not be a worse guide than one who knows” (97b). Meno concurs that this person would not be a worse guide because the conveyed belief, or guidance, would be essentially the same. But upon receiving this response, Socrates observes an oddity: if true belief can serve our practical purpose of successfully guiding action just as well, then why do we value knowledge over true belief? Indeed, why (and how) do we try to distinguish knowledge from *merely* true belief?

These searching questions leave Meno in the uncomfortable, perplexed state of mind the Greeks termed *aporia*. Meno now seems to be without resources to answer Socrates's initial question about the nature of knowledge. But Socrates immediately offers Meno a way out. It seems correct that an assertion or transmitted belief, insofar as it *is* true, would serve practical ends as well as would knowledge. But for the testifier in our example, the belief lacks justification, and in sharing it that testifier would be “offering guesswork in lieu of knowledge” (98b). If we abstract from the single-iteration cases in which the belief happens to be true, we find that relying upon luck, guesswork, or weakly supported beliefs is quite *unlikely* to serve well. If so based, our own beliefs are not likely to “stay put” even for us. So, “True opinions, for as long as they remain, are fine things and do nothing but good. But they don't hang around for long. They escape from a man's mind, so that they are not worth much until one tethers them” with a *logos* or “account” (97e–98a).



[Bust of Plato](#) from the Vatican Museum.
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Socrates does not say much about the nature of this *logos*. It might refer to the good reasons for a belief that an agent finds available upon self-reflection. It could also be something more like an explanation for why the agent reliably formed the belief—something that makes clear why it was more than extreme good luck that they came to hold this true belief, rather than some other false belief. But it is clear, firstly, that Socrates is talking about something like “justification” or “warrant,” to use terms debated in contemporary epistemology (see [Chapter 2](#) of this volume, “Epistemic Justification” by Todd R. Long). Secondly, it is clear that he takes this “tethering” of the belief by a *logos* to provide what differentiates knowledge from true belief. Thirdly, he clearly maintains that the *stability* which results from such tethering affirms why we should *value* knowledge above merely true belief. Hence, Plato (ca. 428–347 BCE) is seen as a source of the traditional, “justified true belief” (JTB) analysis of knowledge (for more on the JTB account, see [Chapter 1](#) of this volume, “The Analysis of Knowledge” by Brian C. Barnett).



[John Dewey](#) at the University of Chicago in 1902. Photo by Eva Watson-Schütze via Wikimedia Commons. This work is in the public domain.

The sufficiency of this traditional analysis has been challenged in recent years, and some have even questioned the necessity of reflective justification for knowledge possession. But we owe Plato for having vividly presented the concern about what we *mean* in attributing knowledge to someone, together with a question about why we *value* different epistemic standings as we do. While the **value problem** is approached in different ways by different epistemologists, facing these questions head-on has arguably added much depth to contemporary epistemological debates. It has helped the field to expand beyond a mere “spectator” theory of knowledge, which American philosopher John Dewey (1859–1952) characterized as an account which makes the metaphor of vision primary, so that knowing is fundamentally a passive, or “beholding” relation between an individual “subject” knower and an external “object” known ([1929] 2008, 19). For as epistemologist Alvin Goldman points out, while a few decades ago epistemology and ethics were “positioned in opposite corners of the philosophical establishment, the former the epitome of ‘theoretical’ philosophy and the latter the epitome of ‘practical’ philosophy,

with little contact made between them, today an active interest in both analogies and disanalogies between ethics and epistemology abounds” (2015, 132–3).¹

Important for appreciating the connection between ethics and epistemology is the concept of normativity. A **normative** task does not aim at description or causal explanation, but rather at assessment or guidance of some kind, according to values (norms) deemed pertinent to some practice (the value of art or particular artworks, for example), or the domain of discourse (ethics, politics, economics, epistemics, aesthetics, etc.). What has been discovered—or perhaps recovered—through recent interest in the value problem is that normative epistemology and normative ethics have important parallels. This is why duty, consequentialist, and virtue theories in ethics each have analogues in contemporary epistemological theories.² The study of value (**axiology**)—in particular the study of epistemic value (**epistemological axiology**)—helps to highlight the similarities and differences of ethical and epistemic evaluation. Moreover, similarities or analogies imply something quite different from identity: their claim is weaker than the claim that we can *reduce* the one kind of value to the other. The value problem is best addressed by carefully distinguishing the kinds of value in play, rather than reducing value to a single kind. So, as Duncan Pritchard (2014) insists, to understand and respond to the problem we must first recognize that different kinds of value (epistemic, ethical, practical) are in play.

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1. We should note that I am for simplicity introducing the value problem as a single problem, whereas Pritchard (2007) argues that we should really distinguish at least three overlapping sub-questions.
 2. See Goldman (2015) and Berker (2013) debating the relationship between T-monism (a theory I introduce in the next paragraph) and consequentialist accounts of epistemic normativity. See also the [Ethics book in the Introduction to Philosophy open textbook series](#) for more on duty, consequentialist, and virtue theories of ethics.

The claim of **veritism** (also **truth monism** or **T-monism**) is that truth is the natural “goal” or “aim” of belief (since belief is the acceptance of a proposition’s truth), and true belief is the fundamental epistemic good. While truth is, as in the traditional account, a condition on knowledge, the value of truth is not grounded in knowledge or anything else. Other epistemic states or standings (e.g., justification or warrant) are good as they promote the epistemic value of true belief. T-monism has many critics as well as defenders. Linda Zagzebski (1996), for example, argues that (externalist) reliabilism (a view introduced in [Chapter 2](#) of this volume) offers an inadequate account of epistemological axiology, or epistemic value.³ Although Pritchard (2014) defends reliabilism and T-monism, he makes the useful methodological point that authors on both sides of the debate are sometimes guilty of confusing “epistemic value” (associated with truth or other epistemic ends) with “the value of the epistemic” (the instrumental value of holding true beliefs, knowledge, or understanding for realizing our moral or practical ends).⁴ Epistemic value does not imply value proper, or value for life (Pritchard 2014, 112).⁵

Opposed to epistemic value monism is **epistemic value pluralism**. This axiological thesis denies the T-monist claim that the natural aim of belief is truth. The pluralist finds no clear hierarchy among epistemic goods, but rather an *un-unified* order of values. A Jamesian point often discussed as a challenge to T-monism is that “truth” as the fundamental epistemic good is ambiguous between a positive and negative good: “Believe truth! Shun error!” (James [1896] 2009, sec. VII, 18). Seen as prescribing how to conduct inquiry, these two commands are not the same. Instead of marching in lockstep they can sometimes come apart, leading to different prescriptions. As an example, think about beliefs derived from testimony. If I take my epistemic aim as acquiring as many true beliefs as possible (“Believe truth!”), then I should believe any claim made by any source of testimony (friends, books, media, etc.) and not worry that I will very likely acquire lots of false beliefs along with true

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3. Zagzebski (1996) charges Goldman, Pritchard, and other defenders of a reliabilist account of epistemic value with what is now called the “swamping problem.” If the value of an epistemic state is only instrumentally valuable relative to a further good and that good is already present in that item, then it can confer no additional value. The value of reliability will be “swamped” by these further values. Thus, the notion that a belief must be reliably formed in order to constitute knowledge seems unable to tell us why knowledge is more valuable than merely true belief. Pritchard (2014) defends the adequacy of a fairly traditional truth-centered monistic axiology, but he doesn’t think it implies a consequentialist way of thinking about epistemic value (as its critics charge), and as the swamping problem assumes. Goldman (2015) relatedly endorses only a formal similarity between reliabilism and consequentialism. He urges us not to run together “(A) a theory of epistemic value called ‘veritism’ and (B) a theory of belief justifiedness called ‘process reliabilism’” (139). Practices, rules, and institutional arrangements, Goldman argues, “should be evaluated [consequentially] in terms of ‘downstream’ effects such as the truth-ratio of jury verdicts” (140). But this leaves open that agents and any particular beliefs they hold are evaluated in other ways. Indeed, reliabilists like Goldman hold that epistemic standing is assessed by the reliable etiology or causal history of the belief, which is an “upstream” matter. So, both Goldman and Pritchard warn us not to associate too closely epistemic value truth monism with consequentialism.
 4. Pritchard (2014) finds a crucial ambiguity in the use of the term “epistemic value.” He thinks it should be restricted to the “attributive” sense: something that is *valuable in a specifically epistemic way*. He argues that veritism’s critics confuse the meaning by understanding “epistemic value” in the “predicative” sense: as something that is both *epistemic* and *of value* (e.g., morally valuable, practically valuable, or aesthetically valuable).
 5. Similarly, we should not simply presuppose a close overlap between issues in the “ethics of belief” (introduced in the next section) and the “epistemology of disagreement” (introduced in [Chapter 7](#) of this volume), even though both are often divided between proponents of “uniqueness” and of “permissivism.” See Greco and Hedden (2016) for a defense of uniqueness and impermissivism. See Jackson (2020) for a defense of a permissivist ethics of belief based upon *epistemic* permissivism and standpoint epistemology. See Axtell (2020) for further discussion of differences between epistemic assessment and guidance, especially with respect to beliefs in domains of controversial views.

ones. If I instead think I am a better epistemic agent to avoid false beliefs as much as possible (“Shun error!”), I will be far more cautious and risk-averse in what I come to accept.

This shows that the epistemic good of true belief is not as unified as it may at first appear. Further, if there is no single best way for agents to balance these two ideals of inquiry (the “councils” of intellectual courage and caution, as James describes them), then recognition of the range of ways to achieve a balance becomes an argument in support of the possibility of reasonable disagreement even among evidence-sharing epistemic peers (Kelly 2013).

Critics of veritism have either (a) maintained a value monism but elevated to final value status a *different* aim, such as understanding; or (b) jettisoned monism’s “primary aim” thesis in order to embrace “radical pluralism about both the nature of the epistemic and about epistemic value” (Pritchard 2016, 407). On this latter, pluralist view, “there is no base-level account of the epistemic available, and nor is there a fundamental epistemic good—i.e., fundamental in the sense that the epistemic value of other epistemic goods is reducible to the fundamental epistemic good” (407). Here we are presented with an array of the epistemically desirable—truth, knowledge, understanding, wisdom, justification, reliability, cognitive agency, explanatory power, and so on—but “with no straightforward hierarchy in play” (407).⁶



[William James](#) in 1890 via Wikimedia Commons. This work is in the public domain.

THE ETHICS OF BELIEF

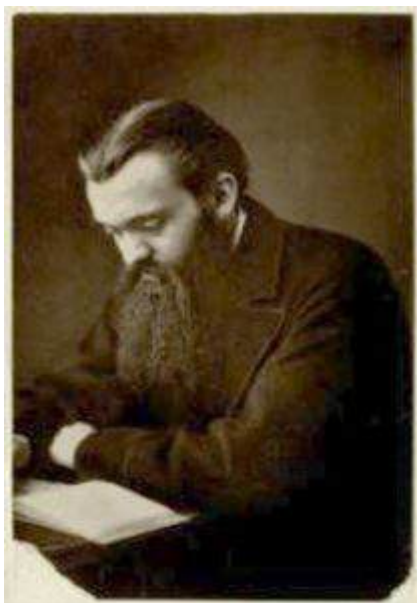
The **ethics of belief** raises questions of our responsibility (praiseworthiness or blameworthiness) for how we conduct our inquiries and settle our beliefs. It is a broad and perhaps ambiguous phrase, which Andrew Chignell (2018) describes as referring to a cluster of questions at the intersection of epistemology, ethics, philosophy of mind, and psychology. Susan Haack (2001) defends an “overlap model” relating epistemic and ethical evaluation. On this model we should not reduce epistemic value to ethical values, but having first properly differentiated them, we can then go on to acknowledge a good deal of overlap or “traffic” between them. *Moral* responsibility is widely held to have an epistemic condition, the failing of which is the reason why not knowing something, when the ignorance is non-culpable, is generally an excusing condition for one’s wrongful action.⁷ **Doxastic responsibility**, the kind of responsibility someone has for what they believe, seems similarly to draw from the ethical

6. Epistemic value pluralists sometimes also reject the sweeping primacy claims that “internalists” and “externalists” respectively make about the relationship between “propositional justification” and doxastic norms (see [Chapter 2](#) of this volume for the internalism/externalism debate). Propositional justification is a property of propositions and evidence, while doxastic norms apply to agents and their beliefs. These different norms seem to be intertwined (Melis 2016), but when epistemologists discuss their relationship, they often present them in a more dichotomous way that fuels an incompatibility between internalism and externalism.

7. See Robichaud and Wieland (2017) for an exploration of the epistemic condition on moral responsibility. Note also that it may be useful to take our beliefs as “actions” of a sort, and moral and epistemic responsibility as to some degree intertwined, even as one allows that beliefs have not nearly the same *voluntary* quality that most actions do. Virtue theorists and pragmatists have highlighted these connections, and regulative epistemology and performance epistemology are approaches which develop this. See Roberts and Wood (2007) and Vargas (2016) for exemplary work in this area.

side: although we lack the direct control over our beliefs that we often have over our actions, we have enough *indirect* control over how well or poorly we inquire that some portion of our beliefs are subject to moral evaluation.

Haack argues that the portion of our beliefs that are properly censured on moral grounds is substantially smaller than the full set of our epistemically unjustified beliefs. For there are numerous cases where one's belief may lack epistemic justification, but where the agent is not vicious or blameworthy for believing something on scanty evidence. This may occur because the person's believing something unjustifiably is due to "cognitive inadequacy" and does not involve willed ignorance, negligence, or the covert (self-deceptive) operation of hopes or fears. To demonstrate, Haack revisits the classic debate between the evidentialist W. K. Clifford (1849–1879) and the **permissivist** William James (1842–1910).⁸ The focus of James's rebuttal of Clifford (highlighted in Table 1 below) was the latter's bold, **impermissivist** claim:



[William Kingdon Clifford](#) by Leslie Stephen and Fredick Pollock via Wikimedia Commons. This work is in the public domain.

Clifford's principle: "It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence." ([1877] 1999, 77)

It is clear that the presupposed sense of "wrongness" in Clifford's principle is an ethical sense. But the idea of doxastic responsibility, and (accordingly) of projects of guidance, also raise issues about "**ought implies can**" (control as a precondition of responsibility) and about the degree of control humans have over their doxastic attitudes. If all beliefs are completely involuntary, it would hardly make sense to speak of doxastic responsibility. That we are responsible for our actions does not mean we are responsible for our beliefs or that we can change them in the same way. This would likely be false.⁹ Differences over these issues help explain why debate over the ethics of belief often involves competing models of the relationship between epistemic, ethical, and pragmatic value. But Haack provides a quite helpful taxonomy of five models of the relationship between ethical and epistemic evaluation. It is worth reproducing the taxonomy verbatim:

1. that epistemic appraisal is a subspecies of ethical appraisal—henceforth, for short, the *special-*

8. The permissivism/impermissivism debate in the ethics of belief has focused around whether there is any "slack" between a body of evidence and the propositional attitude it supports. Impermissivism, more formally, is closely associated with the rational uniqueness principle (RU) and permissivism with its rejection. RU holds that for a given set of evidence *E* and a proposition *p*, only one doxastic attitude about *p* is rational. So, impermissivists hold that only one doxastic attitude about *p* is epistemically rational (belief, disbelief, or suspension of judgment). RU leaves little if any place for permissible beliefs that are not reducible to epistemic duties to believe, disbelieve, or suspend judgment. One who does not exhibit the single appropriate doxastic attitude must be committing a performance error. So, is disagreement always (or regularly) evidence of a rational failing on the part of one or more party to the dispute? Permissivism, through rejecting RU, rejects this view of disagreement, and defends the possibility of reasonable or blameless disagreement, at least in domains of controversial views (philosophy, morals, politics, religion, aesthetics, etc.). Of course, there are more and less moderate versions of permissivism and impermissivism defended in the literature. See [Chapter 7](#) of this volume for more on RU and its role in the epistemology of disagreement.

9. See Vitz's "Doxastic Voluntarism" for an overview of the debate about doxastic control.

case thesis ;

2. that positive/negative epistemic appraisal is distinct from, but invariably associated with, positive/negative ethical appraisal—the *correlation thesis* ;
3. that there is, not invariable correlation, but partial overlap, where positive/negative epistemic appraisal is associated with positive/negative ethical appraisal—the *overlap thesis* ;
4. that ethical appraisal is inapplicable where epistemological appraisal is relevant—the *independence thesis* ;
5. that epistemic appraisal is distinct from, but analogous to, ethical appraisal—the *analogy thesis* .
(Haack 2001, 21)

Haack's taxonomy brings a good deal of clarity to an oft-muddled debate. Zagzebski's early "pure virtue theory" is a clear instance of the special-case thesis. Clifford can be seen to presuppose the correlation thesis in coining the term "ethics of belief," yet other evidentialists like Trent Dougherty (2014) criticize that thesis and appear to endorse the independence thesis instead.¹⁰ The overlap thesis is the most plausible, according to Haack. She argues that it helps to clarify and properly restrict the domain in which instances of believing may be judged on ethical as well as epistemic grounds. Clifford's principle presupposes the correlation thesis: it assumes, Haack points out, that "whenever a person believes unjustifiably, his so believing is always also subject, all things considered, to unfavorable moral appraisal" (24). But, Haack argues, "there is, not an invariable correlation, but partial overlap, where positive/negative epistemic appraisal is associated with positive/negative ethical appraisal" (21). As she explains, "Unlike the correlation thesis, which requires that unjustified believing be always (at least *prima facie*) harmful and always something for which the subject may properly be held responsible, the overlap thesis¹¹ requires only that unjustified believing *sometimes* causes (at least *prima facie*) harm and *sometimes* be something for which the subject may properly be held responsible" (25).



[Susan Haack](#) at the University of Miami in Spring 2005 by Atfyfe via Wikimedia Commons. This work is in the public domain.

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10. Chignell (2018) points out that "Clifford's view is not merely that we must be in a certain state at the precise time at which we form a belief. Rather, the obligation always and only to believe on sufficient evidence governs our activities across time as well." Dougherty (2018) argues that the ethics of belief is "only ethics," and holds the overlap thesis to be ambiguous. The synchronic relationship of epistemic *fit* between an agent's attitude towards a proposition at time *t* and the evidence they possess bearing probabilistically upon that proposition, *exhausts without remainder the nature of epistemic obligation*. Haack would at least agree with Dougherty if he is, in her terms, asserting the inadequacy of the correlation thesis that Clifford assumes.
 11. The overlap thesis, as originally stated, leaves open the type of epistemic appraisal in question. Haack adds the subscript "J" in this instance to specify justification as the relevant type of appraisal.



[John Rawls](#) in 1971. Photo by Alec Rawls via Wikimedia Commons. This work is in the public domain.

Haack's application of the overlap thesis to the ethics of belief functions by (a) restricting the domain in which instances of believing may be judged on ethical as well as epistemic grounds; (b) identifying circumstances that serve to exonerate individuals from unfortunate epistemic failures; and (c) distinguishing appraisals of character from epistemic and ethical appraisal, and role-specific responsibilities from those more generally appropriate to all of us.¹²

This approach arguably delivers an ethics of belief that is moderately permissivist and supportive of William James's plea for a "spirit of inner toleration" ([1896] 2009, sec. X) and of what the political philosopher John Rawls (1921–2002) termed "reasonable pluralism" (1993, 4). Barring more specific objections, Rawls's form of permissivism may align with Thomas Jefferson's view in *Notes on the State of Virginia*: "It does me no injury for my neighbor to say there are twenty gods or no god. It neither picks my pocket nor breaks my leg" (1787, Query XVII, "Religion," 285). This is an advantage in that we are not bound to over-easily associate disagreement with error or irrationality. The view also appreciates the holistic and trait-dependent reasoning that attends our

deepest-held or "worldview" beliefs—the many different *kinds* of evidence and the many contextual factors including upbringing or early educational influences. These tend to weigh heavily upon reasoning in domains of controversial beliefs, such as morals, politics, philosophy, and religion. But another advantage is that this approach remains concerned (as was Clifford) with the many harms and injustices that us/them or ingroup/outgroup beliefs, as a prime example, inflict upon others. It remains what I call a permissive yet *risk-aware* ethics of belief (Axtell 2020).

This leads directly to our next topic, but the ethics of belief remains a topic of lively debate, so I conclude our discussion of it with a table describing the key issues and arguments between Cliffordian moral evidentialism and proponents of a more permissive ethics of belief, as James presented them in his famous 1896 paper "The Will to Believe." James primarily intended to rebut Clifford's principle, which appeared to demand agnosticism (withholding or suspending judgment) in a wide range of cases, and to rule out virtuous faith ventures including belief in a broad, philosophically stated "religious hypothesis."

12. I paraphrase Christian's (2009, 468–9) useful elaboration of Haack (2001). James Pryor (2001) finds that personal justification and epistemic blamelessness can also "come apart," such that (a) being blameless does not necessarily make one justified (or rational), and (b) holding an unjustified belief does not necessarily make one blameworthy (or irrational). Recognition of the distinction between justification and blamelessness, Pryor goes on to argue, "militates against any deontological [duty-based] conception of justification" (115) which Clifford and most other evidentialists are committed to. Whenever normative concepts of belief assessment can come apart in such ways, epistemologists are invited to explore analogies and disanalogies in order to illuminate their entanglements, or what we termed the "traffic" between them. The overlap thesis, if correct, also undercuts the reductive ambitions of the special-case thesis and the correlation thesis, and the assumption of a fact/value dichotomy, as in the independence thesis.

Table 1 – Clifford vs. James on the Ethics of Belief¹³

Dimension of Comparison	The Cliffordian Evidentialist as “Faith-Vetoer”	The Jamesian Believer
A. Primary Aim	<i>Avoid believing what is false!</i>	<i>Believe what is true!</i>
B. Risk of Losing the Truth	<i>Remaining in ignorance; through skeptical paralysis, never coming to believe something that is true.</i>	<i>Falling into error; through credulous manner of uptake, coming to believe something that is false.</i>
C. Guiding Rule or Prescription	<i>Evidential reasoning should always prevail in our deliberations: “The rightness or wrongness of belief in a doctrine (proposition) depends only upon the nature of the evidence for it, and not upon what the doctrine is” (Clifford, EOB, 102). Stated negatively, “It is wrong, always, everywhere, and for anyone, to believe anything upon insufficient evidence” (EOB, 77).</i>	<i>In specific instances, pragmatic reasoning should be treated as a normal element in making up our minds: “The thesis I defend is, briefly stated, this: Our passionate nature not only lawfully may, but must, decide an option between propositions, whenever it is a genuine option¹⁴ that cannot by its nature be decided on intellectual grounds” (James, WB, sec. IV).</i>
D. Applied to the Religious Hypothesis (RH)	<i>Withhold assent to the RH, as to more particular over-beliefs, until sufficient evidence is present. An agnostic stance of suspension is uniquely rational, and deontologically required.</i>	<i>“The lawfulness of voluntarily adopted faith,” since the option between the alternatives of accepting or doing without the RH are argued to meet the conditions of a “genuine option.”</i>
E. Justifying Moral Argument	<i>Public duty: There is a public duty to withhold assent, based on harm done by irresponsible and dishonest habits of belief-acquisition.</i>	<i>Private right: There is a private right to “faith ventures,” and there is value in a robust marketplace of spiritual and philosophical “over-beliefs”; we ought to promote an “inner tolerance” for them when they are tolerant themselves.</i>
F. Risk-Related Primary Intellectual Virtue	<i>Intellectual caution: Since “we must avoid error,” we should maintain the “skeptical balance,” and remain uncommitted until sufficient evidence is presented either for or against a belief.</i>	<i>Intellectual courage: Since “we must know the truth” on some questions of existential concern, we may have to dare to be wrong. Under the conditions of the genuine option, we may commit to belief “in advance” of sufficient evidence, yet continue to inquire.</i>
G. Motivating Passion	<i>Fear: “Better risk loss of truth than chance of error, —that is your faith-vetoer’s exact position” (WB, sec. X). [But Clifford would reverse this, with the evidentialist exemplifying fearless open inquiry into truth, and his opponent fear and intellectual dishonesty.]</i>	<i>Hope: “If religion be true and the evidence for it still be insufficient, I do not wish . . . to forfeit my sole chance in life of getting upon the winning side” (WB, sec. X).</i>

RECENT TRENDS IN NORMATIVE EPISTEMOLOGY

Study of the value problem and of epistemological axiology more generally has been part of a

13. This table is adapted from Axtell (2001). By his term “religious hypothesis,” James does not mean that religious belief is a mere hypothesis to the believer. But belief in a transcendent reality, a “more” as James put it, referring to a moral order to the universe (rather than to any one specific conception of this higher reality), can be placed aside its opposite, the “naturalistic hypothesis,” for the purposes of bringing adherents of these different worldviews into philosophical dialogue and better mutual understanding.
14. James placed three conditions on “genuine option[s]” besides their being evidentially underdetermined. They must be “options” (choices) that are “live,” “momentous,” and “forced” ([1896] 2009, sec. I). “Live” options, James says, are ones which make some appeal to an actual agent A, and which A considers it a real possibility to accept. A “momentous” option presents a unique opportunity, an irreversible decision, or a decision with a highly significant stake. A “forced” option is one where there is “no standing place outside of the alternative,” so that not to accept *d* is for practical purposes to accept not-*d*, even if only by default (e.g., bring an umbrella today or do not bring an umbrella).

broader trend that includes the development in recent decades of social, feminist, performance, virtue, and vice epistemologies. These accounts themselves display numerous overlaps not just in what epistemological views they claim to supersede, but also in what they affirm as the proper scope of normative epistemology (see also in this volume [Chapter 7](#), “Social Epistemology” by William D. Rowley, and [Chapter 8](#), “Feminist Epistemologies” by Monica C. Poole). Authors associated with these trends have explored the relationship between knowledge and power, the relationship between individual and group knowing, and the relationship between coming to know and performing inquiry responsibly. This section highlights just three of the many important recent developments in normative epistemology: virtue epistemology, vice epistemology, and the emerging debate over epistemic paternalism within social epistemology.

Virtue epistemology is the philosophical study of the nature, identity, and epistemological significance of intellectual virtues. While such virtues may play a role in the analysis of knowledge (see [Chapter 1](#) of this volume), virtue epistemology covers a range of recent approaches that grant characterological concepts (including specific habits, dispositions, or strategies which constitute excellences or “virtues” for agents engaged in inquiry) an important or even fundamental role in epistemology.¹⁵ Virtues such as intellectual humility have received a good deal of attention, along with open-mindedness and others.¹⁶

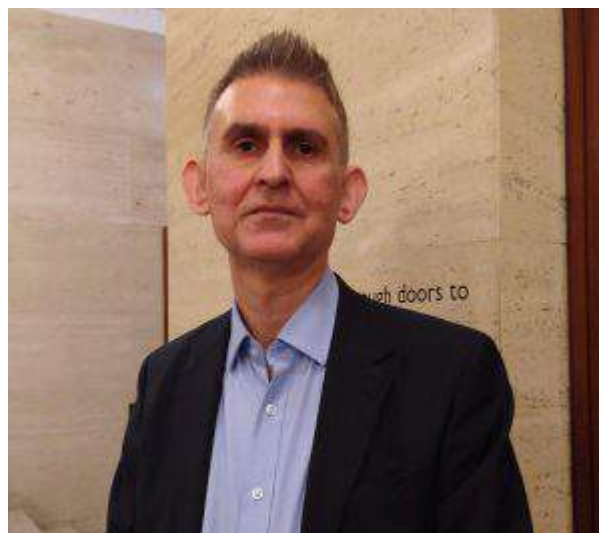
While most “character epistemology” has focused on one particular class of character traits—*virtues* (whether in the broader “intellectual” or the more restrictive “epistemic” sense)—a good deal of interest has recently been shown in the complementary focus on intellectual *vices*, often directly informed by studies in social or cognitive psychology. Quassim Cassam’s *Vices of the Mind: From the Intellectual to the Political* (2019) somewhat ironically mirrors the title of Zagzebski’s *Virtues of the Mind* (1996), noted for having spurred a great deal of initial interest in virtue or character epistemology. Cassam defines **vice epistemology** as “the philosophical study of the nature, identity, and epistemological significance of intellectual vices. Such vices include gullibility, dogmatism, prejudice, closed-mindedness, and negligence. These are intellectual character vices, that is, intellectual vices that are also character traits” (2016, 159).¹⁷

15. For development of contemporary virtue epistemology, including East-West connections, see Fairweather (2014), Fairweather and Flanagan (2014), Slote and Sosa (2015), Battaly (2019), and Kelp and Greco (2020).

16. There is too much work on intellectual humility to mention, but see especially the journal special issue edited by Carter, Kallestrup, and Pritchard (2016), and the recent collection edited by Church and Samuelson (2017).

17. On intellectual vices and vice epistemology, see also Battaly (2010 and 2019).

Given that our intellectual virtues and vices have social implications, character epistemology overlaps with **social epistemology**, which studies how social relationships and interactions affect the epistemic properties of individuals, groups, and collectives (see again [Chapter 7](#) of this volume). These relationships may include existing or ideal divisions of labor in the search for knowledge and questions of power relations. Social epistemology raises socially significant questions both about our epistemic agency in the world and about the efficacy of our epistemic practices. Some of these questions involve the improvability of our habits of inquiry. Education, of course, offers the opportunity for such improvement, but there is controversy about the need and justification for more overt policies or interventions to correct for flawed or biased thinking.



[Quassim Cassam](#) at Senate House by [Philafrenzy](#) via Wikimedia Commons. License: [CC BY-SA 4.0](#)

“Paternalism” refers to actions or policies intended to aid others for their own good—but without their consent. Helmet and seatbelt laws, for example, require something of us for our own safety, and we aren’t free to just ignore them. But our inquiry and access to information can be similarly interfered with on the paternalistic ground that this is for our own epistemic benefit. Indeed, epistemic practices which have a paternalistic profile affect our private and public lives, often in ways of which we are not aware. **Epistemic paternalism (EP)** provides a rationale for such interferences; in its primary sense EP is a normative thesis, a thesis of *advocacy* for (or justifiable participation in) some specific interferences or limitations in the ways in which we might seek knowledge. Restricted access to information sometimes improves people’s reasoning and supports veritistic outcomes, as for instance in “blinded” scientific experiments, and in judicial rules prohibiting the disclosure of a defendant’s past criminal profile to a jury. But what entities are entitled to undertake a paternalistic practice, and in virtue of which features does such entitlement accrue to them? For example, are media sites like Facebook *permitted* to paternalistically tag or remove “fake news” or extreme content? Should they be *expected* to have policies to filter out certain potentially harmful content, and to remediate the ill-effects of “echo chambers” where biased and polarized ideologies are fostered?

The debate over justified EP at times leans on the interpretation of findings in psychology, which are often claimed to suggest intractable human irrationality, biases, and problematic heuristics (i.e., the shortcuts by which we make quick judgments, usually subconscious and automatic). But while biased reasoners might be one threat to the legitimacy of democratic practices, so might be certain censoring or coercive testimonial practices rationalized by the epistemic improvements they promise. So, paternalistic epistemic practices and their proper limits are today a topic of interest, at least where contemporary social epistemology and concerns for political legitimacy overlap. Alvin Goldman introduced and defended EP early in social epistemology’s emergence (1991). While epistemic paternalism may appear to suggest **epistemic injustice**, EP’s defenders think that intelligent

interventions can in fact be a form of epistemic justice, insofar as applications of epistemic paternalism respect persons as actual knowers and facilitate their epistemic capacities.

DISTINGUISHING BETWEEN EPISTEMOLOGY'S NORMATIVE PROJECTS



[Alvin I. Goldman](#), who first introduced process reliabilism. University of Michigan News and Information Services Photographs, Bentley Historical Library, University of Michigan.
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Questions about epistemological axiology that interest many philosophers today—questions of what epistemic *goals* there are and why we *value* knowledge, understanding, and wisdom—were not always considered very central questions in epistemology. The traditional project of the analysis of knowledge (undertaken in Part I of this book) remains one of epistemologists' primary tasks, but the turn to the study of knowing agents (rather than propositions known), and to collectives (rather than just individuals) broadens and transforms contemporary normative epistemology (hence this chapter opens Part II of the book—Expanded Epistemology). It requires us to rethink issues about *how* we inquire and *how* we should conceive the relationship between epistemic and moral evaluation. Thus, epistemologists are increasingly concerned with agency both of individuals and collectives, and with the role of particular virtues and vices (epistemic or moral) in inquiry. Contemporary normative epistemology also hosts lively debate over the importance of concepts of responsibility, reasonableness, willful ignorance, and epistemic justice/injustice. These and related concepts are important for projects of guidance aimed at addressing real-world agents and problems

of diversity among beliefs—concerns discussed here under the *ethics of belief*. But these projects of guidance or amelioration (improvement of performance) involve human psychology and attention to the non-ideal agents we actually are. For these reasons, it is important to clearly distinguish the forward-looking concerns with guidance from the project of conceptual analysis of knowledge.

Questions for Reflection

1. In what ways is the evaluation of responsible belief similar to the evaluation of responsible action? In what ways is the evaluation of belief different from the evaluation of actions?
2. What is the highest epistemic good? Is there one main epistemic good, or are there several?
3. How are norms of rationality connected with norms of the ethics of belief? Should our ethics of belief be permissive or impermissive? If permissive, does that mean any belief is a reasonable one, or are there limits to reasonable belief and reasonable disagreement?
4. W. K. Clifford argued that “It is wrong always, anywhere, and for anyone, to believe anything upon insufficient evidence” ([1877] 1999, 77), while Thomas Jefferson argued that “It does me no injury for my neighbor to say there are twenty gods or no god. It neither picks my pocket nor breaks my leg” (1787, Query XVII, “Religion,” 285). Are Clifford (the evidentialist) and Jefferson (the permissivist) speaking about the same kinds of harms? Whose stance on the ethics of belief do you most agree with, and why?
5. Is the study of intellectual “virtues” and “vices” valuable? Can such virtues as intellectual humility and open-mindedness be taught? Are virtues simply skills, or is there a motivational component to virtues that distinguishes their acquisition from, say, acquiring the skills of riding a bike?
6. What examples can you find of epistemic paternalist practices, for instance, in medicine, in the law, in education? Are there justified instances of interfering with people’s inquiry without their consent, for their own epistemic good, or does the value of personal autonomy always outweigh the interest in promoting truth?

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CHAPTER 6.

EPISTEMOLOGY, PROBABILITY, AND SCIENCE

JONATHAN LOPEZ

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Distinguish* between formal and traditional epistemology, including their main characteristics, motivations, and assumptions.
2. *Cultivate* an intuitive sense of how basic formal methods apply to everyday thinking and decision-making.
3. *Employ* Bayesianism in scientific contexts, specifically for hypothesis testing.
4. *Evaluate* the strengths and limitations of Bayesianism.

PREAMBLE

Epistemologists have traditionally approached questions about the nature of knowledge and epistemic justification using informal methods, such as intuition, introspection, everyday concepts, and ordinary language.¹ Whether in addition to or in place of these methods, **formal epistemology** utilizes formal tools, such as logic, set theory, and mathematical probability. The upshot is greater precision, increased rigor, and an expanded range of applications. This chapter focuses on the formal approach in its most prominent manifestation: **Bayesianism**, which begins by discarding the traditional view of belief as an all-or-nothing affair (either you believe a proposition or you don't) and instead treats belief as admitting of degrees. These degrees are governed by how strongly a proposition is supported by the evidence. Evidential support is measured by probability, especially with the help of a famous result in probability theory, Bayes's theorem (hence the term, "Bayesian"). Our aim here is to understand the basics of Bayesianism, its pros and cons, and an extended application to the epistemology of science. As we'll see, the Bayesian framework is a natural fit for

1. Refer to Chapters 1–4 of this volume for the foundations of traditional epistemology.

the scientific context. Very seldom does a single experiment change the opinion of the scientific community; the quest for scientific truth is hard fought over many experiments and research programs as hypotheses gradually gain or lose favor in light of a changing body of evidence. Bayesianism allows us to model this process, come to a more robust understanding of scientific knowledge, and use this understanding to settle some controversies over theory choice.

DEGREES OF BELIEF

You are probably more confident in some beliefs than others. You've probably said things like "I'm 100% sure I turned the oven off," which is to say your confidence is high, or "I have a hunch he might not be telling the truth," which is to say your confidence is low. When you closely scrutinize your beliefs, you'll find that they fall along various points in a spectrum—a hierarchy which can't be captured simply by saying that you either believe or you don't. Such all-or-nothing terms lump beliefs together into broad categories, masking important differences among their locations in the hierarchy.

Suppose instead you understand belief as "admitting of degrees." This allows you to distinguish beliefs in which you have varying degrees of confidence: your **degree of belief** in a proposition *is* the degree of confidence you have in that proposition, which can be placed on a scale from 0 to 1 (expressed in decimal, ratio, or percentage form)². A belief that has accrued significant evidential support receives a high "score" or degree, which would gradually diminish with decreasing support. Plausibly, the all-or-nothing standards of traditional epistemology can then be mapped onto degreed terms according to a thesis named after British philosopher John Locke (1632–1704):

The **Lockean thesis**: A belief (in the all-or-nothing sense) is rational when the rational *degree* of belief is sufficiently high (i.e., above some specific threshold). (Foley 1992)³

2. Compare Moon (2017), who distinguishes degrees of confidence from degrees of belief. On his view, beliefs do not come in degrees.

3. Here we leave the threshold unspecified, since it is up for debate.



[Portrait of John Locke](#) by Godfrey Kneller via Wikimedia Commons. This work is in the public domain.

Given this thesis, an advantage of the degreed framework is that it provides the resources to distinguish and evaluate specific levels of belief in a way that also grounds the traditional epistemological standards. In what follows, we will focus on the degreed aspects, keeping in mind that translation back into traditional terms is always possible via the Lockean thesis.

Formal epistemologists often talk about degrees of beliefs as **credences**. For example, take the statement, “All bachelors are unmarried,” which is analytically true (true by definition) and therefore impossible to be false.⁴ A credence of this caliber would receive a perfect score of $\frac{100}{100} = 100\% = 1$. Such a score represents *absolute certainty*. Just short of this are beliefs that are *nearly certain* but can, theoretically, be mistaken. For example, you’re probably nearly certain that the external world exists, although there’s a slight chance that you’re actually a brain

in a vat and your experience of the world is being simulated.⁵ If so, you have a really high credence, perhaps $\frac{95}{100} = 95\% = 0.95$, that you are not a brain in a vat. The further removed from absolute certainty, the lower the score a belief would receive. A score of 0 is reserved for beliefs that *can’t possibly* be true, often because they are analytically false (self-contradictory)—for example, “The number 42 is both even and odd.” This framework can make sense of statements like “I’m 100% sure I set the alarm” and “There is a 0% chance I’m getting that job” (perhaps after a bad interview). However, these sentences would, strictly speaking, be hyperbole, since they are neither tautologies nor contradictions—just *highly likely* and *highly unlikely*, respectively. There are, of course, slight leanings—propositions you *barely believe* or *weakly reject*. And in the middle, at $\frac{50}{100} = 50\% = 0.5$ credence, there are propositions on which you probably *suspend judgment* (have no opinion on one way or another), for example “The total number of people currently living on Earth is odd rather than even.”⁶

TWO MODELS OF DEGREES OF BELIEF

The best way to understand how “scores” are assigned to beliefs depends on whom you ask and what

4. Refer to K. S. Sangeetha, [Chapter 3](#) of this volume, for further elucidation of the connection between analyticity, possibility, and necessity.

5. See Daniel Massey, [Chapter 4](#) of this volume, for this and related skeptical scenarios.

6. Some will make a distinction between *suspending/withholding judgment* and having *no attitude* toward a proposition (e.g., a proposition that one doesn’t grasp or has never thought about). If so, the former would be located in the *middle* of the confidence scale, whereas the latter would amount to being *off the scale* altogether. It is also worth noting that some epistemologists will identify withholding belief as a (possibly vague) *range* that includes 0.5. *Belief* would then correspond to the part of the scale beyond that range up to and including 1, whereas *disbelief* would correspond to the part of the scale preceding that range down to and including 0.

your purposes are. The previous section treated credences as values on a scale from 0 to 1. This scale aligns them with how we typically think of *probabilities*, which also fall between 0 and 1 according to a standard axiom of probability theory:

The probability of a proposition or event X , represented by $P(X)$, is such that:
 $0 \leq P(X) \leq 1$.

More generally, formal epistemologists typically adopt **probabilism**: the view that credences should conform to probabilities. A significant upshot is that we can use the advantages of *probability theory* to talk and reason carefully about our beliefs. However, there are two ways to think about probability, which correspond to two ways to think about degrees of belief: objective and subjective.

An objective understanding of degrees of belief understands the “score” we’ve been talking about as a feature of the real (external, mind-independent) world. For example, if I asked for your degree of belief in a fair coin coming up heads, you’d likely say 1 in 2, or $50\% = 0.5$. This is grounded in the fact that the coin has one side that is heads (the *desired* outcome) out of the two *possible* outcomes for a single toss. Getting a royal flush in poker follows the same reasoning with larger numbers: there are four ways to do it out of 2, 598, 960 possible poker hands (1 in 649, 740). In general, the **objective probability**, hence the objective degree of belief one should have, is equal to the number of ways the desired outcome can obtain out of the number of all relevant possible outcomes:

$$P(X) = \frac{\# \text{ of ways } X \text{ can obtain}}{\text{Total } \# \text{ of relevant possible outcomes}}$$



[Jacob Bernoulli](#) (1655–1705), the mathematician who introduced the objective/subjective distinction in probability. Painting by Niklaus Bernoulli via Wikimedia Commons. This work is in the public domain.



[John Stuart Mill](#) (1806–1873), the philosopher who defended a “frequentist” view of probability as the “frequency” of an event in a reference class. Image via Wikimedia Commons. This work is in the public domain.

The denominator of this ratio is the size of the **reference class** (the set of all relevant possible outcomes).⁷ In the coin case, the reference class consists of two possible outcomes: heads and tails. In the card case, the reference class consists of all possible hands in a poker game. But matters aren’t always so clear-cut. For example, consider the event, “Your local sports team will win their next championship.” Would we consider all past and future games that the team has ever played? Should we only consider their past and future championship games? Of course, we can’t directly inspect future games at present. So, do we simply look at the past? If so, how far back should we go? Surely their victories and losses in the 1970s aren’t relevant to this year. Now consider what credence to assign a belief such as, “Napoleon’s conquest in Europe would have been successful had he never ventured into Russia during the winter.” Despite this being intuitively likely, it would be even harder here to decide where to start in assigning a reference class. This set of confusions is known as the **reference class problem**.

A subjective understanding of degrees of belief avoids this problem by not tying your belief to the nature of the event in question. On this understanding, the score one attributes to a belief is a **subjective probability**: how confident you actually are in that belief being true, regardless of any features of the real, mind-independent world. This allows you to say things like “I’m 75% sure my friend is going to be late” and “I’m 90% sure my local sports team will win their next championship” without deciding on a reference class to use in a ratio.

Although the subjective interpretation allows us to expand the class of events or propositions we can sensibly assign probabilities to, it invites a host of other problems. One of the most prominent problems for the subjective understanding is the **problem of the priors** (the name for which will become apparent in the next section). Basically, if your subjective probabilities aren’t grounded in anything in the real world, they are just up to each individual person. Does this mean anyone can just set their subjective probabilities to whatever they want? Well, they could, but there are at least some constraints on what makes a set of subjective probabilities *rational*.



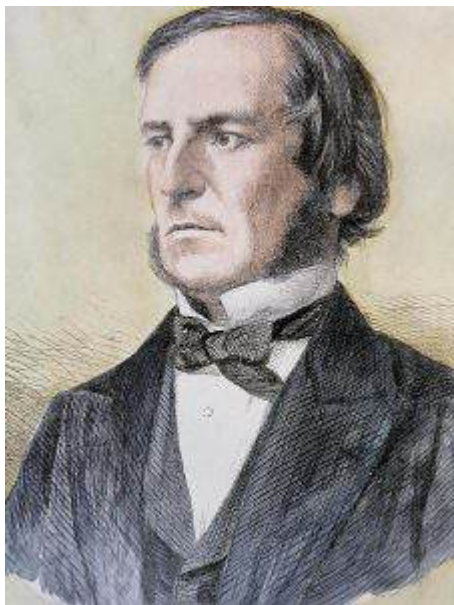
[Augustus De Morgan](#) (1806–1871), the mathematician among the earliest proponents of subjective probability. Image via Wikimedia Commons. This work is in the public domain.

7. “Reference class” is sometimes applied only to statistical probabilities and a “frequentist” interpretation. But others have generalized the meaning in accordance with the way I am using the term here. See Hájek (2007).

As with your beliefs in a traditional (non-degreed) framework, credences should not violate the laws of logic. For example, you shouldn't believe two propositions that contradict each other. The degreed framework additionally requires us to respect the laws of probability.

Let's say you decide to try out your hand at the racetrack and, as luck would have it, show up the day they're racing Corgis (a Welsh dog breed). Before the races begin, you get to meet some of the racers. The first Corgi, Atticus, has cute little legs, is a little on the chubby side, but has a smile that convinces you that he will win the race. You decide he has an 80% chance. The next Corgi you meet, Banquo, is half German Shepherd, is much taller and leaner, and hasn't stopped staring into the middle distance in a determined fashion. You are now convinced that Banquo will win with a credence of 80%. After meeting all the racers, and subsequently falling in love with all of them, you want everyone to win and therefore assign each a probability of 80%. Assigning every contestant such a high probability is irrational. But why, especially on the subjective understanding?

A way to test whether any of your probabilities are irrational in the degreed framework is analogous to how you might evaluate beliefs in a non-degreed framework: you check for inconsistencies. In a non-degreed framework, the inconsistencies come in the form of logical contradictions among beliefs. In the degreed framework, inconsistencies arise when the probabilities you attribute to beliefs don't respect the laws of probability (along with the laws of logic). One such law, **finite additivity**, maintains that if two propositions or events, X and Y , are incompatible, their probabilities must be additive (the sum of their individual probabilities):



[George Boole](#) (1815-1864), the mathematician who defended objectivist probability. He also "logicized" probability by grounding it in logical relations among propositions. Image via Wikimedia Commons. This work is in the public domain.

$P(X \text{ or } Y) = P(X) + P(Y)$, where X and Y cannot both obtain.

An example of incompatible events is a normal coin landing both heads, H , and tails, T , on a single toss. Setting aside the negligible possibility of the coin landing on the edge, H and T each has a probability of $\frac{1}{2}$. So, finite additivity implies that

$P(H \text{ or } T) = P(H) + P(T) = \frac{1}{2} + \frac{1}{2} = 1$. In other words, the probability that either H or T obtains is 1, or certainty.

Return to the racing example. You can discover that assigning an 80% subjective probability to all the racers is irrational if you are forced to "put your money where your mouth is." Table 1 summarizes the pertinent information you would see displayed at a betting counter. The racetrack assigns each racer betting odds, which can be translated into the probability of winning.

Table 1 – Racetrack’s Betting Information

Racer	Betting Odds (A to B). You stand to gain $\$A$ (the amount the bookie puts up) for every $\$B$ you bet.	Probability of Winning = $\frac{B}{(A + B)}$	Expected Payout per $\$1$ Bet = $\frac{(A + B)}{B}$
Atticus	4 to 1	20% ($\frac{1}{5}$)	\$5
Banquo	1 to 1	50% ($\frac{1}{2}$)	\$2
Cheddar	4 to 1	20% ($\frac{1}{5}$)	\$5
Dr. Waddle	9 to 1	10% ($\frac{1}{10}$)	\$10

For example, since Banquo is the favorite to win the race, the racetrack gives him “even odds” (1 to 1) to avoid paying out very much money. Atticus, though adorable, is less likely to win, so the racetrack gives him 4 to 1 odds. Dr. Waddle, the least likely to win, will pay off the most if he can pull off the upset at 9 to 1. The way to read these betting odds is to understand them as hypothetical amounts that the bookie and yourself, respectively, put up. This means that if Atticus wins, you’ll receive the \$4 the bookie bet and get back the \$1 you bet. You can, of course, bet whatever quantity you desire. The betting odds simply set the ratio.

If a bookie overheard you saying all the Corgis are likely to win, with an 80% chance each, she could try to take advantage of this by offering you the revised set of bets summarized in Table 2 below. The bookie arrived at her numbers using the same strategy as the racetrack. If you accept, as your credences suggest, you will be *guaranteed* to lose money. It will cost you \$4 to place bets on all the Corgis, but you will get back just \$1.25 since only one Corgi will actually win.

Table 2 – The Bookie’s New Offer

Racer	Subjective Probability of Winning	Betting Odds You Should Accept (Given Your Subjective Probabilities)	Expected Payout per \$1 Bet
Atticus	80%	1 to 4	\$1.25
Banquo	80%	1 to 4	\$1.25
Cheddar	80%	1 to 4	\$1.25
Dr. Waddle	80%	1 to 4	\$1.25

Another way to put the fact that you are guaranteed to lose is that you have had a **Dutch book** made against you. To avoid Dutch books, you need to adjust your credences to align with the laws of probability. It is rational to avoid Dutch books. So, according to the **Dutch book argument**, rational credences adhere to the laws of probability (Vineberg 2016).

Though the Dutch book argument begins to make subjective probability more palatable by placing

some firm constraints on the probabilities you can rationally assign, some would object that these constraints are too demanding. This objection to probabilism in general (whether objective or subjective) is the **problem of logical omniscience**. At the beginning of the chapter, it was mentioned that all and only necessary truths, such as those of logic (e.g., p or $\text{not-}p$), deserve a perfect score of 1 :

$$P(X) = 1 \text{ when } X \text{ is necessarily true}$$

and

$$P(X) = 0 \text{ when } X \text{ is necessarily false.}$$

However, there are an infinite number of logical truths. Since human beings (individually and collectively) are finite, there are many logical truths that no person has ever thought about. Some of them are beyond our limited grasp, since there is no limit to how complex they can be. Even many simple logical truths aren't recognized without studying logic. For a number of reasons, then, no human has the capacity to form a belief in every logical truth, making it impossible for us to assign 1 to them all. By adopting the graded framework, we are committed to saying our beliefs behave in accordance with the laws of logic and probability. But if there are many instances where they don't, as we seem to have found, we should rethink this relationship.

In response, we might say that the laws of logic and probability are nevertheless standards for *ideal rational agents*, which can be viewed as a kind of theoretical limiting case for those of us in the messy real world. In this approach, we are engaging in idealization much like physicists do when they reason with their frictionless planes, complete vacuums, and perfect spheres. Still, the Dutch book argument doesn't stop people from having ridiculous credences so long as they respect the laws of probability. Almost any credence (e.g., that your local sports team is 99.9% likely to win the championship) can be made probabilistically consistent with other credences if they are adjusted to fit. Objective probability could appeal to features of the real world to settle the appropriate credence, but subjective probability does not have this advantage. We will return to this problem for subjective probabilism in the final two sections to see if it can be mitigated.

BAYES'S THEOREM AND BAYESIANISM

The previous sections introduced some of the critical ingredients for using **Bayes's theorem**, a powerful theorem in probability theory established by Reverend Thomas Bayes (ca. 1702–1761). This theorem gives you the rules to follow to update your credences based on incoming evidence. Bayesianism is a version of formal epistemology that gives Bayes's theorem a central role in updating credences. After all, not just any way of updating is rational. For example, after watching a couple of news reports about airplane crashes in the same week, you might be tempted to lower your credence that air travel is safe to the point that you're afraid to fly. Decreasing your degree of belief in the safety of air travel to this extent would be irrational because the evidence isn't strong enough. After all, think of all the safe flights that occur on a regular basis compared to those that crash. To see how we might approach updating your belief in a rational way, let's look at the components of Bayes's theorem.



[Thomas Bayes](#) (purported identification by Terence O'Donnell) via Wikimedia Commons. This work is in the public domain.

Bayes's theorem is often stated as follows:

$$P(H|E) = \frac{P(E|H) \cdot P(H)}{P(E)}, \text{ where } P(E) \neq 0.$$

$P(H|E)$ represents the probability of a hypothesis H given evidence E , where H and E are any two propositions or events. It tells you how likely E makes H . Because this probability is dependent or conditional on E , it is referred to as a **conditional probability**.

The process of obtaining this probability is called **conditionalization (or conditioning)**. *Prior* to conditionalization, one begins with a **prior probability**, $P(H)$. This is a kind of baseline or starting probability for H , one that does not yet take evidence E into account. *After* conditionalizing, one ends up with a **posterior probability**, $P(H|E)$.

Given these concepts, we are now in a position to understand the **rule of conditionalization**, which is a relatively intuitive proposal: whenever a person gains new evidence E concerning hypothesis H , the proper way to update one's initial credence in H —given by $P(H)$ —is by conditionalizing on E , then conforming one's new credence to the result:⁸

After gaining evidence E , the updated credence $P_{new}(H)$ is given by $P(H|E)$.

The importance of Bayes's theorem is that it helps us put this into practice by giving us a precise means by which to calculate the effect of conditionalization. But before we can see how this works, we must first examine the other components of the theorem.

$P(E|H)$ is the probability of obtaining the evidence E given that the hypothesis H is true. This component is often called the **likelihood**. It is sometimes described as the "explanatory power" of H with respect to E . Basically, it measures how well your hypothesis predicts the evidence. If a properly conducted and well-designed experiment yields E as the expected result of H , this value will be high.

$P(E)$ is the probability of obtaining evidence E . If the evidence is easily obtained by chance, it would not be a good idea to increase your confidence in the hypothesis. Bayes's theorem accounts for this because if $P(E)$ is large, it will decrease your posterior probability in virtue of being in the denominator of our calculations, rendering the ratio smaller.

8. Since the rule of conditionalization does not reflect any uncertainty we have about the evidence itself, some Bayesians replace this rule with a modification called "Jeffrey conditionalization," named after the philosopher who proposed it, Richard Jeffrey (1926–2002). Refer to the further reading on Jeffrey conditionalization for more on this issue.

Comparative Bayesianism

One way to use Bayes's theorem is to calculate the right-hand expressions in the formula and plug in the values to get a number for $P(H|E)$, then update your credence accordingly. But sometimes it is difficult to find a value for $P(E)$. We can bypass this by using the theorem in a comparative fashion. If we want to use E to choose between two competing hypotheses H_1 and H_2 , we only need to show that $P(H_1|E) > P(H_2|E)$. Applying Bayes's theorem to each side of the inequality, $P(E)$ will appear on both sides and cancel out. The result is that:

$$P(H_1|E) > P(H_2|E) \text{ when } P(E|H_1)P(H_1) > P(E|H_2)P(H_2).$$

And if we start out neutral between H_1 and H_2 , so that $P(H_1) = P(H_2)$, then those cancel too. The result is that:

$$P(H_1|E) > P(H_2|E) \text{ when } P(E|H_1) > P(E|H_2), \text{ for cases where } P(H_1) = P(H_2).$$

In other words, given that all else is equal, we should adopt H_1 over H_2 when the former better explains or predicts the evidence. So comparative Bayesianism gives us a probabilistic verification of a form of **inference to the best explanation**.

Note that where we have only a single hypothesis H , we can still use the above comparative formulation to compare H to not- H (by substituting H for H_1 and not- H for H_2):

$$P(H|E) > P(\text{not-}H|E) \text{ when } P(E|H) > P(E|\text{not-}H), \text{ for cases where } P(H) = P(\text{not-}H) = \frac{1}{2}.$$

But we must be cautious not to drop out the $P(H)$ in this way—except when comparing H with another hypothesis that is equally likely. In other cases, $P(H)$ can have a dramatic impact on the calculation. In fact, ignoring prior probabilities and focusing exclusively on the conditional probabilities is the notorious **base-rate fallacy** (so named because $P(H)$ is sometimes called the **base rate**). Psychologists have identified this fallacy as a common source of many real-world reasoning mistakes, ranging from medical misdiagnoses to legal errors to discriminatory policies (Kahneman and Tversky 1973). To get a sense of how this fallacy operates in the medical context, try your hand at question 2 in the Questions for Reflection at the end of this chapter.

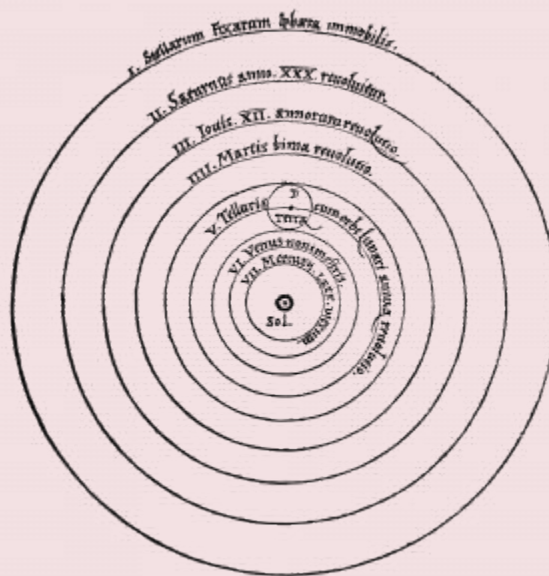
Box 1 – Ockham’s Razor



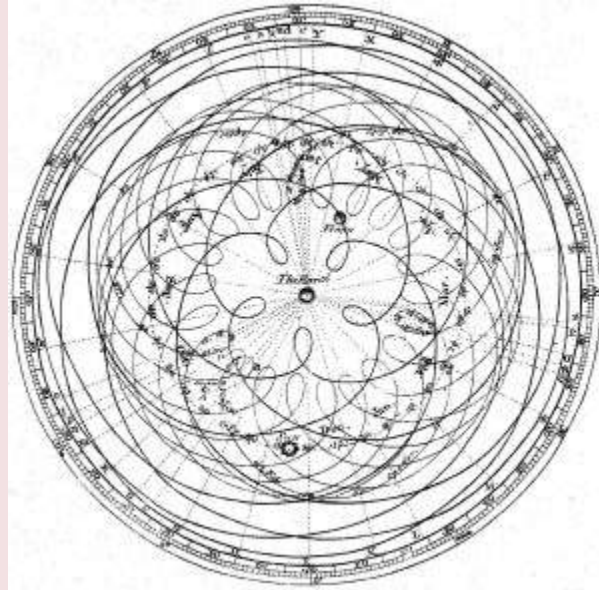
[William of Ockham](#) (ca. 1285–1347), the medieval Christian philosopher/theologian to whom the razor is credited. Image via [Wikimedia Commons](#). This work is in the public domain.

Ockham’s razor, which posits that “entities should not be multiplied beyond necessity,” serves as a guiding principle for choosing among competing hypotheses. The core insight is that we should stick to the simplest explanation consistent with the data, ensuring that any additional postulates aren’t superfluous. Since simplicity is an **explanatory virtue** (among others)—that is, it improves the quality of an explanation (other things being equal)—Ockham’s razor is closely related to inference to the best explanation.

The choice between a heliocentric or geocentric model of the universe shows how “the razor” plays out in a scientific context. The heliocentric model of the universe maintains that the planets orbit the sun. The geocentric model maintains that they orbit Earth. However, to account for observations, the geocentric model further stipulates that the planets exhibit “epicycles,” meaning that they move backward and forward via smaller loops within their orbits. These epicycles may be seen as an extra entity or postulate. Although the razor doesn’t eliminate the postulate with *certainty*, it renders the geocentric model *less probable* than the heliocentric model.



[Copernicus' Heliocentric Model](#) by [Scewing](#) via [Wikimedia Commons](#). This work is in the public domain.



[The Geocentric Model](#) by James Ferguson from the first edition of *Encyclopaedia Britannica* (1771) via Wikimedia Commons. This work is in the public domain.

Adding a new entity/postulate is equivalent to adding a conjunct (an “and”) to the hypothesis, which (because of how probabilities are calculated) only works to drive down one’s credence. Mathematically, we can express this as the following probabilistic law:

$$P(X \text{ and } Y) < P(X) \text{ when } X \text{ does not entail } Y.$$

Consider the following example made famous by psychologists Kahneman and Tversky (1983). Linda is a recent university grad who studied philosophy. While at university, Linda regularly participated in activism related to racial injustice and climate change. Which is more probable?

- a. Linda is a bank teller.
- b. Linda is a bank teller and is active in the feminist movement.

If you’re like most people, you will likely have chosen (b). However, (b) is the less likely option because no matter what probabilities you assign to each attribute—“bank teller” and “active in the feminist movement”—it will always be less likely for both attributes to appear together rather than either on its own. For an extended explanation and discussion of this example, see Berit Brogaard (2006). For more on Ockham’s razor, see Elliott Sober (2015 and 2016).

APPLICATION: THE EPISTEMOLOGY OF SCIENCE

Revising your credence in a hypothesis in response to evidence, specifically, empirical observations, is what science is all about. One of the reasons Bayesianism has been so influential is that it generalizes across many fields and scenarios. In this section, we will look at how one might use Bayesianism to assist in updating degrees of belief in scientific hypotheses.

Suppose you want to know whether vaccines cause autism, so you set out to do some research. After a half hour on Google, you find yourself in a vortex of misinformation. You come across the (in)famous 1998 *Lancet* article responsible for instigating the vaccine/autism misconception. In this article, Dr. Andrew Wakefield and his co-authors report a study in which 8 of 12 children showed the onset of behavioral symptoms associated with autism within weeks of receiving the measles, mumps, rubella (MMR) immunization. On this basis, you accept an $\frac{8}{12} \approx 66.67\%$ chance that vaccines cause autism, and form an ≈ 0.667 credence that your child will develop autism (H) if you let her receive the immunization (E). In other words, your initial estimate is that $P(H|E) \approx 0.667$. However, you then learn that *The Lancet* retracted the article after the study had been repeatedly discredited. While anti-vaxxers continue to side with Wakefield, others insist that vaccines are safe and vital to public health.



[Andrew Wakefield](#) during a 2019 anti-vax march in Warsaw. Photo by [Bładość](#) via Wikimedia Commons. License: [CC BY-SA 4.0](#)

What should you do? Determined to sort this out but unsure of your probability skills, an intriguing open textbook chapter about Bayesian epistemology catches your eye. Equipped with your new knowledge of Bayes's theorem, you seek out some experiments to obtain the probabilities to input into the theorem. Fortunately, there are many such experiments to draw from. As an example, consider just one study done in Quebec (Fombonne et al. 2006).

The study reports that ≈ 65 per 10,000 children were diagnosed with a condition on the autism spectrum. So, $P(H) \approx \frac{65}{10000} = 0.0065$. The researchers report that this is consistent with the 0.6% rate found in other epidemiological studies. They also calculate an average 93% vaccination rate among children in the relevant age group, which yields $P(E) = 0.93$. If vaccines cause autism, one might expect a higher-than-normal vaccination rate concentrated among the 65 diagnosed with autism. To give anti-vaxxers the benefit of the doubt, suppose that 64 of the 65 (about 98%) were immunized. That is, $P(E|H) \approx 0.98$.

Using Bayes's theorem,

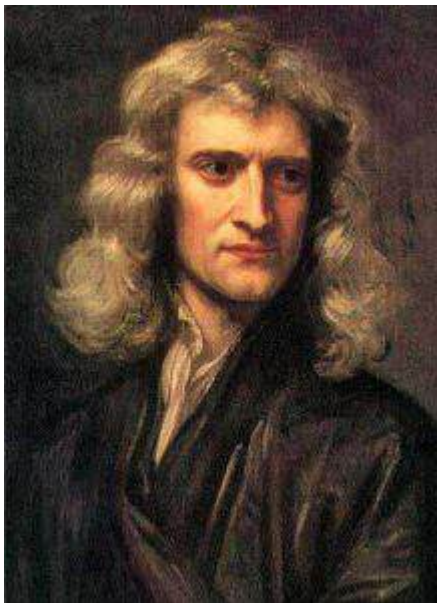
$$P(H|E) = \frac{P(E|H) \cdot P(H)}{P(E)} \approx \frac{0.98 \cdot (0.0065)}{0.93} \approx 0.0068 = 0.68\%$$

Putting it all together, this result suggests that the rational response to the evidence is to dramatically downgrade your credence in the hypothesis from the initial 66.67% to less than 1%. While we might not ever fully rule out the hypothesis, additional experiments could continue this downward slope until credences become vanishingly small. Even at 1%, you would already be justified in believing that it is highly improbable that vaccines cause autism—in other words, justified in believing that it

is highly probable (99%) that vaccines do *not* cause autism. A corollary to this is that no matter how much evidence accrues, you will never be able to raise your credence to 1, or absolute certainty. This point generalizes: a Bayesian treatment of science best accords with **fallibilism**, the idea that one can have justification without certainty.

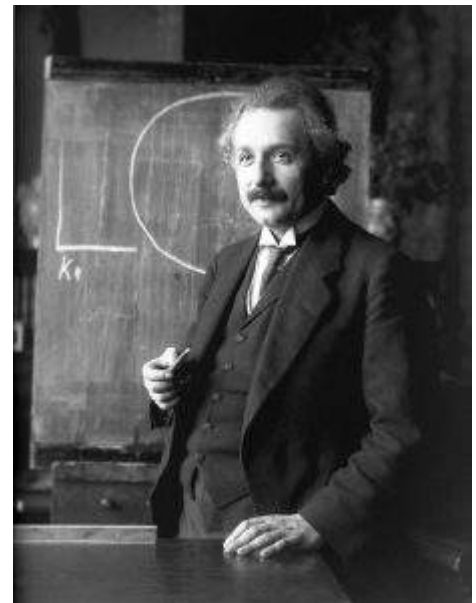
Our example also demonstrates that Bayesianism has some mechanism for correcting prior probabilities, since enough evidence will wash out erroneous priors. One might appreciate that we could have started off skeptical about the claim that vaccines cause autism, say with 5% confidence, and our credence would *still* have decreased after seeing the evidence. In the short term, however, **subjective Bayesianism** would allow someone to believe in unrealistic priors until enough evidence comes in. **Objective Bayesianism** has the advantage on this front because it insists on having priors that cohere with the world before one gets on with the business of updating (though on the other hand, the objective view faces the reference class problem).

The vaccine case required us to appeal to observed rates and statistical calculations to determine the probabilities to input into Bayes's theorem. However, it's not always possible to put a number on the relevant values. Consider Einstein's theory of general relativity, which postulates that mass causes spacetime to warp or curve, and that this curvature is the force of gravity. At the time of its publication in 1915, most scientists viewed this theory as a radical, unwarranted departure from the longstanding Newtonian theory of gravity. After all, Einstein had no empirical proof. On the other hand, his reasoning also seemed convincing, not to mention that he had been proved right once before when everyone else had it wrong (regarding his theory of special relativity in 1905). So, in 1915, it was perhaps reasonable to form a $\frac{50}{50}$ credence on the question of Newtonian gravity (N) vs. general relativity (GR). If so, then $P(N) = P(GR)$.



[Portrait of Isaac Newton](#) by Godfrey Kneller via Wikimedia Commons. This work is in the public domain.

Whereas N predicts that light rays approaching the sun would travel a straight path, GR predicts that they would be warped by the sun's gravity, taking a curved path. During the total solar eclipse in 1919, the famous Eddington experiment (E) strongly confirmed GR 's prediction. In other words, $P(E|GR) \gg P(E|N)$, where the double inequality means "much greater than." Of course, it's hard to see how numerical values could be determined.



[Albert Einstein, 1921](#), by Ferdinand Schmutzer via Wikimedia Commons. This work is in the public domain.

Comparative Bayesianism to the rescue! Given what we just determined—that $P(N) = P(GR)$ and $P(E|GR) \gg P(E|N)$ —the comparative version of Bayes’s theorem introduced in the previous section implies that $P(GR|E) \gg P(N|E)$. Hence, E strongly supports GR over N . Comparative Bayesianism tells us that after we learn Eddington’s results, we should significantly increase our credence in GR and decrease our credence in N . Since those credences were previously equal, this means we will end up with $P(GR|E) \gg \frac{1}{2}$. In other words, we should strongly believe GR over N .



[Arthur Stanley Eddington](#) (1882–1944), English astrophysicist and astronomer. Part of the George Grantham Bain Collection, Library of Congress Prints and Photographs Division Washington, D.C. Image via Wikimedia Commons. This work is in the public domain.

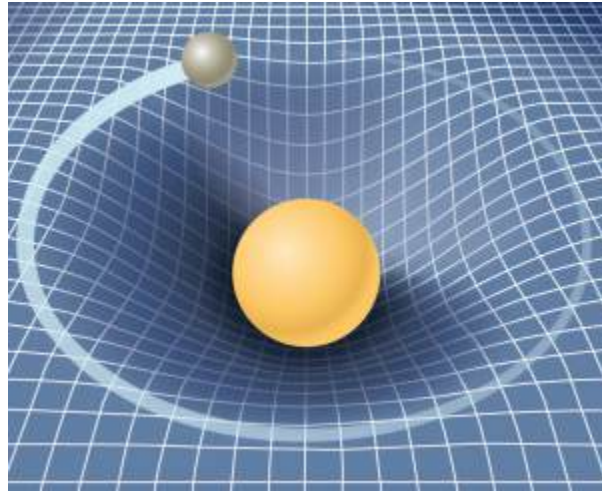


Illustration of spacetime curvature due to mass, as predicted by general relativity. Image by [OpenStax University Physics](#) via [Wikimedia Commons](#). License: [CC BY 4.0](#)

Of course, this conclusion is somewhat limited. Without numerical probabilities, Bayesianism cannot pinpoint a *specific* degree of belief in *GR*. Instead, comparative Bayesianism showed us how we are justified in choosing between two competing hypotheses. Further, comparisons can also usefully justify a “belief ranking” (e.g., belief *B*₁ is more probable than *B*₂, which is more probable than *B*₃). Decision theorists use such rankings to explain which beliefs should be given greater weight in decision-making.

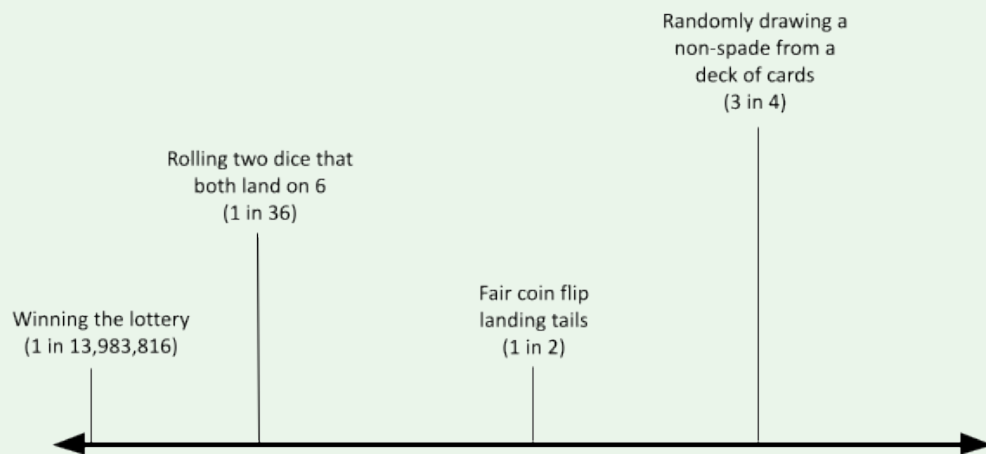
EVALUATING BAYESIANISM

This chapter has demonstrated that Bayesianism provides us with a strong supplement or alternative to traditional epistemology. A degreed framework allows us to characterize our doxastic attitudes more precisely. The tools of probability avail us to a rich mathematical framework for evaluating credences. The most valuable of these tools is Bayes’s theorem, which meticulously prescribes how to refine our credences over time in light of new evidence. The result is a powerful framework, one which can provide a strong epistemological ground for scientific inquiry.

This chapter has also shown that Bayesianism is not without its weaknesses, including the reference class problem, the problem of the priors, and the problem of logical omniscience. These, however, may not be insurmountable and are, in fact, the hub of lively debate and research in formal epistemology. Though this chapter focuses on examples from science, it might be appreciated that the result is highly generalizable. If you are intrigued by the potential of Bayesianism, it would be fruitful to look through the suggested reading list to understand how it makes contact with other areas of philosophy.

Questions for Reflection

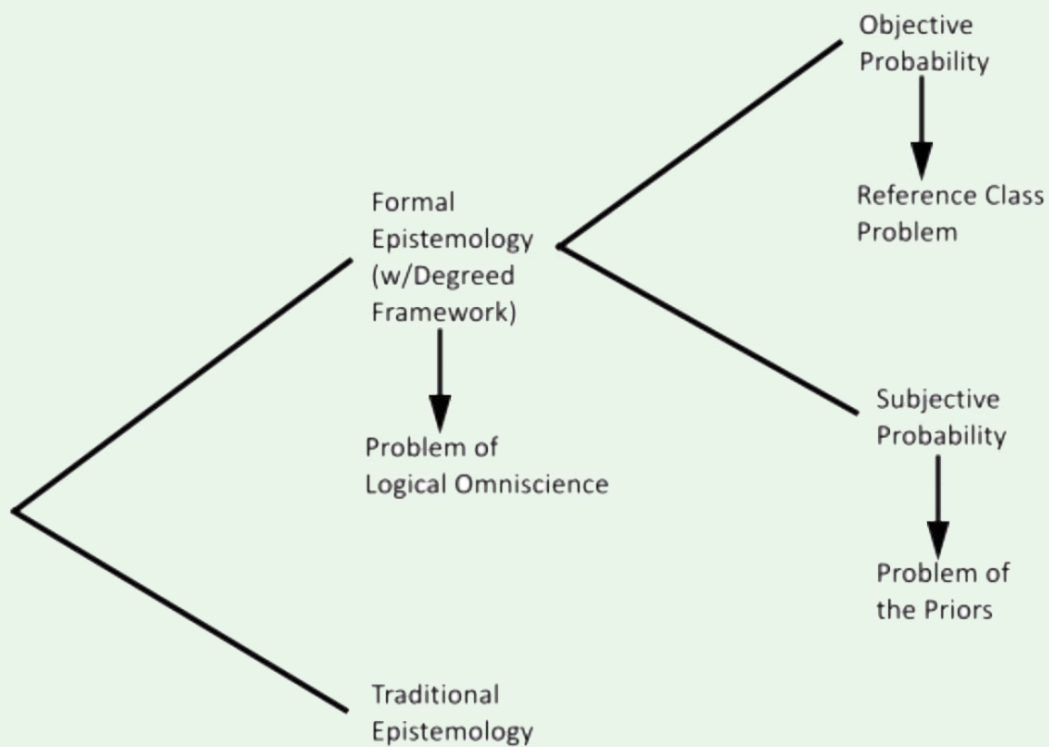
1. Create a sketch of what your own range of credences might look like. Use the continuum below to plot your credences for the propositions listed in (a)–(e). There are several benchmarks in the diagram to help guide your thinking.
 - a. The scientific consensus is wrong about climate change.
 - b. A nuclear strike will happen within your lifetime.
 - c. Someone on a given crowded bus (≈ 30 passengers) has the same birthday as you.
 - d. The final match of the next World Cup (soccer) will feature at least one European country.
 - e. The Talking Heads (a rock band) will reunite for one final album.



2. Let's explore Bayes's theorem and how it compares to your probability intuitions. Consider two claims:
 - T = You test positive for a given medical condition.
 - C = You have the medical condition.
 Suppose the test has a strong track record for detecting the condition when it's actually present: $P(T|C) = 0.8$. Also suppose about 1% of the population has the condition: $P(C) = 0.01$. Finally, suppose about one of every ten people who are tested tend to test positive: $P(T) = 0.1$. Now answer the following questions:
 - a. Using only your intuition (no calculations), how likely is it that you have the condition given that you tested positive? In other words, is $P(C|T)$ is high, low, or roughly in the middle?
 - b. Now plug the numbers into Bayes's theorem to find a numerical estimate for $P(C|T)$.
 - c. Compare your answers to (a) and (b). If you found your intuition to be far off course, what do you think is the reason for this? What led your intuition astray? Were you selectively focused on one particular aspect of the provided data? Is the error related to the base-rate fallacy (introduced in the Comparative Bayesianism section)?
3. Find your own example to demonstrate the use of comparative Bayesianism. Begin with a specific scientific or philosophical hypothesis H in which your initial credence is 0.5. Describe any single

consideration E that seems to have some relevance to H . According to comparative Bayesianism, how should learning about E alter your credence in H ? Explain step by step.

4. Is Bayesianism the way our brains “naturally” update beliefs? AI (artificial intelligence) researchers have had tremendous success by using Bayesian inference to approximate some human capabilities. Does this suggest we might have stumbled upon the algorithm our brain has been using all along? (See the paper in the Further Reading section by Robert Bain, “Are Our Brains Bayesian?”)
5. *Mapping Out the Terrain*: Below is a roadmap of the epistemological terrain. Like most areas of philosophy, you will find yourself at a choice-point. Each option has pros and cons, but it’s up to you to defend your position whichever way you go. You’ve read about the upshots of the degreed framework, but it would be intellectually responsible to have something to say about the problems that each position inherits. As an exercise, determine which of the problems you think are the most serious and decide which position you think is most defensible, all things considered. Write a mini-essay explaining your decision.



6. *The House Always Wins*: To get a better feel for Dutch books, it would be helpful to run through the following game. The example involves a roulette wheel, but for simplicity we will only consider bets that the ball will land on a number in the range 1–36 and one of two green spaces (0 and 00), yielding a **sample space** (the set of all possible individual outcomes) of size 38.

First consider what would happen if you place bets on all 38 options. Although you will win some of these, since you covered all options, more of them will lose, guaranteeing a net loss. So, this is a Dutch book.

Now look instead at what happens when you repeat single bets in sequence. Suppose you start out with \$200 and place \$5 (minimum) bets on the simplified roulette wheel. First pick a number you wish to bet on. To see whether you won, use a [random number generator](#) to generate one number at a time with a range of 1–38 and assume 37 and 38 stand in for the two green spaces (0 and 00), respectively. Then repeat.

For each win, use the space in the table below to record your gain or loss. Though you might win once in a while, in the long run you will lose your entire initial pot of money. Try it and see how long it takes to reach that point.

Table 3 - The House Always Wins

Event	Probability of Winning	Expected Payout per \$5 bet	Your pot of money (+\$180 per win, — \$5 per loss) Initial amount: \$200
0	1 in 38 ($\approx 2.78\%$)	\$180 ($\36×5)	Remaining amount: ___
00	1 in 38 ($\approx 2.78\%$)	\$180	Remaining amount: ___
1–36	1 in 38 ($\approx 2.78\%$)	\$180	Remaining amount: ___

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CHAPTER 7.

SOCIAL EPISTEMOLOGY

WILLIAM D. ROWLEY

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Discuss* multiple ways in which social interactions affect the epistemic status of our beliefs.
2. *Differentiate* between theories of testimonial justification.
3. *Explain* the problem of peer disagreement and how it emerges from common intuitions about everyday situations.
4. *Compare* and *contrast* solutions to the problems of testimonial justification and peer disagreement.

INTRODUCTION: WHAT IS SOCIAL EPISTEMOLOGY?

Human beings are social animals. We live in networks of interdependence. We depend on each other for many things—including the truth. True beliefs keep us from eating poisonous mushrooms, getting shocked by live circuits, and getting into car accidents. The need to transmit true beliefs is pressing because none of us individually can get all the true beliefs we need on our own. But we know that not everyone tells the truth. Therefore, our many-dimensional dependence on each other for our beliefs raises epistemological questions. **Social epistemology (SE)** is the study of how social relationships and interactions affect the epistemic properties of individuals and groups.



[Jennifer Lackey](#) during a lecture at Amherst College in 2010. Photo by Rose Lenehan via Wikimedia Commons. License: [CC BY-SA 4.0](#)

This chapter will focus on two important issues in SE: the epistemology of testimony and peer disagreement. The epistemology of testimony is central to SE because, without what others tell us about the world, we would know very little about it. We would be almost entirely ignorant of history, science, and current affairs—not to mention the inner lives of others. Philosophers refer to this *telling* as **testimony**—whether it takes the form of speech, text, or something else (Lackey 2006).

Though there are many questions worth asking, the place to start is by wondering:

Under what conditions does testimony confer positive epistemic status on its content?

I will focus on our *justification* for believing testimony. However, we may hope that better understanding testimonial justification will help us understand testimonial *knowledge* as well.¹

Testimony is not the only way in which others affect what we believe. We can find out how the world is indirectly, by seeing whether others agree or disagree with us or with each other. For this reason, we seek out and value second opinions as a check on our fallible sources. But we sometimes seem to dismiss disagreement. Many of our strongly held beliefs—philosophical, religious, or political—are controversial, and we know it. This, too, presents an epistemological puzzle. To lead us into the epistemology of disagreement, we will ask:

What is the epistemically rational response to discovering that someone disagrees with us?

Epistemological questions about testimony and disagreement are core issues in social epistemology and will be the focus of this chapter. The following social epistemological issues will not be covered, but may still interest the reader:

1. I am making the common assumption that to know that p , one must be justified in believing p . See [Chapter 1](#) of this volume by Brian C. Barnett.

- **Collective epistemology:** We speak of groups as having intentions and beliefs.² When are the beliefs of groups justified or knowledge?³
- **Agnotology:** Sometimes individuals or groups have an interest in others being *ignorant* of some truth. How do propagandists, purveyors of fake news, and others exploit communication to render their targets ignorant?⁴
- **Epistemic injustice:** Not all members of a communication network are treated equally. What are the epistemic consequences of these inequalities?⁵
- **Epistemic democracy:** Can votes be construed as testimony about the best candidate or policy? Is collective opinion more likely to yield truth than individual opinion? Can democracy be justified on such epistemic grounds?⁶



Alvin I. Goldman, who first introduced process reliabilism. University of Michigan News and Information Services Photographs, Bentley Historical Library, University of Michigan. License: [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)

Oddly enough, Western philosophy has historically neglected social epistemology. Individual pursuit of truth has generally been held up as a check on the fallibility of social sources of information, whether in the classical⁷ or modern eras.⁸ Interestingly, outside of the West, especially in Indian philosophy, there has been lively development of social epistemology.⁹

Social epistemology has taken on new urgency in light of the rapid changes brought on by new technology. Peer-reviewed research of the highest quality can be freely accessed in a matter of moments—as can conspiracy theories, radical manifestos, and celebrity medical tips.

TESTIMONY AS A SOURCE OF KNOWLEDGE AND JUSTIFIED BELIEF

What people tell us is critical for our understanding of the world. It furnishes us with beliefs, many of which we are sometimes happy to call “knowledge.” Still, how can this be when deception (or

2. Some include the analysis of group belief itself under the heading of SE (Goldman and O’Connor 2019). While related to SE, I would classify the analysis of group belief as a topic in metaphysics.

3. See Lackey (2014).

4. See Proctor and Schiebinger (2008).

5. For those interested in epistemic injustice, see [Chapter 8](#) of this volume by Monica C. Poole.

6. See Goldman and O’Connor (2019).

7. For example, Socrates’s (ca. 469–399 BCE) criticism of Greek religion was one of the reasons why he was tried by the Athenians (Plato [ca. 390 BCE] 2009).

8. For example, the epistemological work of René Descartes (1596–1650) and John Locke (1632–1704) can both be seen as responses to widespread disagreement about the foundations of religious belief. For an overview of Cartesian and Lockean epistemology, see [Chapter 3](#) of this volume by K. S. Sangeetha.

9. For an overview, see Phillips (2019) and Matilal and Chakrabarti (1994).

other error) can rarely be ruled out? Why think that beliefs based on the testimony of others are ever justified?

A. Reductionism



[Portrait of David Hume](#) by Allan Ramsay via Wikimedia Commons. This work is in the public domain.

One answer is that we *learn* that (some) testimony is worthy of belief. A spoken or written word is an artifact or event in the world. Perhaps testimony justifies belief by our learning that testimony correlates with truth. This seems to be what Scottish philosopher David Hume (1711–1776) had in mind when he wrote that our assurance of testimony “is derived from no other principle than our observation of the veracity of human testimony, and of the usual conformity of facts to the reports of witnesses” (Hume [1777] 1993, 74).

One way of understanding Hume is this: similar to how we’ve learned that smoke is caused by fire, we’ve also learned through observation that testimony tends to be true. Testimony is evidence only because we have inductive evidence based on other kinds of evidence (observation and memory, especially). In effect, testimonial justification *reduces* to other forms of justification.

We can formulate (testimonial) **reductionism** as follows: you are justified in believing some S’s testimony that *p*, *if and only*

if:

- a. You receive S’s testimony that *p* (you hear, read, or otherwise come to know about it and understand that S’s testimony means that *p*);
- b. You have (broadly) inductive evidence based on observation for the reliability of S’s testimony that *p*; and,
- c. *p* is not defeated by other evidence you have.

Thus, according to reductionism, we are justified in believing someone’s testimony only if we have testimony-independent evidence (e.g., sensation, introspection, or memories of sensation or introspection) for believing them.

Reductionism looks like a promising way of answering our question about the conditions of justified testimonial belief. It comports well with reflective common sense. If we know someone to be especially honest and knowledgeable about a topic, we have stronger than usual justification to believe their testimony. On the other hand, if we know someone is prone to lying, we are usually not justified in believing their testimony. Reductionism seems to justify a commonsensical level of skepticism about testimony—but not too much skepticism.

Box 1 – Solving the Missing Evidence Puzzle

The puzzle: Testimony does not work by evidence transmission. Your telling me that p does not give me your evidence for p . But I still rely on your evidence in some sense. How can I rely on your evidence without having it?

A two-step solution for reductionists:

- Step 1. We have inductive evidence that people tend to follow norms of communication that require knowledge or evidence when testifying that p . So, your testimony that p gives me evidence that you have some evidence in support of p (even if I don't know what your evidence is).
- Step 2. Apply the **evidence of evidence principle (EEP)**, which says, roughly, that whenever I have some evidence that you have some evidence in support of p , then I have some evidence in support of p . (And so, this evidence about you would enable me to reason to the conclusion that p .)

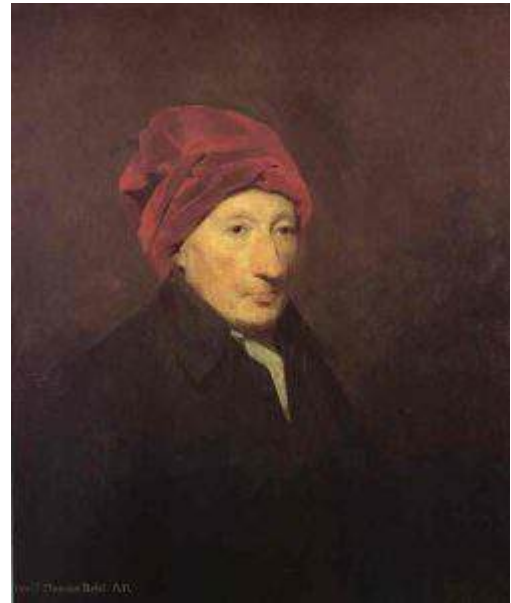
Together, Step 1 and Step 2 imply that your testimony that p gives me evidence in support of p (without giving me your evidence for p) (Rowley 2016).

B. Objecting to Reductionism

Thomas Reid (1710–1796), Hume's contemporary and fellow Scot, was critical of reductionism. Let's consider two "Reidian" objections to reductionism.

The first problem concerns the reliance of reductionism on individual observation. For reductionism, the only evidence anyone can rely on to justify believing testimony is their own observation. But how many of us can really reconstruct a good inductive argument from our own experience alone, relying on nothing that we have been told, for thinking that an individual's testimony is likely to be true? For Reid, attempting this would be hopeless, claiming that, "most men would be unable to find reasons for believing the thousandth part of what is told them" (Reid [1764] 2000, 194). If Reid is right, reductionism implies that we are rarely justified in believing testimony. It doesn't follow that reductionism is false, of course. Maybe we should be skeptics about most of what we are told. But most reductionists are not skeptics about testimony. Thus, Reid's argument is a powerful objection to non-skeptical reductionism.¹⁰ Call this the **not enough evidence objection (NEEO)**.¹¹

Another problem inspired by Reid concerns the beliefs of



[Portrait of Thomas Reid](#) by Sir Henry Raeburn via Wikimedia Commons. This work is in the public domain.

10. For an early and accessible version of this argument, see Anscombe ([1979] 2008). For a more recent and influential version, see Coady (1992), especially Chapter 4 of that work.

11. See Rowley (2012).

small children. This objection is called the **infant/child objection (ICO)**.¹² This objection proceeds from two observations. First, very young children lack many of the concepts adults have, and have far fewer experiences than adults on which to base their beliefs. Second, it is obvious that young children have justified testimonial beliefs. However, the cognitive innocence of very young children makes it very hard to see how, according to reductionism, they could have testimonially justified beliefs. So, the ICO urges, reductionism is false.

C. Non-Reductionism

Can testimony justify beliefs without being supported by non-testimonial evidence? Non-reductionists think so.¹³ Just as perceptual beliefs are justified without any inference, they argue, so are testimonial beliefs.

A way of stating (testimonial) **non-reductionism** is the following: you are justified in accepting some S's testimony that *p*, *if and only if*:

- a. You receive their testimony that *p*, and
- b. *p* is undefeated.¹⁴

Testimonial justification is therefore fairly straightforward. Having someone's testimony that *p* at least to some degree justifies one in believing *p*.¹⁵

An initial objection to non-reductionism is that it justifies gullibility (Fricker 1994). If non-reductionism involves a presumptive right to trust whatever you are told, all it takes to be justified in believing a proposition, after all, is for someone to tell you it is true. Granted, one must not have defeaters, but non-reductionism imposes no requirement that one be vigilant to the trustworthiness of testimony. Without such vigilance, available defeaters will be overlooked. However, a requirement that one monitor for trustworthiness would appear to invalidate the presumptive right to trust. Thus, non-reductionism licenses gullibility. The problem with Fricker's objection, non-reductionists have replied, is that she seems to assume that monitoring must be to some degree conscious. However, they argue, there is no reason that monitoring could not be unconscious and automatic, from which it follows that one may still have a presumptive right to trust while not being gullible (Henderson and Goldberg 2006).

D. The Dialectic between Reductionism and Non-Reductionism

Non-reductionism suffers from two major theoretical disadvantages when compared to

12. See Lackey (2005) and Goldberg (2008).

13. Some representative proponents of versions of non-reductionism include Reid (1764), Coady (1992), Weiner (2003), Graham (2006), and Goldberg (2008).

14. It should be noted that there is a lot of variation in the way the terms "reductionist" and "non-reductionist" are used in philosophy. Recognizing this, I have opted for a simplified formulation of both views. A constructive discussion of formulations of reductionism and non-reductionism can be found in Greco (2012).

15. I say "some degree" because one can have some justification for believing *p* without having on-balance justification for believing *p*. A non-reductionist might hold that undefeated testimony that *p* is true is always *some* reason to believe *p*, even if it need not be *sufficient* evidence to believe *p*. A view of this kind is proposed by Graham (2006). For simplicity, however, I will be treating non-reductionism as though it provides sufficient justification for belief in the absence of any defeaters.

reductionism. Reductionism *explains* why it is that we are justified in relying on testimony in terms of a familiar sort of justification—(broadly) inductive justification. If reductionism is equally explanatorily powerful as non-reductionism, it looks like it will be a simpler theory, benefiting from **Ockham’s razor**. Furthermore, there is a phenomenalist problem with non-reductionism. Other sources of justification share a compelling “presentation-as-true.” When we seem to perceive, introspect, remember, or intuit, it *seems* to us that it is true, even if we presently *reject* what seems to be true. Consider an optical illusion like the Müller-Lyer lines (Figure 1).

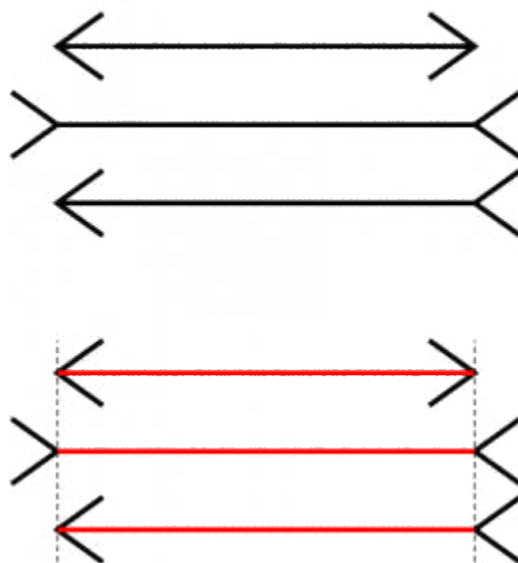


Figure 1 - The [Müller-Lyer Illusion](#) by [Fibonacci](#) via [Wikimedia Commons](#). License: [CC BY-SA 3.0](#)

Sight presents the three lines to us as having different lengths, even if we believe—*know*, even—that they are the same lengths. Testimony seems to be different. It doesn’t “wear its truth on its sleeve” in the same way as other sources of justification. Even though we believe testimony “automatically” much of the time, it seems to be more like our conclusion that there is a fire when we see smoke. The best reply for the non-reductionist would be to offer an account of testimony as evidence which is both independently plausible and permissive enough to count testimony as a non-reducible form of evidence.¹⁶

Setting aside fundamental questions about evidence, the most powerful argument for non-reductionism is that reductionism cannot avoid skepticism, via either the NEEO or ICO.

Can the reductionist say anything in reply to these objections? The issue is too complicated to deal with at length here. In my own view, the most promising reply to the NEEO appeals to inference to the best explanation.¹⁷ In brief, it may be that the reductionist can treat our experiences—especially of

16. See Burge (1993) and Chapter 9 in Coady (1992) for examples of such attempts. A critical discussion can be found in Malmgren (2006).

17. For a defense of reductionism that makes use of inference to the best explanation, see Lyons (1997) and Fricker (2017). For a criticism of this kind of defense, see Malmgren (2006). For discussion of the role of inference to the best explanation in epistemic justification, see [Chapter 2](#) of this volume by Todd R. Long. For discussion of the relationship between best explanation and probability, see [Chapter 6](#) by Jonathan Lopez.

testimony, communication more generally, and other social interactions—as data, the best available explanation of which is that many individual cases of testimony are true. Such an approach to replying to the NEEO may also help in replying to the ICO if it could be argued that the very simple explanations available to young children justify believing testimony (Rowley 2016). Alternatively, the reductionist could argue that the reliability of testimony is tacitly confirmed while children learn that there are reliable associations between words, contexts of utterance, and truth (Shogenji 2006, 340).

DISAGREEMENT

Surprisingly, it is only in the last twenty years or so that philosophers have become especially interested in the epistemological significance of disagreement. Here, I will first say something about disagreement in general, laying out some basic concepts and highlighting an important role that disagreement plays in forming our views about the world. Then, I will point out a thorny philosophical problem that emerges.

The mere fact of disagreement is commonplace. If we interact with others, we encounter disagreement frequently. If you have any political beliefs at all, it will not be hard to find someone who disagrees. On the other hand, many of our disagreements arise and are resolved without much fanfare. Consider anything you've had to do in cooperation with someone else: a group project, fixing a car, or playing on a team. Different beliefs about goals, procedures, division of labor, and so forth, emerge and evolve over the course of collaboration. Some of these disagreements cause conflicts, some momentary, some lasting.

These disagreements offer us, as David Christensen puts it, “opportunities for epistemic self-improvement” (Christensen 2007, 187). We know we are fallible and limited in our first-hand evidence about the world. We value eyewitness accounts and expert opinion not only because they can inform us, but because they can correct us when we have a false belief. At least some of the time, the justified response to finding out someone disagrees with us is to adjust our beliefs to agree with the other person.

Of course, it isn't always the case that we should abandon our belief that p when we find out that someone else believes p is false. If the best explanation of our difference of opinion is not that the other person has evidence I lack, but that they are ignorant, misinformed, biased, or mentally compromised (e.g., concussed, drunk, delirious, etc.), this probably does not justify my ceasing to believe as I do.¹⁸

The upshot is that sometimes disagreement provides us with evidence about how the world is. It does this by giving us evidence about the beliefs other people have about the world. This changes our own body of evidence and what is justified for us to believe.

18. It might be thought that the epistemology of disagreement simply is a sub-issue within the epistemology of testimony. However, while testimony often is evidence that someone disagrees with us, not all evidence from disagreement is testimonial. I can infer that we disagree by watching your behavior. Suppose I ate the last cookies in the jar and, therefore, believe *the cookie jar is empty*. When I watch you approach the jar as if to open it, I may have evidence that you believe it is not empty.

Box 2 – The Evidence of Evidence Principle & Disagreement

The EEP (see Box 1) also contributes to our understanding of disagreement. The principle suggests that usually, finding out that an expert believes that p (where p is in their area of expertise) is strong evidence that p —stronger than any competing evidence a novice is likely to have. The reasonable thing for a novice is usually to agree with the expert. On the other hand, if we find out that a peer disagrees with us about p , we learn that a comparable body of evidence supporting their view about p (and not ours) likely exists. By the EEP, this is evidence for us about p —and usually partially or fully defeats our original evidence concerning p , justifying some degree of conciliation.

The importance of disagreement as a source of evidence is embodied in various practices in which we engage. Experts realize that second opinions can confirm or disconfirm our initial judgments. Academic peer review formalizes this check on our fallibility by risking the possibility that experts will disagree with the conclusions of authors of new work in their discipline. Another practice is creating “space” for disagreement. Where individuals are free and even encouraged to voice their disagreement, the group is less likely to fall into unjustified groupthink or other biases. This is one of the reasons there are usually academic freedom protections for students and faculty within universities. For similar reasons, the freedom to publicly disagree is usually legally protected in liberal democracies.

A. Peer Disagreement

Suppose we both have thermometers. Yours reads 30. Mine reads 70. What should we believe? If we add that we have carefully calibrated yours and found it very reliable, while mine isn't, then it would seem that we should believe yours. But what if we have tested both and, until now, have found them to be equally reliable? It won't do, in such a case, to appeal to our *ownership* of the thermometer—that is obviously irrelevant. If we have no other evidence about the thermometers or temperature (suppose you're in a spacesuit and can't feel the air for yourself), then it appears that we should suspend judgment about which thermometer is right.¹⁹

Now imagine that these thermometers are *in* our minds—or rather—*are* our minds. Suppose you believe p and I believe p is false. If we both know you're more likely to be right—say we know you to be intelligent, have given a sober, fair-minded consideration of all of the evidence, and so on, while I have only given a cursory reading of one source of dubious value—then it seems I should treat your belief about p as something like *testimony*. I should change my view and adopt yours. But what if we are both **epistemic peers** about p , and we know it? In other words, suppose we know that we're equally epistemically situated with respect to p , and therefore equally likely to have the truth. If the analogy with thermometers holds, then it looks like we are justified only in suspending judgment about p once we find out about the disagreement. Put another way, we should **conciliate**—adopting an attitude closer to our peer's attitude than our initial attitude (Elga 2007).²⁰

Conciliation seems like it explains the value of disagreement outlined above. Peer review is valuable

19. For a discussion of the thermometer analogy, see White (2009).

20. Also see Matheson and Frances (2018) for a further discussion of conciliation and steadfast responses to disagreement.

because we find someone who is at least as likely to be right as we are and, if we find out that they disagree, we decrease our confidence and seek new evidence (or at least a reason to think that we aren't peers after all).

However, there are a couple of things that should give us pause before simply agreeing that we should always conciliate when we find out that a peer disagrees with us.

The conciliatory response to peer disagreement—or **conciliationism**—seems to have serious skeptical consequences. Controversial beliefs are often central to our view of the world: they include political, religious, scientific, or philosophical beliefs. Yet for most of these beliefs, you either know about people who appear to be your peers or are experts with respect to these beliefs, and who *disagree* with you. Further, even if you don't know of specific individuals who qualify, you are likely justified in believing that somewhere in the world, there is such a peer, if not an expert, who disagrees with you.²¹

This suggests grounds for a limited sort of skepticism—but not an insignificant one. Do you believe that a god exists? Do you believe that there isn't one? Chances are that there is someone you know who is as fair-minded, intelligent, and acquainted with the relevant arguments as you are (if not more so). If you encounter such a peer, it would appear that you have a reason to abandon your own belief (or weaken it). After all, what non-arbitrary reason do you have to prefer *your* judgment to that of your *peer*? The upshot is that we may have some powerful reasons for skepticism about a whole range of controversial propositions—reasons to either significantly weaken our confidence or suspend judgment altogether about propositions which may be quite important to us.²²

B. Resisting Skepticism

Are there ways of resisting this skeptical argument? We might call the (non-skeptical) view that sometimes (or frequently) it is justified to continue holding our original attitude in the face of peer disagreement in scenarios like the above the **steadfast view**.²³

Objection 1 (to the skeptical argument): Maybe peers aren't that common. If you and I are just as likely to be right about *p* and I know this, then it looks like I am being arbitrary in continuing to believe as I do about *p* when I find out that you disagree with me. But how often is it that we know (or are strongly justified) that we are *just* as likely to be right as someone else? Perhaps the skeptical consequences can be avoided because real, known epistemic peers are rare.²⁴

This looks initially promising as a means of defending our controversial beliefs. There really aren't that many ideal cases in which we and someone we disagree with are perfectly balanced in our disagreement about some *p*. However, a little more consideration shows that this response only

21. For a discussion of the potential skeptical force of merely possible (rather than actual) disagreement, see Carey (2011).

22. For those interested in traditional skeptical arguments, see [Chapter 4](#) of this volume by Daniel Massey.

23. Note that the truth of the steadfast view may not be enough to avoid skepticism. It won't be enough that *sometimes* we are justified in maintaining our original view in the face of disagreement. We must be justified in doing so in many of those real-world cases in which scientific, political, philosophical, and religious beliefs are threatened by conciliation. Defenders of the steadfast view include Kelly (2005), Kelly (2010), Lackey (2010), and Huemer (2011).

24. For a discussion, see King (2012).

goes so far. The more likely it is, on my evidence, that you and I *are* competent peers, the more evidence I get from finding out about your disagreement with me that *your* view is the correct one. Think of it this way: even if I justifiably believe my thermometer is more likely to be accurate than yours is, I cannot simply dismiss your thermometer's reading. It *is* evidence. If it disagrees with my thermometer, it is *some* evidence that my thermometer is wrong. The closer your thermometer is in accuracy to mine, the stronger the evidence is that my thermometer is the one that is in error and the closer to suspending judgment I should come.

Objection 2 (to the skeptical argument): It might be thought that the argument for conciliation is self-defeating. Philosophers disagree about the correct response to peer disagreement. It looks like all an opponent of conciliation has to do to “win” the argument is continue to maintain their position. The “conciliationist” should follow their own advice and either come to agree with their opponent or continue to disagree with less confidence than before. If they still disagree after this initial conciliation, they should follow their advice *again*, and either agree with their opponent or become less confident than they were. Let this continue for a while and they will no longer be justified in believing conciliationism. So, it would appear that conciliationism defeats itself, so long as its opponent holds firm.

The main problem with this objection is that it doesn't show that conciliationism is false. At best, it shows that it might be true and, yet, not justified for belief.²⁵ Additionally, if the non-conciliating “peer” cannot give a good account of *why* they are not also conciliating, this may undermine the evidence that the conciliationist has for conciliating in the first place.

Box 3 – Rational Uniqueness

Rational uniqueness (RU) is the principle that each body of evidence supports only one attitude toward a proposition. One way of defending a steadfast view would be to argue that RU is false. The alternative to RU is **rational permissivism (RP)**. According to RP, two peers might justifiably disagree about *p*, because both of them have attitudes in the range the evidence permits.

RP has a curious consequence. It means that for a single body of evidence, both *p* and not-*p* could be justified for belief. Thus, one could truthfully say, “*p*, but my evidence equally supports not-*p*.” But that sounds altogether wrong to my ears. When the evidence equally positions one with respect to *p* and not-*p*, “I have no idea whether *p*” sounds much better. In that case, suspension of judgment is the unique justified attitude, in accordance with RU.²⁶

It is also not clear that RP will do very much against the skeptical argument. The reason has to do with the *range* of attitudes permitted by a given body of evidence. A large range would allow two individuals to confidently believe *p* on the one hand, and not-*p* on the other. But such a large range is highly implausible. On the other hand, a narrow range might be plausible, but would do very little to turn aside the argument for conciliationist skepticism. Such a narrow range might leave both disputants only justified in maintaining a very weak belief that *p* or not-*p*.

25. Recall that truth and justification can diverge assuming fallibilism. See [Chapter 1](#), [Chapter 2](#), [Chapter 4](#), and [Chapter 6](#) of this volume for discussion of this point.

26. See Box 1 in [Chapter 2](#) of this volume for another argument for suspension of judgment in cases in which the evidence equally favors *p* and not-*p*.

It is telling that even those who disagree with conciliationism in theory agree in practice that knowing about peer disagreement often calls for a kind of epistemic humility. Knowing about peer disagreement should make us less confident in the accuracy of our initial judgment—it should exert some degree of “skeptical pressure” on our beliefs. In my own view, it is vitally important to be aware that we do not form our beliefs—even our most cherished and important ones—in a vacuum, epistemically insulated from other minds. We are ever more interconnected than we have ever been. Awareness of disagreement is a tonic for the ills of the digital echo chambers in which each side of a controversy seems oblivious to the other—because digital filters, not the quality of the evidence, give the appearance of agreement on every side. Anyone who can’t find a disagreeing peer (or someone near enough) for their most cherished political, philosophical, and religious beliefs—would do well to get out of the narrow confines of such epistemically limiting social circles. Engage, and it won’t take long to find them.

Questions for Reflection

1. How does the term “testimony” as used in epistemology differ from its usage in everyday life?
2. A widespread attitude is that there is a large class of testimony that we should be disposed to dismiss (e.g., gossip, rumors, tabloid headlines, and conspiracy theories). Given that testimony is an important source of our justification and knowledge, how might this attitude be defended? Is there something different about this class of testimony as opposed to, say, believing the average stranger on the street whom you ask for directions?
3. There is a strong emphasis in liberal, democratic societies on learning to think for ourselves and formulating our own beliefs. Moreover, such epistemic autonomy is protected by a “right to our own opinions.” Would this be a good argument against epistemically relying on testimony? How might one respond to the argument?
4. Is reductionism or non-reductionism the more plausible theory of testimonial justification? Why?
5. Not all apparent disagreements are genuine. Sometimes it appears that two people disagree merely because they are “talking past” one another. Their differences are “merely verbal.” Can you think of an example where you have experienced this yourself? What, if any, are the epistemic ramifications of this phenomenon?
6. How does an “epistemic peer” differ from a “peer” in the ordinary sense of the term? Given an average intro philosophy class, determine whether each usage of the term plausibly applies to all classmates with respect to issues in epistemology, politics, science, and so on.
7. Most scientists agree that human-induced climate change is both real and urgent. Consider a non-expert climate skeptic who encounters this agreement. On the basis of your views about the epistemology of testimony, disagreement, and the like, what is the appropriate epistemic stance for this person upon such an encounter?
8. Does conciliationism really require repeated conciliation with apparent peers who refuse to conciliate? Perhaps conciliation can be construed so that after the first instance, staying put is a way to sustain the conciliation one has already accomplished. No further adjustment is required. Is this a plausible view? If so, would it be another way of stopping the slippery slope into skepticism?
9. Consider two people who “agree to disagree” on some matter. Is it possible, given conciliationism, for them to recognize each other as reasonable peers?

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CHAPTER 8.

FEMINIST EPISTEMOLOGIES

MONICA C. POOLE

Chapter Learning Outcomes

Upon completion of this chapter, readers will be able to:

1. *Discuss* important concepts in feminist epistemologies, including standpoint, situated knowledge, gaslighting, power-based ignorance, epistemic advantage, epistemic injustice, and epistemologies of resistance.
2. *Identify* some significant philosophers contributing to feminist epistemologies.
3. *Contextualize* feminist epistemologies in relation to other significant conversations in epistemology.
4. *Apply* concepts in feminist epistemologies to real-life situations (e.g., in current events, pop culture, and lived experiences).

INTRODUCTION

This chapter's title is plural—**feminist epistemologies**—because there is not one unified feminist epistemology. Indeed, feminist epistemologies value plurality: collaboration among multiple perspectives results in more complete, valid knowledge. One of the most significant contemporary philosophers contributing to feminist epistemologies is Patricia Hill Collins. Collins's work established a paradigm for the past thirty years of feminist epistemology. In *Black Feminist Thought*, Collins wrote that epistemology “investigates the standards used to assess knowledge or why we believe what we believe to be true. Far from being the apolitical study of truth, epistemology points to the ways in which power relations shape who is believed and why” ([1990] 2000, 252).



[Patricia Hill Collins](#) during a conference in Brazil. Photo by Valter Campanato/Agência Brasil via Wikimedia Commons. License: [CC BY 3.0 BR](#).

Sometimes, this approach has been criticized as an inappropriate “pollution” of epistemology with political considerations, especially when practiced by philosophers who are people of color or women (or both). Responding to some of these critiques, Linda Martín Alcoff located feminist epistemologies in a long history of politically attuned epistemology. She identified several European male philosophers traditionally highlighted in the history of epistemology such as John Locke (1632–1704), Immanuel Kant (1724–1804), and Bertrand Russell (1872–1970), who openly avowed the political merits of their epistemological positions (1999, 73–74). Ultimately, feminist epistemologies do not separate

epistemology from ethics or politics: inquiries about knowledge are considered in relation to inquiries into right and wrong, and power and oppression.

Published work in feminist epistemologies increased significantly during the twentieth and twenty-first centuries, and this chapter will focus on this contemporary period. However, feminist epistemologies are ancient, just like epistemology in general. Sometimes, there is an erroneous perception that feminist philosophy is a relative newcomer within philosophy. So that the contemporary focus of this chapter does not risk reinforcing that error, let us pause to highlight a few pre-modern contributions.¹ Consider, for example, the second-century eastern Mediterranean text known as the *Gospel of Mary*, which fits into contemporary Hellenistic and Gnostic Christian philosophical traditions (King 2003). The *Gospel of Mary* engages with themes familiar to philosophers working in feminist epistemologies today, as do medieval and early modern contributors to the field—for example, Hildegard of Bingen (1098–1179), Mary Astell (1666–1731), and (most significantly) Juana Inés de la Cruz (ca. 1651–1695). These include the limits of knowledge, the consequences of ignorance, the relationship between emotions and credibility, and, perhaps most pointedly, the refutation of opponents who claimed that these philosophers’ gender identities diminished their authority as knowers.

1. Historians of philosophy conventionally apply modern terms to describe philosophical approaches that predated the invention of the terms. Philosophers of history debate this choice: is this a valid tool to make the past intelligible to people in the present, or does it risk imposing conceptual categories of the present on the past? We do not have the space to explore that broader question here. In this chapter, I apply the term “feminist” to describe philosophers who fit the description even if they did not define themselves as “feminist,” just as colleagues in this volume apply “rationalist” and “empiricist” to philosophers who did not define themselves with those terms.

While a wide variety of ideas may be included under the umbrella of “feminist epistemologies,” there are several recurring themes that have been used to guide the structure of this chapter:

- All knowledge is situated knowledge: knowledge does not exist in a vacuum; all knowledge comes from someone and somewhere, and where you come from (your standpoint) shapes how you approach knowledge.
- Lived experiences are knowledge: real-life, first-person experiences contribute to knowledge, validate a knower’s credibility, and shape their standpoint.
- Power shapes knowledge: a knower’s relative position in hierarchies of social power contributes to greater knowledge or deeper ignorance.
- With knowledge comes responsibility: the knowledge one constructs has real consequences for real people, and a knower is personally accountable to one or more communities for how they “do knowledge.”
- Knowledge comes through collaboration: the most complete knowledge is created through “kaleidoscopic” dialogue and collaboration, reflecting multiple different standpoints. This includes dialogue in a literal, interpersonal sense, but incorporates a broader understanding of collaboration, where it is not limited to immediate, real-time social interaction.



[Portrait of Sor Juana Inés de la Cruz](#) by Miguel Cabrera via Wikimedia Commons. This work is in the public domain.

Finally, this chapter focuses on feminist epistemologies, and it includes topics in feminist epistemologies that intersect with other significant conversations in epistemology such as queer epistemologies, crip (disability) epistemologies, critical race epistemologies, and postcolonial epistemologies. To adapt Audre Lorde’s maxim (1982), there are no single-issue epistemologies, because we do not live single-issue lives.

SITUATED KNOWLEDGE AND STANDPOINT

Box 1 – Skepticism about Objectivity



[Associate Justice Sonia Sotomayor](#) by Steve Petteway from the Collection of the Supreme Court of the United States via Wikimedia Commons. This work is in the public domain.

When Sonia Sotomayor was nominated to serve as one of the nine Justices of the US Supreme Court in 2009, the public dialogue during her confirmation hearings focused on a profoundly epistemological question: can—and should—judges be objective?

In a 2001 lecture at the University of California at Berkeley, Sotomayor had highlighted the value of a “wise Latina woman” whose judgments were informed by the “richness of her experiences.” Sotomayor noted: “Personal experiences affect the facts that judges choose to see” (Sotomayor [2001] 2009). This speech resurfaced during her 2009 confirmation hearings. Critics objected that Supreme Court Justices should be “objective” and “neutral.” Defenders argued that everyone interprets facts and observations through the “lens” of their own experiences, and highlighted Sotomayor’s acknowledgment of this as a demonstration of honesty and responsibility.

This was a political debate about an epistemological question: can humans know something objectively? Is there a “view from nowhere”—could you perceive something in the world from a perfectly neutral vantage point? Or, should claims to “objectivity” be viewed with suspicion?

In the previous chapter, “Social Epistemology,” you encountered the concept of **situated knowledge**—knowledge “situated” in relation to the knower’s point of view (Haraway 1992, 313). In Paula Moya’s words, “all knowledge is situated knowledge”; nobody can “ascertain universal truths independent of a historically- and culturally-specific situation” (2011, 80). That does not mean there are no universal truths—only that we humans cannot perceive them with a “view from nowhere,” the kind of perspective often described as “objective.”

Situated knowledge is a foundational concept in feminist epistemologies. There are two related concepts to understand: social location and standpoint. Your social location is defined by how you experience misogyny, White supremacy, imperialism, religious persecution, class struggle, and other dynamics of power and oppression. Your epistemic **standpoint** is the perspective you have as a knower, informed by your social location. Situated knowledge means that a knower has a standpoint. A knower's standpoint influences what they perceive, what they ignore, and how they interpret information. Philosophers often use "dominant" or "dominantly situated" to describe knowers who wield more social power and "marginalized" or "oppressed" to describe knowers who are relatively excluded from power.



[Donna Haraway and her dog Cayenne](#) by Rusten Hogness via Wikimedia Commons. License: [CC BY-SA 3.0](#)

Box 2 – Standpoint

“Standpoint” is a term for an abstract concept, but it’s rooted in a very concrete reality: the view when you stand over here is different from the view when you stand over there.

Imagine you and a friend go to see a concert or sporting event. It’s too crowded to find two seats together, so you agree to each find a seat separately, and then meet up afterward to discuss the experience. When you meet up with them later, you realize that even though you were both at the same event, you understood it differently depending on where you were seated. Maybe you’re talking about one of your favorite moments, but your friend barely noticed it because it was so far away from them. Maybe you and your friend disagree about how to interpret something you both saw: maybe from your angle, the referee made a bad call, but from your friend’s angle, the referee’s call looked perfectly justified. Akira Kurosawa’s film *Rashomon* (1950) explored this multiplicity of truths in a critical way; sometimes, this general phenomenon is described as “the Rashomon effect.”

Of course, in epistemology, standpoint gets more complicated—especially because you have to consider many layers of power dynamics. But the core of it is this simple analogy: you were both in the stadium, spectators at the same event, but the view from your seat was different from the view from your friend’s seat.

Epistemological questions are ethical questions: questions about knowledge are inseparable from questions about justice. Sotomayor’s acknowledgment of her point of view is in alignment with feminist epistemologies. As Patricia J. Williams writes, abandoning the myth of objectivity and acknowledging one’s standpoint promotes “legal and social responsibility,” because “much of what is spoken in so-called objective, unmediated voices is in fact mired in hidden subjectivities and unexamined claims” that dehumanize one another (1991, 11). A “view from nowhere” is impossible; moreover, striving for it produces unreliable knowledge polluted with unacknowledged biases. However, acknowledging where you are coming from is epistemically virtuous: your knowledge is situated in a context, and you can be held accountable for it.

CHANGING STANDPOINTS, CHANGING KNOWLEDGE

Standpoint and lived experience are central in feminist epistemologies, and connecting these two elements has led feminist epistemologies to key in on another vital question: how does your knowledge change when your standpoint changes? As you live through various experiences over the course of your life, your standpoint changes—certainly in small ways, sometimes in big ways. Exploring a few philosophers’ takes on how changes in standpoint relate to changes in knowledge will deepen and sharpen our real-world application of standpoint theories.

A. Gender

One important perspective is offered by Veronica Ivy (formerly known as Rachel McKinnon). Ivy is a professor of philosophy working on feminist epistemologies; she is also a transgender woman. In a recent article, she inquired: what happens, epistemically, when you undertake a gender transition?

Box 3 – Clarifying Concepts of Gender

Maybe you’re new to talking about transgender experiences, so let’s clarify some concepts: Ivy is a woman. Ivy is a transgender woman: she is a woman who was “assigned male at birth”—they said “it’s a boy” when Ivy was born, and she was raised as a boy. (“Cisgender” or “cis” would describe a woman who was “assigned female at birth”: they would have said “it’s a girl,” and she would have been raised as a girl.) Ivy’s experiences include being assigned male at birth, being raised as a boy, and transitioning. This does not make Ivy, a trans woman, any “less” of a woman; women have an immense variety of life experiences, and one experience that some women have is the experience of transitioning.

In this article, Ivy is focusing on a shift in her knowledge that comes about through a shift in the social identity she occupies in the world—not how she understands herself, but how other people interact with her, and how she learns to navigate the social norms others apply to her. This is different from her knowledge of herself as a woman, which—for Ivy and for many trans women—happened long before other people recognized her as a woman and interacted with her using social norms and “scripts” for interacting with women.

After you transition, people treat you according to gender norms that differ from those you were socialized to align with when you were growing up. The social space you occupy is different after transitioning, and Ivy argues that this results in a different epistemic standpoint on familiar situations. You might have access to some new kinds of knowledge; you might also be blocked or hindered in access to other kinds of knowledge you were easily able to access before (2015, 436). Consider the following excerpt from Ivy’s article (Box 4).

Box 4 – Veronica Ivy on “What-It’s-Like” Knowledge & Experience



[Veronica Ivy](#) (formerly known as Rachel McKinnon) by Veronica Ivy via Wikimedia Commons. License: [CC BY 3.0](#)

the social identity and position of a woman being confronted with walking home alone in the dark. (Ivy [formerly McKinnon] 2015, 436)

Turning to a real-world example, many men are at least somewhat aware that women often feel unsafe walking home alone at night, particularly after dark. They may even have some understanding why women experience this fear. But they tend to lack the “what-it’s-like” experience that women tend to have. And lacking that “what-it’s-like” has epistemic effects. For example, many men aren’t aware that many women choose to wear footwear on walks home at night in which they can more easily run if they need to.

Now consider a trans woman who transitions in her 20s. I’ve spoken to many trans women who transitioned in their 20s or 30s who’ve had the experience where pre-transition they had no real concern about walking home on a particular route at night. But post-transition, they were acutely afraid of that same route, and they changed their behaviors accordingly. What was taken to be known—that women experience fear and concern about walking home alone in the dark—took on a new depth of understanding when the same agent occupied

Ivy described her changing perspective on misogyny pre- and post-transition: “Changing my social identity and location to being a woman changed my situatedness and it changed how I struggle against subtle forms of misogyny and sexism. This changed, and began to sharpen, my ability to even perceive such instances as instances of sexism” (2015, 436). There is a clear difference between hearing about an experience “secondhand” and experiencing it yourself. Ivy experiences “what-it’s-like” to be treated as women are treated in social spaces—an experience that she had not had pre-transition—and this leads her to a more acute perception of misogyny, sexism, and violence against women. This speaks to multiple topics in feminist epistemologies including standpoint, lived experience, and a topic we will discuss later in this chapter: power-based ignorance.

B. Disability

While Ivy’s experience might be unfamiliar to some, experiencing a change in ability is nearly universal: as Rosemarie Garland-Thomson wrote, “most of us will move in and out of disability in our lifetimes,” through illness, injury, or simply aging (2016). Feminist disability epistemologies offer another window into changes in standpoint, which further illuminates the concept of standpoint.

Aimi Hamraie described how the built environment reflects a “normate template” of design. How tall is the doorway? How wide is the chair? How bright are the lights? For buildings, clothing, furniture, and many other things, designers envision a specific type of body (and mind) as “normal.” The normate template reinforces a “one-size-fits-all.” In Hamraie’s article, they analyze how it is sustained by the

illusion “that normates are normal, average, and majority bodies” (2013). This illusion resonates with Audre Lorde’s concept of the “mythical norm” (1984, 116).

One size does not fit all. If the doorways, chairs, and light levels “fit” you, you might develop a false belief that they fit everybody. However, when they *aren’t* a good fit for you, you are acutely aware that you are in a space built to fit someone—and that someone is not you. As Hamraie puts it, “misfitting shatters the illusion” of the normate template, and signifies its failure to reflect many humans’ living realities (2013).

Fitting is impermanent: as Garland-Thomson notes, “Any of us can fit here today and misfit there tomorrow” (2011). As their body changes, a person who is accustomed to “fitting” might newly experience “misfitting.” This change over time might, likewise, shatter the illusion of “normal” and expand their personal epistemic resources.

This section focuses on one specific epistemic aspect of disability; regrettably, a full consideration of epistemologies of disability and crip epistemologies is outside the scope of this chapter. Readers eager to learn more are encouraged to consult the *Stanford Encyclopedia of Philosophy* article on “Critical Disability Theory” (Hall 2019) for an overview, as well as recent interviews in Shelley Tremain’s *Dialogues on Disability* series featuring Laura Cupples (2020) and Nathan Moore (2020).

EPISTEMIC ADVANTAGE

While your standpoint changes as your experiences change, at any given moment you have a distinctive standpoint. Following Williams, honestly “owning” your standpoint makes you more reliable as a knower than one who claims a false objectivity. However, are all standpoints equally valuable? Returning to our analogy about a stadium: could you have a “better view” of the action from one standpoint than another?



[Gloria Evangelina Anzaldúa](#) in 1990 at Smith College. Photo by [K. Kendall](#) via Flickr. License: [CC BY 2.0](#)

One key insight of feminist epistemologies is the idea that oppressed or marginalized groups might hold an “epistemic advantage.” Within feminist epistemologies, perspectives on the nature of this idea vary.

One point of view envisions this as a dual knowledge, in a way that is in dialogue with the “*mestiza* consciousness” discussed by Gloria Anzaldúa (1942–2004) and the Black “double consciousness” discussed by W. E. B. Du Bois (1868–1963). When a society is structured to favor a dominant group—placing their knowledge, practices, and norms at the center—people outside that dominant group typically need to acquire fluency in the dominant group’s knowledge, practices, and norms in order to function within that society. The comparatively marginalized person needs to learn the knowledge of the dominantly situated group in addition to their own—but not the other way around.

disparity. The British Empire colonized many places around the world with rich linguistic and literary heritages—many of which are now places where English is an important language of formal education and commerce. Consequently, many of the world’s fluent speakers of English are native speakers of languages such as Bengali, Irish, or Shona. On the other hand, among the world’s fluent speakers of English, many of those who speak English as their first language are monolingual, and remain so. Moreover: when monolingual native speakers of English do learn a second language to advance in the business or educational world, how likely is it to be Bengali, Irish, or Shona?

Language-learning in a (post)colonial context is often used to illustrate this



[William Edward Burghardt Du Bois](#) in 1918. Photo by Cornelius Marion Battey via Wikimedia Commons. This work is in the public domain.

Another core argument is that the epistemic advantage of the feminist standpoint comes from the experience of living as a woman in a misogynist society and the development of a “critical consciousness about the nature of our social location” (Wylie 2003, 31). Paulette Nardal (1896–1985) was a foundational figure in establishing this idea ([1932] 2002). Nardal formulated this as part of commenting on the epistemic acuity of Antillean women students in early twentieth-century Paris. As Nardal wrote, “The women of color living alone in the metropolis,” who were “less favored than their male compatriots,” arrived more rapidly at what Nardal described as “the awakening of race consciousness” ([1932] 2002, 122).² Subsequently, rooted in Marxian theories about other

2. Nardal’s work would become central in the international *Négritude* movement, significant in twentieth-century philosophy. See Sharpley-Whiting (2000) and Jeffers (2016) for more information.

standpoints, Nancy Hartsock (1983) defined the “feminist standpoint” as an epistemic achievement that comes about through struggle and analysis, establishing the vocabulary of “standpoint” to characterize this idea in feminist epistemologies.

Another important idea—also dating back to Nardal—locates the significance of epistemic advantage in the two-part activity of (a) *critiquing* the limits or errors in knowledge provided by dominant, mainstream structures and (b) *constructing* knowledge resources that mitigate those flaws. For example, suppose your child’s public school curriculum narrates the national history in a way that neglects the history of your ancestors within that nation. To fill in the gaps in the school curriculum, you seek out other resources such as books, documentaries, and online activities. Sometimes, there’s not a child-friendly resource, so you make your own. In effect, first, the knower critically recognizes that the “default” content and frameworks for knowledge were constructed to reflect someone else’s experience—not their own.³ Then, perceiving the inadequacies of the existing epistemic resources, a marginalized knower contributes to constructing alternative epistemic resources that are “experience-rich” and more comprehensive than mainstream epistemic resources. Often, this takes place in a community of marginalized knowers.



[Paulette Nardal](#) via Wikimedia Commons.
This work is in the public domain.

Epistemic advantage is a powerful idea that should be applied with care. In a foundational article in feminist epistemologies, Uma Narayan identified some of the perils of how “Western” (often, White) feminist philosophers applied the idea of epistemic advantage too crudely or naively to women in “non-Western” contexts (1989). Notably, Narayan highlighted the fact that simply having access to different sets of knowledge and ways of knowing is no guarantee of deep critical insights—what matters is what you do with that knowledge. Equally importantly, Narayan cautioned readers to recall that a position of epistemic advantage is not necessarily comfortable, safe, or satisfying to dwell in. Narayan advised “Western” feminist philosophers to check the assumption that non-Western feminists would “express unqualified enthusiasm about the benefits of straddling a multiplicity of contexts” (221). Narayan highlighted the discomfort of perpetual outsiderhood, rootlessness, or lacking a space to feel fully relaxed and “at home.”⁴ As Narayan wrote, “The decision to inhabit two contexts critically, although it may lead to an ‘epistemic advantage,’ is likely to exact a certain price” (222). As the bicultural philosopher Sor Juana Inés de la Cruz explored in the seventeenth century, such knowledge can take a toll on one’s well-being: “For all I add to discourse/I usurp as much from my years” (2014, 13–14).

POWER-BASED IGNORANCE

Just as experiencing oppression can shape a person’s knowledge, being in a position of social power

3. This is similar to the idea of recognizing the “misfitting” of disabled bodies in the built environment, as discussed by Hamraie, above.

4. Mariana Ortega would explore the epistemic stakes of “in-betweenness” in greater depth in “Hometactics: Self-Mapping, Belonging, and the Home Question,” in *Living Alterities: Phenomenology, Embodiment, and Race*, ed. Emily S. Lee, SUNY Press, 173–88.

can produce ignorance. José Medina (2013) refers to this as being epistemically “spoiled.” Like coddled children, people in a “dominantly situated” position of social power and privilege can be “spoiled” epistemically because they rarely have to acclimate to unfamiliar epistemologies. When the world is built to suit their experiences and ways of knowing, why would they bother to learn any others?

In practice, a knower is rarely 100% dominantly situated, but most knowers are dominantly situated in at least one context. It can be fruitful, therefore, to discuss different forms of ignorance that track different forms of social power. Epistemologies of ignorance address various forms of what we might call **power-based ignorance**—including White ignorance, male ignorance, straight ignorance, rich ignorance, and abled ignorance. Power-based ignorance reflects an intellectual laziness stemming from the “privilege of not knowing or not needing to know” (Medina 2013, 32). Feminist epistemologies of ignorance have explored how being ignorant of certain topics is normalized in dominant, patriarchal culture. These topics include sexual harassment, menstruation, clitoral orgasm, gaslighting by supposed allies, and forced sterilization (Tuana 2004, 2006; Tuana and Sullivan 2006; Fricker 2007; McWhorter 2009; and Ivy [McKinnon] 2017). Like most topics in epistemology, this can be explored at many levels. Consider, for example, how personal and family life are impacted when it is normalized for men to be ignorant of the basics of menstrual care. Or, consider how many matters of political significance are relegated as “women’s issues.”

Feminist epistemologies of ignorance also critically consider ignorance among feminists. In a foundational article, Mariana Ortega discussed “loving, knowing ignorance” as an attribute of White women responding to women of color (2006). White feminist women demonstrated an “ignorance of the thought and experience of women of color that is accompanied by both alleged love for and alleged knowledge about them” (57). Ignorance is far from innocent: as Ortega indicated, White feminist knowledge production may reject responsibility and adopt an “arrogant perception” that harms women of color.

Building on this idea, Medina explored the stakes of ignorance for epistemology and for ethics. Medina discussed the responsibility of a knower to remedy their ignorance: “The collective ignorance may not be of one’s choosing,” it may be inherited or normalized in one’s upbringing, but that is no excuse. A knower must make an effort to combat their ignorance. Otherwise, “one’s inattention to the ignorance one partakes in becomes complicity and active participation” (2013, 140). Combating one’s power-based ignorance is both a moral and an epistemic responsibility.

CONSTRUCTING IGNORANCE: CHOICES, GATEKEEPERS, AND ACCOUNTABILITY

Medina’s discussion invites a broader consideration of responsibility. While many factors contribute to patterns of ignorance, they do not “just happen.” People make choices. In Heidi Grasswick’s words, “ignorance is not the result of a benign gap in our knowledge, but deliberate choices to pursue certain kinds of knowledge while ignoring others,” and we must be held accountable for these choices (2011, xvii). Formal education reflects many such choices: when a college has a curriculum that is made up of “core courses” required for all students, and “electives” that are optional, somebody in charge made a decision about which courses would be “core” and which would be “elective.” Consider the contemporary proverb by scholar and educator Ozy Aloziem: “White privilege is your history being taught as part of the core curriculum, while mine is being offered as an elective.”

Who makes those “deliberate choices”? Sometimes, they are described as **gatekeepers** of knowledge. In academic life, professors, librarians, and publishers are among these gatekeepers: they determine what counts as a “reliable source,” what is a “significant question” in a field, what is a “core” requirement—in short, they define “mainstream,” dominantly situated knowledge. An individual student might also have choices—for example, they might choose one among several courses that can fulfill a particular degree requirement—but the lion’s share of the responsibility in this case rests in the hands of the people who defined those degree requirements.

Valuable epistemic resources developed by marginalized people are often met with resistance from **dominantly situated knowers**, people who are in positions of relatively high social power—especially in academia. Linda Tuhiwai Smith’s *Decolonizing Methodologies: Research and Indigenous Peoples* (1999) is a foundational work highlighting vital epistemic resources that most academics had ignored.⁵ More recently, consider the scholarly conversation around the politics of citation and structural inclusion/exclusion: Sara Ahmed (2013), Jenn M. Jackson (2018), and Kecia Ali (2019) are three important contributors.



[Professor Linda Tuhiwai Smith](#) after her investiture as a Companion of the New Zealand Order of Merit by the Governor-General, Sir Jerry Mateparae, on May 8, 2013. Photo by the New Zealand Government, Office of the Governor-General, via Wikimedia Commons. License: [CC BY 4.0](#)

As Gaile Pohlhaus discussed, dominantly situated knowers are not *incapable* of understanding frameworks developed by knowers who are relatively marginalized. However, they are not socially penalized for their lack of familiarity with relatively marginalized epistemic resources, and they have little social incentive to build their capacities. Indeed, the dominantly situated knower may find that marginalized knowledge might reveal the unearned advantages that keep them in their positions of power (Pohlhaus 2012, 721). Willful ignorance, on the other hand, may protect their power.

META-IGNORANCE

Ignorance has an inherent feedback loop: one may be ignorant of one’s ignorance. Medina called this **meta-**

ignorance. As Kristie Dotson observed, “Convincing people that they are missing something integral when, in fact, they cannot detect such deficiencies is no easy task” (2014, 14). Encountering concepts like “date rape,” “White privilege,” and “cis-heteronormativity,” a knower ignorant of the experiences from which these concepts are constructed might perceive this as “making something out of nothing.”

Philosophy is just as susceptible to this as any other field—indeed, perhaps more so. For instance, Pohlhaus identified that mainstream epistemology had initially dismissed the idea of the “situated knower” (2012, 722). Dotson and many others have critiqued the normalized meta-ignorance and irresponsible gatekeeping by colleagues in academic philosophy (Dotson 2013, Dabashi 2013, Park 2014). Feminist epistemology is not exempt from this; notably, as discussed by Ortega and others,

5. For a brief overview of the book, check out Stahelin (2000).

White women in feminist epistemology too often ignore the work of colleagues who are women of color. When we hold powerful knowers accountable for ignorance, we must also hold the mirror up to ourselves.

EPISTEMIC INJUSTICE

Miranda Fricker (2007) defined a vocabulary of **epistemic injustice** that has been widely adopted to describe how power interferes with knowledge. The development of these concepts was principally undertaken by many earlier philosophers (including Patricia Hill Collins and Mariana Ortega, discussed above). That said, Fricker's vocabulary has played an important role in defining this conversation in epistemology as a whole. Fricker distinguished two types of epistemic injustice:

- **Testimonial injustice:** related to credibility and validation
- **Hermeneutical injustice:** related to resources for constructing understanding



[Miranda Fricker](#) by Edmond J. Safra Center for Ethics. License: [CC BY 2.0](#)

A. Credibility

Dominantly situated knowers not only have the power to ignore; they also have the power to *discredit*. Indeed, ignoring and discrediting often go hand in hand. As noted above, dominantly situated knowers might claim that marginally situated knowers are “making something out of nothing” and discredit their knowledge as exaggerated, irrelevant, or unreliable.

In epistemology, “testimony” does not only refer to testimony in a court of law: if you know something because you read it in a book, or heard it from another person, or looked it up online, you are relying on testimony. But how do you decide whose testimony you should believe? How do you evaluate whether a source is credible?⁶

As Lorraine Code (1995) observed, judgments about credibility are applied “unevenly” across social locations. A recipient of knowledge might “discount” or “deflate” the credibility they assign to a knower (or source of knowledge) based on unfair social biases on the recipient's part. Credibility discounting might reflect many different angles of bias, including gender, race, education, age,

6. This topic is also discussed in [Chapter 7](#), “Social Epistemology,” by William D. Rowley.

physique, and language. Consider, for example, Tina Sacks’s analysis of how healthcare providers fail to take Black women seriously as “credible witness[es] to [their] own conditions” (2019, 49). Credibility may also be “inflated” according to inequitable distributions of social power, rendering to some people *more* credibility than they have fairly earned. Notably, Audrey Yap (2017) analyzed credibility excess in cases of sexual assault. In both of these forms of testimonial injustice, a person’s knowledge is not evaluated on its own merits, but is discounted or inflated according to social hierarchies.

Credibility inflation/deflation is enacted in many ways. To take one example, emotional expression is often used to discredit people; indeed, the very word “hysterical” was developed to discredit some women as knowers. Moreover, if a recipient of knowledge discredits a knower as “too emotional,” that itself might provoke strong emotion—rage, disappointment, sorrow, etc.—in the knower. The recipient can use that emotion as further ammunition to discredit the knower, in a vicious loop that Veronica Ivy (2017) called the “epistemic injustice circle of hell” (169).

Gaslighting is probably the most widely recognized issue of testimonial injustice. Pausing to consider gaslighting may further illuminate these questions of credibility and testimonial injustice.

“You’re overreacting.”

“It’s all in your head.”

“There you go again.”

“Don’t make a big deal out of nothing.”

These are phrases often associated with gaslighting—undermining someone’s confidence in their own credibility, in particular, undermining their trust in their own perceptions of reality. Gaslighting may take place as part of interpersonal harm in private or structural violence at a societal level. In either case, gaslighting often re-enacts systemic injustices, such as White supremacy, misogyny, and cis-hetero-normativity.

In popular everyday use, “gaslighting” might be used to describe many forms of doubting or discrediting. However, when we are doing philosophy, more precise definitions of terms are needed.

First, gaslighting is different from simply questioning, refuting, or correcting a perception: if I am gaslighting a person (or a group of people) I am attempting to make them doubt their *perceptions* in *general* or their *capacity* for accurate perception. This breadth is important: casting doubt on someone’s credibility and capacity for accurate perception in general is quite different from calling into question a *specific* perception of theirs that may be erroneous, or sharing your own dissenting perception of something specific.

In addition, gaslighting is different from contradicting, dismissing, or discrediting someone. If I am gaslighting you, I am not necessarily conveying “I don’t believe you,” nor am I necessarily advising some third party that *they* shouldn’t believe you. Although gaslighting often is combined with both of those forms of credibility deflation, the defining element in gaslighting is that it undermines your

confidence in yourself as a knower: not “I don’t believe you,” but “*you* shouldn’t believe yourself.” In Kate Abramson’s analysis, “dismissal simply fails to take another seriously as an interlocutor, whereas gaslighting is aimed at getting another not to take herself seriously as an interlocutor” (2014, 2).

Gaslighting, finally, is targeted: it is not about casting doubt on the reliability of human knowledge in general, but about a particular individual, group, or category. If I am gaslighting you, I am attempting to persuade you that *your* perceptions are particularly untrustworthy, more so than people in general. Often, but not always, this might include persuading you that you should trust my perceptions of your experience more than your own.⁷

B. Collective Hermeneutical Resources

Hermeneutics is the process of understanding and being understood; it’s how we turn the “raw data” of information into knowledge that has meaning. Hermeneutical injustice, for Fricker, takes place when a gap in the resources for understanding allows for an abuse of power.

Box 5 – Hermeneutical Gap

Imagine you heard someone say: “She’s a Slytherin” or “That’s a classic Gryffindor response.” That would seem like nonsense—unless you were familiar with the Harry Potter universe. Slytherin and Gryffindor are two of the four “Houses” students belong to at Hogwarts, the school where the Harry Potter novels are set; each House is associated with attributes of personality and character. The Hogwarts Houses are, in a way, a “hermeneutic”—a framework for constructing understanding.

When we consider hermeneutical injustice, we are often exploring the shortcomings of a hermeneutic. Consider the four Hogwarts Houses—or the Myers-Briggs Type Inventory, or the Enneagram, or any other framework categorizing personalities. What about a person who has attributes of two different categories? Or, what about a person who doesn’t seem to fit any of the categories? Where do they fit in? Considering these questions reveals a **hermeneutical gap**—a gap in the resources that a particular framework offers for constructing understanding. Often, an issue of hermeneutical injustice is identified by exploring a hermeneutical gap.

Bosses sexually harassed employees long before the term “sexual harassment” was developed, but according to Fricker, victimized employees lacked the knowledge to name their experiences and accuse their bosses. Fricker defines this as a gap in the “collective hermeneutical resources,” and argues that this was part of the injustice done to employees victimized by sexual harassment.⁸

Let’s pause to consider that idea. Philosophers build knowledge through collegial critique, and colleagues spotted some weaknesses in Fricker’s argument. Can you spot any?

Maybe you’re wondering: a gap *for whom*? *Who* lacks those resources? After all, a hermeneutical gap for one is not necessarily a hermeneutical gap for *all*. Who is to say that there would be just one one-size-fits-all set of collective hermeneutical resources?

7. Two recent contributions to the philosophical literature on gaslighting are Ruíz (2020) and Berenstain (2020). Berenstain’s article takes a specific aspect of Fricker’s work as a case study of White feminist gaslighting.

8. See Berenstain (2020), for a necessary critique of this specific argument in Fricker.

Kristie Dotson was one of the most significant contributors to this conversation. For Dotson, Fricker’s characterization of *the* collective hermeneutical resources “fails to take into account alternative epistemologies . . . that exist in hermeneutically marginalized communities among themselves” (2012, 31). While some knowers might have a gap in *their* knowledge, that isn’t a gap in *knowledge*. Returning to the idea of power-based ignorance, dominantly situated knowers may be unaware of knowledge developed by marginalized people. That is not a lack in *the* collective knowledge or collective hermeneutical resources of humanity—just a lack of knowledge or hermeneutical resources among some people in power.

Box 6 – A Gap for Some Is Not a Gap for All

Just because the mainstream doesn’t know something does not mean it is not known. Consider, for example, how lesbian and queer communities have language defining a panoply of forms of masculinity (e.g., butch, stud, boi, masc-of-center). For some, these vocabularies describe female masculinities.

These conceptual vocabularies have evolved over generations, and continue to evolve today. They reflect precise distinctions and intersect in complex, nuanced ways with trans and nonbinary⁹ identities as well as other identities including class, race, and age. Meanwhile, dominantly situated knowers in “mainstream” culture might lack even the basic idea of female masculinity.

Dotson highlighted the epistemic significance of hermeneutical resources developed by marginalized people. While dominant hermeneutical resources might be inadequate in making sense of certain experiences of injustice, hermeneutical resources “homegrown” in marginalized communities prove more useful. Marginalized people create, value, and use these resources and knowledge, whether or not dominantly situated people recognize them (2012, 2014).

KALEIDOSCOPIIC EPISTEMOLOGIES: TOGETHER, WE KNOW BEST

If power can lead to ignorance, and oppression can lead to epistemic advantage, does that mean that the most oppressed knowers always know best? No: it’s not that simple. The relationship between knowledge and power is a vital epistemological question that philosophers continue to grapple with. However, while there are many perspectives on how power and knowledge relate to one another, none of them advance a simplistic equation where the value of someone’s knowledge would increase as their power decreased.

Feminist epistemologies value collaborative construction of knowledge, integrating multiple perspectives for a comprehensive whole. Collins had defined this paradigm as follows: multiple groups of knowers with distinctive standpoints share their knowledge with each other, with each group using its unique epistemological approaches and avowing its distinctive standpoint. Each group shares its own “partial, situated knowledge.” Openly acknowledging their standpoint does not diminish a knower or their knowledge: indeed, situating your knowledge is a criterion for credibility. Since each “perceives its own truth as partial” they recognize their interdependence with other knowers. “Each group becomes better able to consider other groups’ standpoints without

9. Robin Dembroff (2018) discusses nonbinary identities from their perspective as a philosopher.

relinquishing the uniqueness of its own standpoint or suppressing other groups' partial perspectives" (Collins [1990] 2000, 270). Each holds a piece of a larger puzzle: their piece is valuable, as is their neighbor's, and they know best when they put their pieces together.¹⁰



Silvia Rivera Cusicanqui by LizChezca via Wikimedia Commons. License: [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

More recent work in epistemology has enriched these points. Indeed, Dotson's abovementioned critique of Fricker reflected Dotson's theorizing about a plurality of collective hermeneutical resources, which itself built on Collins. José Medina (2011, 2013) advocated a "kaleidoscopic" approach characterized by "guerrilla pluralism" and a constructive "epistemic friction." Silvia Rivera Cusicanqui described constructing knowledge according to the Aymara concept of "*ch'ixi*," interwoven-ness of multiple threads, the "parallel coexistence of multiple cultural differences" (2012, 105). While there are important differences in the

details of the philosophical frameworks provided by Collins, Dotson, Medina, and Rivera Cusicanqui, a common thread is generating knowledge by placing multiple standpoints and knowledge resources in dialogue together as an integrated whole. Whether it's a kaleidoscope, a tapestry, or any of the many other metaphors used to describe it, a commitment to plurality and dialogue is a cornerstone of feminist epistemologies.

INTERCONNECTIONS

Uma Narayan reflected that feminist epistemology "resembles the efforts of many oppressed groups to reclaim for themselves the value of their own experience" (2004, 214). In fact, feminist epistemologies necessarily are interconnected with critical race epistemologies, postcolonial epistemologies, disability epistemologies, queer epistemologies, and more. As discussed above, we do not live single-issue lives, and we do not have single-issue epistemologies.

10. Feminist epistemologies often describe this as "dialogue" and "collaboration," which may conjure up images of a group of people in a room together, discussing back-and-forth in real time. This is one way, but it is certainly not the only way—and indeed, if this were the only way, many feminist epistemologists would be quick to critique how it limits access and favors some knowers over others. The group discussion would favor extroverts, social learners, people who are good at thinking on their feet, socially adept people, people who prefer speaking/listening communication, people whose bodies adhere to socially acceptable ableist norms, etc. Instead, we think of dialogue and collaboration in a broader way: comments on social media, letters, writing articles that respond to one another (such the critiques among philosophers discussed in this chapter). Creating art in response to another artist's work, reading a book and reflecting on it in relation to your own perspective—even contemplative experiences that are typically described as solitary can be part of collaborative construction of knowledge.

Often, this interconnectedness in feminism (and feminist epistemologies) is described as “intersectionality,” broadening a conceptual framework and vocabulary created by Kimberlé Crenshaw (1988, 1991). Consider, for example, the works of Jasmin Zine (2004) and Farhana Rahman (2018), which illustrate an intersection of at least three elements: religion-specific epistemology, anti-racist epistemology, and feminist epistemology. Rahman illuminates Muslim women scholars’ resilience in response to two forms of epistemic marginalization: (1) often-patriarchal Islamic scholarly epistemologies; and (2) often-Islamophobic, White, secularist academic feminist epistemologies.



[Kimberlé Crenshaw](#) by [Heinrich-Böll-Stiftung](#) via Wikimedia Commons. License: [CC BY-SA 4.0](#)

José Medina’s work on **epistemologies of resistance** (2013) is significant in part because it powerfully integrates several conversations within epistemology with a strong emphasis on the possibilities that epistemic interconnectedness offers for equity and justice in a broader social sense. Along with dismantling historically empowered epistemic systems, epistemologies of resistance construct more responsible ways of knowing rooted in historically marginalized knowledge, toward social and personal transformation. One important voice in this is the queer feminist Indigenous epistemology of the Michi Saagiig Nishnaabeg philosopher Leanne Betasamosake Simpson. Simpson contrasts her Nishnaabeg forms of intelligence, processes of education, and ways of constructing knowledge with dominant “Western” epistemologies characteristic of settler colonialism. For Simpson, lifting up Nishnaabeg epistemology is part of a larger process of resurgence among Indigenous people. Now, as ever, epistemology is not isolated from living, human realities—including “political” realities.

Box 7 – Leanne Betasamosake Simpson: Theory with Living Resonance



[Leanne Betasamosake Simpson](#) by Bull-Doser via Wikimedia Commons. This image is in the public domain.

To me, this is what coming into wisdom within a Michi Saagiig Nishnaabeg epistemology looks like—it takes place in the context of family, community and relations. It lacks overt coercion and authority, values so normalized within mainstream western pedagogy that they are rarely ever critiqued. The land, aki, is both context and process. The process of coming to know is learner-led and profoundly spiritual in nature. . . .

“Theory” is generated and regenerated continually through embodied practice and within each family, community and generation of people. “Theory” isn’t just an intellectual pursuit—it is woven within kinetics, spiritual presence and emotion, it is contextual and relational. It is intimate and personal, with individuals themselves holding the responsibilities for finding and generating meaning within their own lives. Most importantly, “theory” isn’t just for academics; it’s for everyone . . . Theory within this context is generated from the ground up and its power stems from its living resonance within individuals and collectives. (2014, 7)

One might wonder: with all this interconnectedness, is this still a chapter about feminist epistemologies? Yes. As Mariana Ortega memorably put it, despite talk of growth and inclusion and justice, “the writing that comes from the white female hand” is still treated as more important within feminist philosophy, even while feminism “push[es] philosophy and others to see further, to understand more” (Ortega 2014, 186). This chapter attempts to avoid disproportionately featuring the work of White, cis, straight, nondisabled women philosophers in its discussion of feminist epistemologies.

The field of epistemology includes many epistemologies that may be grouped as “alternative” or “marginal.”¹¹ Feminist epistemologies are among these, as well as critical race epistemologies, queer epistemologies, trans epistemologies, crip (disability) epistemologies, Indigenous epistemologies, religion-specific epistemologies—the list goes on. Feminist epistemologies have often been the so-called “alternative” epistemologies that scholars of “mainstream” epistemology most readily include in discussions of epistemology as a whole, and this textbook is no exception; exploring the reasons behind that is beyond the capacity of this chapter. It is, however, important to acknowledge that this chapter’s relatively interconnected discussion of feminist epistemology is no substitute for engaging fully with any of the abovementioned epistemologies. Each of the abovementioned epistemologies could fill a dedicated chapter of its own in an epistemology textbook. Readers are encouraged to explore these further through the resources listed in the bibliography and “Further Reading” section.

11. Many, including the present author, prefer to avoid this grouping, believing that it reinforces an erroneous version of the history of philosophy: the myth that a handful of philosophers, mostly men from Europe, represent the center or mainstream of philosophy, to which everything else is “marginal” or “alternative.”

Questions for Reflection

1. Try applying Paula Moya's idea that "all knowledge is situated knowledge." Think of a time when someone said that they knew something was "objectively" true. What was their standpoint? How was their knowledge *situated knowledge*?
2. Watch the film *Rashomon* (1950) or another film that uses a similarly multifaceted way of storytelling. How can you apply concepts of standpoint and situated knowledge to the film?
3. You are probably reading this chapter as part of a college course. Revisit the section "Constructing Ignorance." Consider the idea of knowers making "deliberate choices" about which knowledge to prioritize, and the dynamics of "gatekeeping." Who are the gatekeepers at your school? What are some of the "deliberate choices" they seem to have made about which knowledge to prioritize? What values do these choices reveal? In particular, how do you see these dynamics in action in the academic field of philosophy?
4. Revisit the section "Credibility." Think of an example from pop culture or current events where someone's credibility was unfairly *deflated* or *inflated*. What strategies did people use to inflate or deflate that person's credibility? How do those strategies relate to broader patterns of social power?
5. Can you think of an example where the mainstream might say there is a "hermeneutical gap," but where you know of important collective hermeneutical resources that are not taken seriously in the mainstream? How could you apply the concepts of power-based ignorance and hermeneutical resources to this example?
6. As José Medina argued, a person has an ethical responsibility to remedy their own ignorance, especially ignorance that contributes to inequity and injustice. How could you apply this idea in practice? Brainstorm: What are some strategies you could use to assess your own areas of ignorance, especially, your areas of power-based ignorance? What are some strategies you could use to remedy your ignorance?

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We would also like to acknowledge **the many philosophy students, faculty, and researchers** who have contributed to the project by providing comments along the way, such as discussions on the Rebus Community platform when we were originally envisioning the series and what topics should be included, as well as giving feedback on drafts of chapter outlines for books. There have been many very helpful contributions from too many people to list here, and the books would not have come together without them.

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REVIEW STATEMENT

Introduction to Philosophy: Epistemology, part of the *Introduction to Philosophy* series, was produced with support from the [Rebus Community](#), a non-profit organization building a new, collaborative model for publishing open textbooks. Critical to the success of this approach is including mechanisms to ensure that open textbooks produced with the Community are high quality, and meet the needs of all students who will one day use them. Rebus books undergo both peer review from faculty subject matter experts and beta testing in classrooms, where student and instructor feedback is collected.

This book has been peer reviewed by two subject experts. The full-text received an open review from the reviewers, based on their area of expertise.

The review was structured around considerations of the intended audience of the book, and examined the comprehensiveness, accuracy, and relevance of content, as well as longevity and cultural relevance. Further review by the series editor and the copyeditor focused on clarity, consistency, organization structure flow, and grammatical errors. See the [review guide](#) for more details. Changes suggested by the reviewers were incorporated by chapter authors and the book editor.

Brian C. Barnett (book editor), Christina Hendricks (series editor) and authors Guy Axtell, Todd R. Long, Jonathan Lopez, Daniel Massey, Monica C. Poole, William D. Rowley, and K. S. Sangeetha, and the team at Rebus would like to thank the reviewers for the time, care, and commitment they contributed to the project. We recognise that peer reviewing is a generous act of service on their part. This book would not be the robust, valuable resource that it is were it not for their feedback and input.

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ACCESSIBILITY ASSESSMENT

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While we work on developing guidelines and implementing support for authoring accessible content, we are making a good faith effort to ensure that books produced with our support meet accessibility standards wherever possible, and to highlight areas where we know there is work to do. It is our hope that by being transparent on our current books, we can begin the process of making sure accessibility is top of mind for all authors, adopters, students and contributors of all kinds on all our open textbook projects.

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Wherever possible, we have identified ways in which anyone may contribute their expertise to improve the accessibility of this text.

We also welcome any feedback from students, instructors or others who encounter the book and identify an issue that needs resolving. This book is an ongoing project and will be updated as needed. If you would like to submit a correction or suggestion, please do so using the [Introduction to Philosophy series accessibility suggestions form](#).

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This page provides a record of edits and changes made to this book since its initial publication. Whenever edits or updates are made in the text, we provide a record and description of those changes here. If the change is minor, the version number increases by 0.1. If the edits involve substantial updates, the edition number increases to the next whole number.

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We will contact the author, make the necessary changes, and replace all file types as soon as possible. Once we receive the updated files, this Version History page will be updated to reflect the edits made.

VERSION HISTORY

Version History

Version	Date	Change	Affected Sections
1.0	August 16, 2021	Original	
1.1	December 3, 2021	Added new frontmatter section discussing the cover art, added some questions to list of questions at the end of selected chapters. A few other minor fixes.	New: "About the Cover Art." Discussion questions added to Chapters 1, 2, and 7. Questions in chapter 8 re-ordered.

GLOSSARY

a posteriori knowledge

Knowledge that is dependent on, or gained through, sense experience. *A posteriori* truths are truths known after experience.

a priori knowledge

Knowledge gained without sense experience. *A priori* truths are truths known prior to experience.

abduction

A type of reasoning that attempts to form the best explanation of available data.

ability (procedural) knowledge

Knowledge-*how*.

acquaintance knowledge

Knowing a person, place, or thing.

agnotology

The study of ignorance, especially when ignorance is caused or influenced by groups who have an interest in that ignorance.

Agrippan trilemma

An argument put forward by the first-century Pyrrhonist philosopher Agrippa for global skepticism about justification (and hence knowledge). This argument begins with the observation that, for a belief B to be justified, the chain of reasons ultimately leading to B must have one of three possible structures: the chain is either (a) finite and linear, (b) circular, or (c) infinite. The next step is to argue that each possible structure is problematic, then draw the conclusion that there is no possible way for a belief to be justified.

analytic truth

A truth that holds in virtue of the meanings of the words in a sentence (and the sentence's logical form). In an analytic sentence, the predicate term is contained in, or is the meaning of, the subject term. Therefore, analytic truths are true by definition.

apperception

The attachment of meaning to a perceptual input based on our past and present experiences and concepts.

applied turn

The “turn,” or major shift, among many epistemologists toward an emphasis on real-world applications (e.g., in politics, education, and everyday life).

axiology

The study of value.

base-rate fallacy

Ignoring a prior probability (or base rate) when determining a posterior probability.

basic belief

A belief that is not formed on the basis of any other belief(s).

Bayes’s theorem

A formula in probability theory attributed to Reverend Thomas Bayes. The formula is used by Bayesians to describe how to update the probability of a hypothesis H given new evidence E:

$$P(H|E) = \frac{P(E|H) \cdot P(H)}{P(E)}, \text{ where } P(E) \neq 0.$$

Bayesianism (or Bayesian epistemology)

The study of knowledge and justified belief within a degreed framework using formal methods, especially probability theory with emphasis on Bayes’s theorem.

belief

In the context of this book (unless otherwise specified), “belief” refers to “belief-*that*,” which is the acceptance of a proposition’s truth. In other contexts, “belief” can refer to “belief-*in*,” which need not have a proposition as its object (e.g., “I believe in you.”). In contrast to belief-*that*, belief-*in* is not purely cognitive but has an affective component (e.g., hope or trust).

belief-that

The acceptance of a proposition’s truth.

Cartesian foundationalism

The view combining what strong foundationalists believe with the claim that non-foundational beliefs are justified only via deduction from justified foundational beliefs.

Clifford’s principle

“It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.”
The principle as defended by W. K. Clifford is considered an impermissivist statement of an evidentialist ethics of belief.

collective epistemology

The study of the epistemic properties of groups and their beliefs.

complex idea

An idea formed by combining multiple simple ideas or impressions. For example, the complex idea “diamond street” is formed by putting simpler ideas into relation: a street made of diamonds.

concept

A general idea of something which allows us to recognize it as belonging to a category, distinguish it from other things, and think about it. For example, to have the concept “table” is to be able to think about tables, distinguish them from other types of furniture, and recognize tables upon encountering them.

conceptual analysis

The breaking down of a concept into more basic conceptual components, arranged to form a definition.

conciliate

In a disagreement about a proposition p , a person S1 conciliates when S1 changes their attitude toward p in the direction of S2’s attitude toward p .

conciliationism

The view that whenever one discovers that an epistemic peer disagrees about some proposition p , one is justified in conciliating. So, for example, if S1 confidently believes p and discovers that their peer S2 believes p is false with the same degree of confidence, then S1 will be justified in decreasing their confidence about p .

conditional probability

Typically written in the form $P(A|B)$, it is the probability that A obtains given that B obtains.

conditionalization (or conditioning)

The process of moving from an absolute probability, such as $P(A)$, to a conditional probability, such as $P(A|B)$. By doing so, one “conditionalizes on B.”

contextualism

A family of views about knowledge and the word “know.” According to contextualism, the standards required for you to count as knowing something vary from context to context. Contextualists often argue that skepticism is correct *in some contexts* but incorrect *in other contexts*. That is, in some contexts, the high standards required of knowledge by skeptics are appropriate, and so in those contexts we fail to know. But in other contexts, the standards required for knowledge are laxer, and there we can know many things.

contingent

When applied to claims, statements, or propositions, the term “contingent” refers to that which is possibly true and possibly false, not necessary. For example, it is a contingent truth that crows are black, since they are black but could have been white. The claim that crows are white is a contingent falsehood, since it happens to be false but could have been true.

correspondence theory

The view that a proposition is true when it corresponds to reality and false otherwise.

counterexamples

Examples that refutes a claim or argument.

credences

Degrees of belief.

deduction

A form of reasoning in which the truth of the premises logically *guarantees* the truth of the conclusion.

defeater

That which cancels justification (a justification defeater) or knowledge (a knowledge defeater).

degree of belief

A degree of confidence (or credence) that a person places in the truth of a proposition.

disbelief

The belief that the corresponding proposition is false.

dominantly situated knowers

People in positions of relatively high social power and privilege in relation to knowledge. Dominantly situated knowers are vulnerable to ignorance because their positions of power may make them epistemically “spoiled,” limit their knowledge, and offer limited incentive to expand their epistemic resources beyond what is designated as “mainstream.” See also *gatekeepers, power-based ignorance*.

doxastic attitudes

Stances on the truth value of a proposition (belief, disbelief, or suspension of judgment).

doxastic responsibility

The kind of responsibility someone has for what they believe.

Dutch book

A set of bets that, when accepted, yields a guaranteed loss.

Dutch book argument

An argument showing that rational credences must adhere to the laws of probability (based on the premise that rationality requires avoiding Dutch books).

empirical

Based on observation or experience.

empiricism

The philosophical position according to which all our beliefs and knowledge are based on experience. Empiricism is opposed to rationalism.

epistêmê

The Greek word for “knowledge” or “understanding” from which the term “epistemology” derives.

epistemic

Pertaining to knowledge.

epistemic democracy

The view that the aim of democracy is (in part) to favor a true outcome (with voting answering a question such as, “which candidate is best to lead?”).

epistemic injustice

Wrongdoing related to knowledge. This includes individual interpersonal interactions that demonstrate injustice, as well as larger structures of inequity in knowledge distribution or knowledge production sustained in institutions such as the legal system, medicine, and education.

epistemic justification

The kind of justification necessary for knowledge, requiring good epistemic reasons.

epistemic luck

Any kind of luck that positively or negatively affects one’s epistemic status.

epistemic paternalism (EP)

Any practice that interferes with the inquiry of some or all persons, without their consent/consultation, for their own purported epistemic health or improvement.

epistemic peer

Epistemic peers with respect to a proposition p are equally likely to believe the truth about p (i.e., each is just as unbiased, intelligent, sober, well-informed, etc.).

epistemic reasons

Truth-indicative reasons—the kind necessary for epistemic justification.

epistemic value pluralism

An axiological thesis that denies the T-monist claim that the natural aim of belief is truth. To the pluralist, finding no straightforward hierarchy among epistemic goods suggests an *un-unified* order of values or even an array of epistemic goods.

epistemological axiology

The study of the aims of cognition, and the value of epistemic states (knowledge, understanding, belief, suspension, etc.) and standings (justified, unjustified, etc.).

epistemologies of resistance

Ways of knowing that resist the exclusive dominance of “mainstream” epistemologies and the unjust social power dynamics that those epistemologies tend to reflect and reinforce. Instead, epistemologies of resistance are structured to meet epistemic needs of marginalized people. They include but are not limited to feminist epistemologies.

epistemology

The branch of philosophy traditionally defined as the study of knowledge. However, many epistemologists gradually deemphasized or abandoned the study of knowledge per se, focusing

instead on other topics that nevertheless pertain to knowledge, even if only in some loose or indirect way. Expanding the traditional definition to accommodate this shift, epistemology can be understood as the study of the epistemic.

ethics of belief

The philosophical project of providing guidance for morally and intellectually responsible *doxa* (belief, opinion), including how one should respond to recognized peer disagreement.

evidence

The information available to a person (an “indication of truth to a person”).

evidence of evidence principle (EEP)

Roughly, the principle that, whenever some person S1 has some evidence that S2 has some evidence in support of *p*, then S1 has some evidence in support of *p*.

evidentialists

Epistemologists who think that justification is entirely a matter of a person’s evidence.

evil demon hypothesis

René Descartes’s methodological supposal that a powerful evil demon is deceiving one as much as it is possible for one to be deceived.

explanationists

Epistemologists who think justification is a matter of which propositions provide the best explanations for a person.

explanatory virtue

A feature of a hypothesis that improves its quality as an explanation of the available data (other things being equal). An example of such a feature is simplicity, according to Ockham’s razor. By contrast, an explanatory vice is a feature of a hypothesis that reduces its quality as an explanation (other things being equal). If simplicity is an explanatory virtue, then unnecessary complexity in a hypothesis is the corresponding explanatory vice.

external objects

Objects in the external world, the world external to our minds.

external world

The world external to our minds, containing external objects.

external-world skepticism

A variety of skepticism that denies we can have knowledge of objects that exist independently of our experiences of them. An external-world skeptic may gladly admit that you know, for example, that you are having an experience of a dog, but will deny that you can know on that basis that the dog actually exists. A stock-in-trade argument for this type of skepticism uses carefully crafted skeptical hypotheses as a means of undercutting what you take yourself to know on the basis of experience.

externalism

The view that justification is contingent on features of a person's mind plus features external to a person's mind.

factive

That which entails the truth of its propositional object.

fallibilism (about justification)

The view that justification does not entail truth.

fallibilism (about knowledge)

The view that knowledge-level justification (the level required for knowledge, which is perhaps more stringent than ordinary justification) does not entail truth.

feminist epistemologies

An umbrella of epistemologies that value plurality, encompassing a wide variety of ideas about knowledge including several recurrent themes: situated knowledge, standpoint, lived experience, the collaborative construction of knowledge, the bearing of power on knowledge, and the responsibilities that come with knowledge. Topics in feminist epistemologies commonly intersect with other significant conversations in epistemology, such as queer epistemologies, trans epistemologies, crip (disability) epistemologies, Indigenous epistemologies, religion-specific epistemologies, critical race epistemologies, and postcolonial epistemologies.

finite additivity

The law of probability stating that if two probabilities, $P(A)$ and $P(B)$, are mutually exclusive, the probability that either A or B obtains is the sum of their individual probabilities: $P(A \text{ or } B) = P(A) + P(B)$. In other words, $P(A \text{ or } B)$ is "additive."

formal epistemology

The branch of epistemology that utilizes formal methods, such as logic, set theory, and probability.

formal turn

The "turn," or major shift, among many epistemologists toward the use of "formal" methods (borrowed from linguistics, logic, and mathematics) in an effort to make the field more rigorous.

foundational belief

A belief that is not formed on the basis of any other belief(s).

foundationalists

Epistemologists who think justification has a structure consisting of justified foundational (a.k.a. basic) beliefs that serve as the epistemic foundation for any justified non-basic beliefs.

gaslighting

Systematically undermining someone's confidence in their own credibility by denying or minimizing their memories, feelings, or perceptions.

gatekeepers

People who have power to define what “counts” as valid knowledge. This might include defining the “core curriculum,” determining what is a “reliable” source, or affirming which texts are “classics” in a field. In academic life, this might include professors, librarians, and publishers. See also *dominantly situated knowers, power-based ignorance*.

generality problem

The problem for process reliabilism of specifying the relevant process type for any given belief so that its justificatory status can be assessed.

Gettier cases

Cases of the sort made famous by epistemologist Edmund Gettier. Such a case occurs when an element of bad epistemic luck is canceled by good epistemic luck, so that it is a justified true belief but not knowledge.

Gettier problem

The problem of how to handle Gettier cases in the analysis of knowledge.

global skepticism

The denial that we have any knowledge, including the denial that we can know that skepticism is true.

heavyweight knowledge

The kind of knowledge that requires more than mere correct opinion.

hermeneutical gap

A gap in the resources for understanding, defining, or organizing knowledge provided by a particular hermeneutic.

hermeneutical injustice

A type of epistemic injustice related to how knowledge is *constructed*. These injustices may relate to structures or frameworks for understanding that leave out or “sideline” some experiences while centering others. These might also relate to access (or limits on access) to resources for knowledge and information. A central question to ask related to hermeneutical injustice is: Whose realities do the available resources for understanding (hermeneutical resources) reflect—and whose realities do they sideline or ignore? See also *epistemic injustice, hermeneutics*.

hermeneutics

The process of understanding and being understood; it’s how you turn the “raw data” of information into knowledge that has meaning.

idea

A mental representation, including individual concepts (such as the concepts “fire” and “hot”) and the thoughts constructed therefrom (such as “the fire is hot”).

impermissivism (in the ethics of belief)

Impermissivism is closely associated with the broad application of the rational uniqueness principle (RU) and permissivism with the rejection of this principle. (RU) holds that for a given set of evidence E and a proposition p , only one doxastic attitude about p is rational. Rational agents who share that evidence will hold this single attitude, and none other. The issues which divide impermissivists and permissivists are further complicated if belief is understood in terms of degreed credences. The debate is also complicated by questions concerning the legitimacy of “faith-based” belief as indicating something quite different from everyday belief, or belief based upon inference from sufficient evidence. Clifford’s principle is associated with impermissivism and with an evidentialist ethics of belief, while James defends a (risk-limited) permissivism.

induction

A form of reasoning in which the truth of the premises *makes probable* the truth of the conclusion.

infant/child objection (ICO)

An objection to (testimonial) reductionism. If reductionism is true, then young children are too cognitively unsophisticated to have testimonially justified beliefs. But it is obvious that young children have testimonially justified beliefs. Thus, reductionism is false.

inference to the best explanation

Given that all else is equal, one should choose the hypothesis that best explains the evidence. One form of this can be justified by a comparative use of Bayes’s theorem. It is closely related to Ockham’s razor.

infinetism

The view that every justified belief is justified by an infinite number of appropriately structured, available reasons.

innatism

The philosophical position, held by many rationalists, according to which we have certain ideas in our minds from birth, ideas which can be realized through reason.

intellectual virtues

A good intellectual trait, such as open-mindedness, intellectual humility, intellectual honesty, curiosity, or understanding.

internalism

The view that contributing factors to justification are entirely internal to a person’s mind.

intuition

The capacity to look inward to directly comprehend intellectual objects and recognize certain truths.

intuition pump

A device that helps bring out or strengthen an intuition.

JTB analysis

The view that knowledge is justified true belief—a modern interpretation of Plato’s view.

JTB+ account

The view that knowledge is justified true belief plus some fourth condition to rule out Gettier cases (and perhaps lottery cases).

justification

A good reason for belief.

justification defeater

Something that prevents the satisfaction of what would otherwise (were there no defeater) satisfy an epistemic theory’s justification condition.

knowledge-first epistemology

The view that knowledge is conceptually basic (and hence the starting point for epistemological theorizing), usually in conjunction with the claim that knowledge is of primary epistemic value (rather than, say, justification or warrant).

lightweight knowledge

True belief.

likelihood

Typically written as $P(E|H)$ in Bayes’s theorem, it measures the degree to which hypothesis H predicts or explains the evidence E . It is sometimes referred to as the “explanatory power” of H with respect to E .

Lockean thesis

The thesis, named after John Locke, which relates the all-or-nothing rationality of traditional epistemology to the graded framework as follows: a belief is rational when the rational degree of belief is sufficiently high (i.e., above some specific threshold level).

loose talk

Speech that is not strictly true (e.g., figurative, hyperbolic, approximate, or elliptical speech).

lottery cases

Cases in which a justified belief is true on probabilistic grounds (often thought to be a counterexample to the JTB analysis).

lottery problem

The problem of how to handle lottery cases in the theory of knowledge.

matters of fact

One of the two divisions of human understanding made by David Hume. Our knowledge of matters of fact comes from observation or generalization from experiences. In other words, it is *a posteriori*. Because such truths are contingent, they are merely probable rather than certain.

meta-ignorance

Ignorance of one's own ignorance.

modest foundationalists

Foundationalists who think that justified basic beliefs include any beliefs that are (a) believed immediately upon having a non-doxastic experience and (b) are proper epistemic responses to experience.

Moorean response

A family of responses to epistemological skepticism in the tradition of G. E. Moore, based on his influential commonsense approach to philosophical problems.

necessary

When applied to claims, statements, or propositions, the term “necessary” refers to that which *must* be true. In other words, it is *impossible* for a necessary truth to be false. For example, it is a necessary truth that a triangle has three sides, which means that it is impossible for a triangle to have any other number of sides. The opposite of necessity is contingency.

no-defeaters clause

A condition in a theory of justification stating that, for a belief to be justified, there must be no defeater.

non-basic belief

A belief that is formed on the basis of at least one foundational (basic) belief.

non-foundational belief

A belief that is formed on the basis of at least one foundational (basic) belief.

non-reductionism (testimonial)

The view that sometimes someone S is justified in believing some testimony *p*, but S lacks testimony-independent evidence that the testimony is reliable.

normative

A normative task does not aim at description or causal explanation, but rather at assessment or guidance of some kind, according to values (norms) deemed pertinent to some practice (the value of art or particular artworks, for example), or the domain of discourse (ethics, politics, economics, epistemics, aesthetics, etc.).

not enough evidence objection (NEEO)

An objection to (testimonial) reductionism. If reductionism is true, then, in order to avoid testimonial skepticism, we must have enough testimony-independent evidence to justify many of our testimonial beliefs. But we don't have enough evidence and we know testimonial skepticism is false. Thus, reductionism is false.

objective Bayesianism

A version of Bayesianism that requires credences to be represented and governed by objective probabilities.

objective probability

The kind of probability grounded in features of the real, mind-independent world.

Ockham's razor

The methodological principle which maintains that given two competing hypotheses, the simpler hypothesis is the more probable (all else being equal). As the "razor" suggests, we should "shave off" any unnecessary elements in an explanation ("Entities should not be multiplied beyond necessity"). The principle is named after the medieval Christian philosopher/theologian William of Ockham (ca. 1285–1347). Other names for the principle include "the principle of simplicity," "the principle of parsimony," and "the principle of lightness" (as it is known in Indian philosophy).

ought implies can

A common dictum in philosophy asserting that control ("can") is a precondition of responsibility ("ought"). This is well accepted with respect to moral responsibility: one is morally responsible for only what is within one's control. The dictum is somewhat more controversial in the case of doxastic responsibility—one point of contention in debates over the ethics of belief.

percept

That which is immediately or directly presented to one's awareness in perceptual experience (prior to attaching meaning or applying a concept in apperception).

permissivism (in the ethics of belief)

Impermissivism is closely associated with the broad application of the rational uniqueness principle (RU) and permissivism with the rejection of this principle. (RU) holds that for a given set of evidence E and a proposition p , only one doxastic attitude about p is rational. Rational agents who share that evidence will hold this single attitude, and none other. The issues which divide impermissivists and permissivists are further complicated if belief is understood in terms of degreed credences. The debate is also complicated by questions concerning the legitimacy of "faith-based" belief as indicating something quite different from everyday belief, or belief based upon inference from sufficient evidence. Clifford's principle is associated with impermissivism and with an evidentialist ethics of belief, while James defends a (risk-limited) permissivism.

phenomenal knowledge

Knowledge of what it's like to have a given experience.

posterior probability

Typically written as $P(H|E)$ in Bayes's theorem, it is the result of conditionalizing a hypothesis H on an incoming piece of evidence E , read as "the probability of the hypothesis given the evidence."

power-based ignorance

An umbrella term for forms of ignorance connected to social power. These may include (but are

not limited to) White ignorance, male ignorance, straight ignorance, cisgender ignorance, rich ignorance, and abled ignorance.

pragmatic justification

The kind of justification provided by good pragmatic reasons.

pragmatic reasons

Practical benefits of belief or action.

prima facie justification

Whatever is good enough, absent a defeater, to yield *ultima facie* justification (justification all things epistemically considered).

prior probability (or base rate)

Typically written as $P(H)$ in Bayes's theorem, it is the probability of a hypothesis H before conditionalization on evidence. Bayesians take prior probabilities, or priors, to represent one's initial degree of belief in H .

probabilism

The view that credences should conform to the laws of probability.

problem of logical omniscience

An objection to probabilism, according to which adherence to the laws of probability would require logical omniscience (knowledge of, or at least justified belief in, all logically necessary truths).

problem of the priors

The objection that subjective Bayesianism places no rational constraint on priors (prior probabilities).

procedural knowledge

Knowledge-*how*.

process reliabilism

The view that justified beliefs are beliefs produced by a reliable process type.

proper functionalism

The view that justification is a matter of having one's beliefs produced by a properly functioning, reliable, truth-aimed cognitive system.

proper-basing condition

The requirement that a belief be formed or held in the right way for the right reasons.

proposition

A statement or claim—something which has a truth value (i.e., is either true or false).

propositional knowledge

Knowledge-*that* (where the *that*-clause expresses a proposition).

prudential justification

The kind of justification provided by good pragmatic reasons.

prudential reasons

Practical benefits of belief or action.

pure coherentism

The view that justification has a weblike structure such that any justified belief is justified by coherence relations it bears to the person's entire set of beliefs.

rational

Pertaining to reasons.

rational permissivism (RP)

The principle that a body of evidence can support a range of attitudes toward a given proposition. RP denies rational uniqueness (RU).

rational uniqueness (RU)

The principle that a body of evidence supports at most one attitude toward any proposition. RU denies rational permissivism (RP).

rationalism

The philosophical position that regards reason, as opposed to sense experience, as the primary source of knowledge. Rationalism is opposed to empiricism.

rebutting defeater

A good reason to think that a proposition is false, thereby providing a defeater for one's *prima facie* justification for believing the proposition.

reductionism (testimonial)

The view that some person S1 is justified in believing some S2's testimony that *p*, if and only if, (a) S1 receives S2's testimony that *p*, (b) S1 has inductive evidence based on observation that S2's testimony that *p* is reliable, and (c) *p* is not defeated by other evidence S1 has.

reference class

The set of all possible outcomes relevant to determining a given objective probability. One calculates the probability of an event or proposition X by dividing the number of possible ways in which X can obtain by the size of the reference class.

reference class problem

The problem of determining a reference class in cases where there is no clear choice.

regress problem

An argument put forward by the first-century Pyrrhonist philosopher Agrippa for global

skepticism about justification (and hence knowledge). This argument begins with the observation that, for a belief B to be justified, the chain of reasons ultimately leading to B must have one of three possible structures: the chain is either (a) finite and linear, (b) circular, or (c) infinite. The next step is to argue that each possible structure is problematic, then draw the conclusion that there is no possible way for a belief to be justified.

relations of ideas

One of the two divisions of human understanding made by David Hume. Relations of ideas concern matters like logic and mathematics. Relations of ideas do not depend on how the world actually is. They are known *a priori*. Truths generated by relations of ideas are certain (not merely probable), true by definition, and therefore impossible to contradict.

rule of belief

A rule that, according to David Lewis, governs conversations. This rule requires that participants in a conversation not ignore possibilities believed true by one of the participants. When deciding whether to count someone as knowing something, the rule of belief forbids you from ignoring possibilities believed by conversational partners that would undermine that person's counting as knowing. The rule of belief typically expands the alternatives that must be ruled out in a conversation if we are to ascribe knowledge to someone in that context.

rule of conditionalization

The rule that one's prior probability must be updated in light of new evidence by conditionalizing on that evidence (via Bayes's theorem, according to Bayesians).

sample space

In probability theory, it is the total set of possible simple outcomes for an event. A reference class consists in subsets of the sample space.

simple ideas

Ideas that contain a single element, such as a patch of brown or the idea of red. Simple ideas are basic and indivisible as opposed to complex ideas.

situated knowledge

All knowledge is "situated" in relation to a knower's point of view (see also *standpoint*). In effect, there is no "view from nowhere"—all knowledge is "situated knowledge."

skeptical hypothesis

An imaginary scenario such that no set of experiences can distinguish between this scenario happening and life as we ordinarily take it to be happening. If all my life has been a perfectly coherent dream, then nothing in my experiences will show me that it has been a dream. External-world skeptics often argue that since we cannot eliminate skeptical hypotheses, we cannot know that any objects exist beyond our experiences of them.

skepticism (with respect to knowledge)

In the context of this book, skepticism is an epistemological thesis, specifically the denial that anyone has knowledge about some type of claim or other. Skeptics in philosophy may focus on

some narrow range of claims, denying that we have knowledge about, for example, the external world, morality, free will, the future, or God's existence, and yet allow that we know many other things. They may also deny that we have any knowledge (global skepticism). (Another prominent form of epistemological skepticism is skepticism about epistemic justification, which is sometimes the basis for skepticism about knowledge, given the standard view that knowledge requires justification.)

social epistemology (SE)

The study of how social relationships and interactions affect the epistemic properties of individuals and groups.

social turn

The "turn," or major shift, among many epistemologists toward an emphasis on the social dimensions of knowledge (and of the epistemic more broadly).

standpoint

A knower's point of view, including their social identities (gender, race, class, age, etc.) and life experiences. Recognizing standpoint is key to understanding how knowledge is situated.

steadfast view

The view that sometimes, when one finds out that a peer disagrees, one is justified in retaining one's original doxastic attitude.

strong foundationalists

Foundationalists who think that justified basic beliefs include only those basic beliefs in propositions about which we are infallible.

subjective Bayesianism

A version of Bayesianism that allows credences to be represented and governed by subjective probabilities.

subjective probability

Probabilities that are grounded in a person's degrees of confidence in propositions.

suspension of judgment

Remaining neutral about whether or not a proposition is true, neither believing nor disbelieving the proposition.

sWTB account

The view that knowledge is sufficiently warranted true belief.

synthetic truth

A truth expressed by a sentence in which the predicate term is neither contained in, nor is the meaning of, the subject term; the predicate adds some new information about the subject. That is, synthetic truths are not true by definition; therefore, they can be denied without contradiction.

T-monism

The axiological thesis that the natural goal or aim of belief is truth, and that epistemic value is rooted in holding true beliefs and avoiding false beliefs. The value of truth is not grounded in knowledge or anything else.

tabula rasa

A Latin term meaning “blank tablet” or “blank slate.” Empiricists like John Locke argue that the human mind is like a *tabula rasa* at the time of birth, and that the mind acquires knowledge through sense experience and from its ability to reflect upon its own internal operations.

TB+ account

The view that knowledge is true belief plus some third condition, often called “warrant” (or more accurately, “sufficient warrant,” to allow that some minimum degree of warrant may be needed for knowledge). So, the view that knowledge is sufficiently warranted true belief, or sWTB, is an example of a TB+ account (where sW fills in the +). The traditional JTB analysis is another example (where J fills in the +). A JTB+ account is a third (where J partially fills in the original +, with some still-unspecified remainder represented by a new +). (Note the possibility that an sWTB account is also a JTB+ account—but only if $sW = J+$. Those who prefer to theorize in terms of “warrant” often reject that equation, and sometimes reject the justification requirement on knowledge altogether.)

testimonial injustice

A type of epistemic injustice specifically related to how knowledge is *received*. Who is believed as a reliable source of knowledge? Whose statements are taken seriously? Issues of credibility and legitimacy are central in testimonial injustice.

testimony (the philosopher’s sense)

Any utterance (e.g., speaking, writing, signing, etc.) by which the actor intends to communicate that proposition *p* is true.

traditional analysis of knowledge

The view that knowledge is justified true belief—a modern interpretation of Plato’s view.

transcendental

Kant’s term for that which is presupposed in, and is necessary for, experience; something *a priori* that makes experience possible.

transcendental idealism

Kant’s synthesis of rationalism and empiricism utilizing a transcendental bridge between the mind and the world, making possible synthetic *a priori* knowledge. The term “idealism,” when not preceded by “transcendental,” may refer to the theories of Berkeley or Hegel, both of which should be distinguished from Kant’s view.

truth monism

The axiological thesis that the natural goal or aim of belief is truth, and that epistemic value is

rooted in holding true beliefs and avoiding false beliefs. The value of truth is not grounded in knowledge or anything else.

truth value

One of two possible values that a given proposition can take with respect to whether or not it is true. “True” is one possible truth value; “false” is the other. (Note that this assumes the standard or “classical” commitment to the principle of “bivalence,” according to which there are exactly two possible truth values. Some “non-classical” views reject bivalence by maintaining, for example, that there are additional, intermediate truth values, such as “half-true,” “mostly true,” or “mostly false.”)

ultima facie justification

Justification all things epistemically considered (equivalently, *prima facie* justification absent a defeater).

undercutting defeater

A good reason to think that the source of a belief is not good enough for *ultima facie* justification, thereby defeating one’s *prima facie* justification for the belief.

value problem

The problem, at base, of why we hold a person’s having knowledge to be more valuable than their having (mere) true belief. The problem, introduced here with Plato’s *Meno*, is broken down into several sub-problems by some contemporary epistemologists.

value turn

The “turn,” or major shift, among many epistemologists toward an emphasis on the study of epistemic value and its relationship to value in other domains (e.g., practical, aesthetic, and moral).

veritic luck

Knowledge-precluding luck.

veritism

The axiological thesis that the natural goal or aim of belief is truth, and that epistemic value is rooted in holding true beliefs and avoiding false beliefs. The value of truth is not grounded in knowledge or anything else.

vice epistemology

Complementary to (if not simply part of) the better-known trend of virtue epistemology, vice epistemology is the philosophical study of the nature, identity, and epistemological significance of intellectual vices.

virtue epistemology

The philosophical study of the nature, identity, and epistemological significance of intellectual virtues. The term covers a range of recent approaches that grant characterological concepts

(including specific habits, dispositions, or strategies which constitute excellences or “virtues” for agents engaged in inquiry) an important or even fundamental role in epistemology.

virtue responsibilism

The view that epistemically justified beliefs just are those resulting from intellectually virtuous character traits.

warrant

That which when added (in sufficient degree) to true belief yields knowledge.

withholding judgment

Remaining neutral about whether or not a proposition is true, neither believing nor disbelieving the proposition.