HUMEANISM AND THE LAWS OF NATURE

Johns Hopkins University, Homewood Campus

Saturday, April 22 – Sunday, April 23

10am – 6pm

Attendance is at capacity, but zoom is open

Saturday April 22

Registration URL: https://rutgers.zoom.us/meeting/register/tJUpcu6hpz8rG9FW81SyqDMEiFRsjUNj4n1C

Sunday April 23

Registration URL: https://rutgers.zoom.us/meeting/register/tJUrduyhqD0pEtIWK4_xjOlPaY4MRpi2LuJw

SCHEDULE

Saturday, April 22

9:00 – 9:45   Breakfast and Coffee

9:45 – 10:00   Introductory Remarks

10:00 – 11:30   **Barry & Alison's Idea about Evaluating Counterfactuals**
David Albert (Columbia)

11:40 – 1:10   **Does anything explain the regularity of the world?**
Harjit Bhogal (UMD College Park)

1:10 – 3:00   Lunch

3:00 – 4:30   **Package Deal Ontology**
Heather Demarest (University of Colorado, Boulder)

4:40 – 6:10   **A "misleading metaphor left over from the concept of law's theological origin"?**
Marc Lange (UNC Chapel Hill)

Sunday, April 23

9:00 – 10:00   Breakfast and Coffee

10:00 – 11:30   **Strong Determinism**
Eddy Chen (UCSD)

11:40 – 1:10   **Unpacking the Deal: How Can Properties Arise from Regularities?**

	Michael Hicks (University of Birmingham)
1:10 – 3:00	Lunch
3:00 – 4:30	**Size** Isaac Wilhelm (National University of Singapore)
4:40 – 6:10	**What Breathes Fire into the Equations?** Barry Loewer (Rutgers)

ABSTRACTS

Saturday Talks

Barry & Alison's Idea about Evaluating Counterfactuals – David Albert (Columbia)

I describe and comment on a simple and beautiful and powerful new proposal – which seems to have been discovered independently by Barry Loewer and Alison Fernandes – for evaluating the truth-values of counterfactual conditionals. What is distinctive and important about this proposal is that it solves what Goodman called the problem of auxiliary antecedents – the problem that Lewis proposed to solve with a metric of similarity on the space of possible worlds – without appealing to anything over and above the fundamental laws of physics.

Does anything explain the regularity of the world? – Harjit Bhogal (UMD College Park)

What explains why the world is regular, rather than chaotic? Metaphysical views that deny necessary connections between distinct existences – 'Humean' views – seem to imply that the answer is: Nothing. This looks like a major problem for those views. But, I claim, if we investigate the Humean conception of explanation we find reason to think that the most general regularities are *appropriately unexplained.*

Package Deal Ontology – Heather Demarest (University of Colorado, Boulder)

In his new book, *What Breathes Fire* (forthcoming), Barry Loewer further articulates and defends the "Package Deal Account" of laws. This new metaphysical account of the laws of nature embraces the systematizing aspect of Lewis's Best System Account while remaining neutral with respect to Humean supervenience. Loewer wants to avoid a commitment to perfectly natural properties as well as fundamental modality. Unfortunately, this leaves the fundamental ontology of the package deal obscure. In this talk, I present some of Loewer's desiderata and argue that they are difficult to mutually satisfy.

A "misleading metaphor left over from the concept of law's theological origin"? – Marc Lange (UNC)

This paper will concern the idea (often voiced by Humeans, as in the title passage, but also by skeptics about natural lawhood) that non-Humean accounts are like the divine-command theory of natural law.

Sunday Talks

Strong Determinism – Eddy Chen (UCSD)

A strongly deterministic theory of physics is one that permits exactly one possible history of the universe. In the words of Penrose (1989), "it is not just a matter of the future being determined by the past; the entire history of the universe is fixed, according to some precise mathematical scheme, for all time." Such an extraordinary feature may appear unattainable in any realistic theory of physics. In this talk, I show how it can be achieved, in a universe like ours. First, I propose a definition of strong determinism and explain how it differs from standard determinism and super-determinism. Next, I discuss its attractions, implications, and some toy examples. The possibility of strong determinism has interesting consequences for explanation, causation, prediction, and the metaphysics of laws. In particular, it is compatible with Humeanism but incompatible with certain versions of non-Humeanism according to which modal facts (such as counterfactuals) are metaphysically fundamental. Finally, I show that Everettian quantum mechanics, with a new version of the Past Hypothesis, provides an easy route to strong determinism. On a theory that I call the Everettian Wentaculus, the quantum state of the multiverse is a fundamental mixed state with exactly one possible history. As a consequence of physical laws, the history of the multiverse could not have been different. Preprint: https://arxiv.org/pdf/2203.02886.pdf

Sunday Talks (cont'd)

Size – Isaac Wilhelm (National University of Singapore)

Do facts about sizes – about how much of something is thus-and-so – provide more basic constraints on rationality than facts about frequencies – about how often something is thus-and-so – provide? My primary goal, in this talk, is to explicate this question. To start, I explain how size facts can guide rationality: roughly put, the relevant size facts are typicality facts, and they guide rationality by way of the Typical Principle, a typicality-based correlate of the Principal Principle. Then I connect the above question to debates over the best Humean interpretation of the Statistical Postulate. Finally, I tentatively suggest an answer to the above question: size facts provide the more basic rationality constraints; this answer is motivated by, among other things, Humean approaches to physical laws.

Unpacking the Deal: How Can Properties Arise from Regularities? – Mike Hicks (Birmingham)

In a number of recent publications, Barry Loewer has advocated a "Package Deal Account" of laws and properties, according to which laws. In this talk, I'll discuss the prospects for such an account. I'll argue that a package-deal style view has the resources to explain why our theories should not include arbitrary or disjunctive-seeming predicates like "grue" without relying on the ordinary language of our linguistic community, and defend the claim that the view has the resources to construct objective property structure without metaphysically privileged natural properties. I'll also discuss how this might offer new avenues for responding to problems of fine tuning (as suggested by Loewer 2023) and close by asking how much metaphysical structure this view really requires.

What Breathes Fire into the Equations? – Barry Loewer (Rutgers)

In my talk I will describe a new account of laws, chances, and fundamental ontology that is Humean in spirit that I call "the Package Deal Account" (PDA). The PDA is a development of David Lewis' "Best Systems Account" (BSA) of laws and chances. Unlike Lewis' metaphysics, the PDA dispenses with perfectly natural properties and instead connects fundamental ontology and laws with macroscopic descriptions. This enables it to avoid many problems that beset Lewis' account. It also enables a novel account of the relation between the fundamental and non-fundamental.

ATTENDEES

Alison Fernandes

Ben Holguín

Bixin Guo

Chloe Park

Chris Dorst

Christian Loew

Dan Pinkel

David Albert

David Builes

David Papineau

David Wallace

Diego Arana

Eddy Chen

Elanor Taylor

Emily Adlam

George Rey

Harjit Bhogal

Heather Demarest

Huining Xia

Isaac Wilhelm

Jacob Barandes

Jacob Lettie

Jenann Ismael

Jill North

Katalin Balog

Katie Elliott

Kerry McKenzie

Marc Lange

Marvin Belzer

Michael Hicks

Orna Panfil

Patrick Connolly

Peter Achinstein

Rob Rynasiewicz

Sean Carroll

Steven Gross

Tim Maudlin

Travis McKenna

Verónica Gómez Sánchez

Vishnya Maudlin