

# Pablo Zendejas Medina

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## Areas of Specialization & Competence

AOS Epistemology, Decision Theory  
AOC Philosophy of Science, Ethics, Logic

## Employment

2022– *Bersoff Faculty Fellow*, Department of Philosophy, New York University

## Education

2022 PhD in Philosophy, University of Pittsburgh  
*Dissertation*: “Idealizations in Epistemology”  
*Committee*: Dmitri Gallow (co-chair, Australian Catholic University), James Shaw (co-chair), Anil Gupta, Kevin Dorst (MIT), Michael Caie (University of Toronto)

2015 MSc in Philosophy, University of Edinburgh

2013 BA in Philosophy, Politics, and Economics, University of Oxford

2009–2010 Undergraduate studies, University of Uppsala

## Publications

forthcoming “Just as Planned: Bayesianism, Externalism, and Plan Coherence”  
(accepted *Philosopher’s Imprint*  
2022)

## Papers Under Review

A paper on rational inference for agents who do not reason with all of their attitudes  
A paper on dogmatism and the rationality of gathering evidence  
A paper on the relationship between deontology and consequentialism in ethics

## Drafts

A paper on the epistemology of higher-order evidence and disagreement  
“Do All Rules Have Goals?”  
“General Conditionalization and Qualitative Belief Revision”

## Presentations

- 2022 “Reasoning with Higher-Order Evidence”  
Lunch Talk, New York University
- 2022 “Rational Inquiry for Qualitative Reasoners”  
Pittsburgh Formal Epistemology Workshop  
New York University
- 2021 “Rational Learning and Belief Revision”  
Early Career Inquiry Network
- 2019 “Bayesianism, Externalism, and Plan Coherence”  
Formal Epistemology Workshop, Turin  
47th Annual meeting of the Society for Exact Philosophy, Toronto
- 2017 “Better Not to Know”  
5th LSE Graduate Conference in the Philosophy of Probability

## COMMENTS

- 2023 on “Accurate Updating” (Ginger Schultheis)  
Formal Epistemology Workshop, Northeastern University
- 2019 on “Bridging Accuracy and Epistemic Merit” (Matthew Maxwell)  
21st Annual Pitt-CMU Graduate Student Philosophy Conference
- 2016 on “Imprecise Bayesianism and Extreme Belief Inertia” (Aron Vallinder)  
18th Annual Pitt-CMU Graduate Student Philosophy Conference

## Courses

### AS INSTRUCTOR AT NEW YORK UNIVERSITY

- Fall 2023 Bounded Rationality (Graduate Course)  
Spring 2023 Epistemology  
Fall 2022 Central Problems in Philosophy

### AS TEACHING ASSISTANT AT THE UNIVERSITY OF PITTSBURGH

- Spring 2022 Concepts of Human Nature  
Fall 2021 Introduction to Philosophical Problems  
Spring 2021 Introduction to Ethics  
Fall 2020 Introduction to Philosophical Problems

Spring 2020 Philosophy and Public Issues  
 Fall 2018 Introduction to Ethics  
 Spring 2017 Introduction to Logic  
 Fall 2016 Philosophy and Science

## Fellowships and Awards

2022 Michael R. Bennett Essay Prize in Philosophy, University of Pittsburgh  
 for best graduate student paper: "The Limits of Deduction"

2015–2016, Pre-Doctoral Mellon Fellowship  
 2017–2019

## Service

### PROFESSIONAL SERVICE

Reviewer for: *Mind* (×2), *Philosophy and Phenomenological Research* (×2)

### DEPARTMENTAL SERVICE

2022–23 Organizer: *Formal Epistemology Reading Group* (NYU)  
 2021–22 Mentor for Undergraduate Student (Pitt)  
 2018–19 Organizer: *Graduate Student Work-in-Progress Series* (Pitt)  
 2015–17 Organizer: *Epistemology Reading Group* (Pitt)  
 2016–17 Graduate Student Union Liaison (Pitt)  
 2015–17, Reviewer: *Pitt-CMU Graduate Student Philosophy Conference*  
 2019

## Graduate Coursework

### UNIVERSITY OF PITTSBURGH

M & E Core (Rescher)  
 Philosophy of Science Core (Woodward)  
 Epistemology (Gallow)  
 Philosophy of Perception (Gupta)  
 Ethics Core (Thompson)  
 Ethics of Consent (Pallikkathayil)  
 \* German Idealism (McDowell)  
 \* Aristotle on Causation (Gelber)  
 Decision Theory and Deontic Modals  
 (Shaw and Caie)

Hellenistic Ethics: Epicurus and the  
 Stoics (Striker)  
 Kant's Practical Philosophy (Engstrom)  
 Wittgenstein (Ricketts)  
 \* Political Philosophy: Natural Rights  
 and Convention (Pallikkathayil and  
 Lewinsohn)  
 \* Love and Justice, Personal and Political  
 (Whiting)  
 Theories of Vagueness (Caie)  
 Logic (Wilson)

### UNIVERSITY OF EDINBURGH

Philosophy of Language (Rabern)  
Introduction to Mind, Language and  
Embodied Cognition (Isaac)  
Advanced topics in Mind, Language,  
and Embodied  
Cognition (Clark, Vierkant)

Themes in Epistemology (Treanor)  
Epistemology 2 (Pritchard, Hazlett,  
McGlynn)  
Philosophy of Science: Contemporary  
Debates (Massimi)

## References

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## Dissertation Abstract

### SHORT VERSION

Much of contemporary epistemology works with a strong set of idealizing assumptions about the capacities and mental states of the agents to which its norms are meant to apply. While these assumptions have proved very fruitful, most reasoners will often find themselves in situations where they do not hold. This dissertation studies epistemic rationality as it applies to such agents. The first main chapter develops a theory of rational reasoning for agents who only reason with a subset of their attitudes at any given time. I show that, with the right assumptions, one can recover a restricted version of the principle that one may infer what one's premises support, although there are also clear exceptions to this principle. The next chapter addresses the question of how to update on evidence when one does not know what one's evidence is, and shows that two standard arguments for Bayesian conditionalization can be generalized to this setting. Agents who are not able to introspect their own evidence should thus reason just like agents who can. In the last chapter I address the question of why it is rational to gather evidence, but for agents who only have qualitative attitudes, rather than credences. I show that, when such agents care only about the accuracy of their qualitative attitudes, the claim that it is always rational to gather evidence is equivalent to two well-known principles of belief revision, which I argue bolsters both sides of the equivalence. In the process of doing so, I show that my framework provides a principled solution to two versions of the Dogmatism Paradox — an argument to the effect that there's no reason to inquire further when one has already formed a belief.

## LONGER VERSION

My dissertation is about rationality in epistemology. The chapters are on different topics, but they are all motivated by the idea that we can make progress in the study of rationality by replacing central assumptions in our formal models — often in a way that makes these models less idealized. In particular, each chapter considers some of the consequences of revising one of three assumptions that are common in formal epistemology and decision theory. The first is:

- I. Rational agents reason by updating their *belief state* (the totality of their beliefs) on their *total evidence*.

Since real, human reasoners are usually unable to simultaneously combine all of their evidence and beliefs in reasoning, this is an idealization of *information-processing*. The first chapter relaxes this idealization, by examining agents who only reason with a subset of their evidence and beliefs at any given time, and develops a formal model of reasoning and its rationality that applies to them.

The second assumption concerns the kind of evidence that one can get. It says that:

- II. Evidence is always *transparent* in the sense that it is equivalent to the claim that the agent has learned that evidence, leaving no room for uncertainty about what one's evidence is.

Recent literature has made a good case that it is possible to learn evidence that is not transparent, making this assumption an idealization of *information-possession*. In the second chapter, I explore how one's belief should change upon receiving non-transparent evidence.

Finally, the third chapter revises:

- III. Rational agents choose an option that maximizes *expected value* in light of their degrees of belief.

This assumption precludes agents from using their qualitative attitudes (belief, disbelief, and suspension) in rational decision-making. The third chapter examines the question of whether it is rational to gather evidence when one only cares about accuracy, but for agents who make decisions using only their qualitative attitudes, rather than by maximizing expected value, as in standard treatments of evidence-gathering.

I end by summarizing each main chapter in greater detail. The first chapter — “The Limits of Rational Inference” — develops a model of reasoning and a view about its rationality that does not incorporate the first idealization. It can be described as follows: a rational agent has a “belief-box” and an “evidence-box”, both of which contain propositions. They then reason by selecting propositions from these boxes and either inferring from them or revising some of them.

With this picture of reasoning in hand, I show that we can borrow the concept of *evidential support* from the standard answer to the ideal epistemologist's question — “What should I believe given the total evidence that I have?” — to give an answer to the non-ideal question “Which steps in reasoning are rational, given the limited set of beliefs and

evidence that have been brought to mind?”. The relation between the two questions is this: the rationality of an inference depends on the set of possible evidence on which the premises *could* be based. Specifically, an inference counts as rational if any body of evidence on which the premises could be based supports the conclusion, as long as that evidence cannot be rationally disregarded in a certain sense. I then make the theory concrete by making standard formal assumptions about the structure of the evidential support relation. Building on these assumptions, I show that one can make the non-ideal question formally tractable, and prove some novel results about rational reasoning, all of which would be difficult to justify or even state in a more idealized setting. Most importantly, it is shown that deductive and inductive reasoning is normally rational, but that this is not always so: for example when beliefs are inconsistent but also when they undermine one another in more subtle ways. The theory can also explain how rational agents can come to have inconsistent or incoherent beliefs — by reasoning with different bodies of evidence at different times — and how inconsistencies can be resolved when they come into view.

The second chapter — “Just As Planned: Bayesianism, Externalism, and Plan Coherence” — deals with a seeming conflict between some of the best arguments for Bayesian updating and the externalist idea that one can be uncertain of what one’s evidence is, that arises when one admits the possibility of non-transparent evidence. Two of the most influential arguments for Bayesian updating (“Conditionalization”) — Hilary Greaves’ and David Wallace’s *Accuracy Argument* and David Lewis’ *Diachronic Dutch Book Argument* — seem to impose a strong and surprising limitation on rational uncertainty: that one can never be rationally uncertain of what one’s evidence is. Many philosophers (“externalists”) reject that claim, and now seem to face a difficult choice: either to endorse the arguments and give up Externalism, or to reject the arguments and lose some of the best justifications of Conditionalization. I argue that the key to resolving this conflict lies in recognizing that both arguments are *plan-based*, in that they argue for Conditionalization by first arguing that one should *plan* to conditionalize. With this in view, it is argued that the conflict with Externalism only arises if one misconceives the requirement to carry out a plan made at an earlier time. They should therefore not persuade us to reject Externalism. Furthermore, rethinking the nature of this requirement allows us to give two new arguments for Conditionalization that don’t rule out rational uncertainty about one’s evidence and that can thus serve as common ground in the debate between externalists and their opponents.

Finally, the third chapter — “Rational Inquiry for Qualitative Reasoners” — addresses the question whether it is always rational to acquire more evidence when one is only interested in the accuracy of one’s beliefs and knows that one will process this evidence rationally. Intuitively evidence-gathering would always seem to be rational for such agents. However, there is a well-known argument to the effect that it is not: since acquiring evidence could lead one to revise one’s beliefs, one should sometimes regard one’s future, more informed, beliefs as less accurate than one’s current ones. This is the *Dogmatism Paradox*, in one of its versions. I give a decision-theoretic argument for the rationality of gathering evidence, given a qualitative conception of belief, as opposed to the standard quantitative, Bayesian justification. To prove this, I assume, *inter alia*, two principles of belief revision, which are also shown to be necessary for learning to be rational, a result that speaks in their favour. These results are then used to solve the paradox, in two of its versions. I end by considering an underappreciated fact about one of the principles of

belief revision: that it commits us to a *rationalist* epistemology on which agents with no evidence can form rational beliefs in deeply contingent propositions.