

# Phillip Hintikka Kieval (he/him/his)

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## Specialization

Philosophy of Science · Philosophy of Machine Learning · Philosophy of Neuroscience · AI Ethics

## Competence

American Pragmatism · Feminist Philosophy · Political Philosophy · Logic

## Education

### UNIVERSITY OF CAMBRIDGE

PhD in History and Philosophy of Science 2021-present  
Supervisor: Marta Halina    Advisor: Hasok Chang

### UNIVERSITY OF HOUSTON

MA in Philosophy 2019-2021  
BA in Philosophy 2015-2019  
*Magna Cum Laude* with University Honors and Honors in Major

## Work Experience

Student Fellow 2022-present  
Leverhulme Center for the Future of Intelligence, University of Cambridge

## Awards & Fellowships

Best Student Paper Award, Issues in XAI4, TU Delft, Delft, Netherlands 2022  
Gates Cambridge Scholarship, Gates Trust / [Link](#) 2021-present  
Graduate Teaching Assistantship, Department of Philosophy, University of Houston 2019-2021  
Mellon Research Scholars Fellowship, Andrew W. Mellon Foundation / [Link](#) 2018-2019

## Publications

3. Kieval, P. H. (forthcoming). Representation Learning without Representationalism: A Non-Representational Account of Deep Learning Models in Scientific Practice, in *Philosophy of Science*

*for Machine Learning: Core Ideas and New Perspectives*, eds., Durán, J. M. & Pozzi, G. Synthese Library, Springer Nature.

2. Kieval, P. H. (2022b). Permission to believe is not permission to believe at will. *Synthese*, 200(347): 1-12
1. Kieval, P. H. (2022a). Mapping representational mechanisms with deep neural networks. *Synthese*, 200(196): 1-25

## Talks & Presentations

### REFEREED

9. "Automated Exploration, Understanding, and Semantic Opacity,"  
Philosophy of Science Association 2022  
Pittsburgh, PA 13 November 2022
8. "Biased-by-design: why algorithms are necessarily value-laden"  
Graduate Student Workshop on Philosophy of Machine Learning  
Max Planck Institute for Intelligent Systems in Tübingen 19 October 2022
7. "Getting Real about Neural Data Science"  
Philosophy of Cognitive Neuroscience: Content, Self, and Cognitive Ontology  
37th Annual Boulder Conference on the History and Philosophy of Science  
University of Colorado Boulder 11 September 2022
6. "Biased-by-design: why algorithms are necessarily value-laden"  
Ethical Issues in AI and Computing Conference Embedded EthiCS @ Harvard  
in partnership with Social & Ethical Responsibilities of Computing at MIT,  
Harvard University 3 June 2022
5. "Unsupervised Discoveries, Understanding, and Semantic Opacity,"  
Issues in XAI #4 - Explanatory AI: Between ethics and epistemology  
TU Delft 25 May 2022
4. "Unsupervised Discoveries, Understanding, and Semantic Opacity,"  
Rotman Graduate Student Conference 2022: Models and Idealization  
Rotman Institute of Philosophy 13 May 2022
3. "Unsupervised Discoveries, Understanding, and Semantic Opacity,"  
4th Annual Scientific Understanding and Representation (SURE) Workshop,  
Fordham University 23 April 2022
2. "Unsupervised Discoveries, Understanding, and Semantic Opacity,"  
Philosophy in Informatics VI 16 December 2021
1. "Artificial Achievements,"  
Rice-UH Graduate Conference, Rice University 2 October 2021

## INVITED

3. "Getting Real about Neural Data Science" 22 June 2022  
LCFI Kinds of Intelligence Work in Progress Retreat  
Department of History and Philosophy of science, University of Cambridge
2. "Biased-by-design: why algorithms are necessarily value-laden" 7 May 2022  
Gates Day of Research, University of Cambridge
1. "Unsupervised Discoveries and Semantic Opacity in Data-driven Neuroscience," 2 February 2022  
Poldrack Lab, Stanford University

## Teaching

### UNIVERSITY OF CAMBRIDGE

#### SUPERVISOR

NST HPS Part IB *Philosophy of Science* 2022-2023  
HPS PART II, PAPER 6 *Ethics and Politics of Technology* Lent 2022

### UNIVERSITY OF HOUSTON

#### TEACHING ASSISTANT

PHIL132I *Logic I* Spring 2021  
PHIL130I *Introduction to Philosophy* Fall 2020  
PHIL132I *Logic I* Spring 2020  
PHIL132I *Logic I* Fall 2019

#### GRADING ASSISTANT

PHIL130I *Introduction to Philosophy* Summer 2020  
PHIL136I *Philosophy and the Arts* Summer 2020

## Professional Activities

### DIVERSITY AND INCLUSION

Wellness, Inclusion, Diversity, and Equity (WIDE) Committee Member, 2022-present  
Leverhulme Center for the Future of Intelligence, University of Cambridge

Organizing Committee, Cambridge University Minorities and Philosophy ([MAP](#)) 2021-present

April 2021

BIPOC Philosophical Film Series with UH Minorities and Philosophy ([MAP](#))  
funded by The Media and the Moving Image Initiative ([MMI](#))

Co-Founder, University of Houston Chapter of Minorities and Philosophy ([MAP](#))

2020

COMPASS: Undergraduate Philosophy Workshop,  
University of Texas at Austin Chapter of Minorities and Philosophy ([MAP](#))

March 2018

Preventing Genocide: Global and Local Workshop and Teach-in (*invited*),  
Hobby School of Public Affairs' Civitas Program and UH Human Rights Series,  
The Honors College at the University of Houston

October 2017

Displaced Populations: Statelessness and Refugee Crises, UH Human Rights Series,  
The Honors College at the University of Houston

April 2017

#### SERVICE AND MENTORSHIP

Co-organizer, [HPS Workshop](#), Department of History and Philosophy of Science,  
University of Cambridge

2022-present

Learning for Purpose Co-director, Gates Cambridge Scholars Council

2021-2022

LAUNCH Tutor for Logic I and Logic II,  
Undergraduate Student Success Center at the University of Houston

2018-2019

LAUNCH Tutor for Writing and Rhetoric,  
Undergraduate Student Success Center at the University of Houston

2018-2019

#### REFEREING

*Philosophy of Science*

### Graduate Coursework

#### UNIVERSITY OF HOUSTON

Logic and Ontology, *James Garson*

Spring 2021

Luck and Achievement, *Christy Mag Uidhir*

Spring 2021

The Problem of Evil, *Luis Oliveira*

Spring 2021

Philosophy of Science\*, *Josh Weisberg*

Spring 2021

The Meta-problem of Consciousness, *Josh Weisberg*

Fall 2020

The Methods of Ethics, *David Phillips*

Fall 2020

Deep Learning, *Cameron Buckner*

Spring 2020

Temporal Asymmetries, *Yael Lowenstein*

Spring 2020

Inference and Reference, *James Garson*

Fall 2019

Doxastic Agency, *Luis Oliveira*

Fall 2019

Philosophy of Film, *Christy Mag Uidhir*

Fall 2019

RICE UNIVERSITY (VISITING STUDENT)

Origins of Mind, *Alex Morgan*

Fall 2020

Personal Relationship Goods, *Elizabeth Brake*

Spring 2020

\* = *Course audited*

## References

### **Marta Halina**

University Associate Professor  
Department of History and Philosophy of Science  
University of Cambridge  
[mh801@cam.ac.uk](mailto:mh801@cam.ac.uk)

### **Cameron Buckner**

Associate Professor  
Department of Philosophy  
[cjbuckner@uh.edu](mailto:cjbuckner@uh.edu)

### **Hasok Chang**

Hans Rausing Professor  
Department of History and Philosophy of Science  
University of Cambridge  
[hc372@cam.ac.uk](mailto:hc372@cam.ac.uk)

### **Luis Oliveira**

Associate Professor  
Department of Philosophy  
[lrolivei@central.uh.edu](mailto:lrolivei@central.uh.edu)