

Rijeka Workshop in the Philosophy of Science: *Enthusiasm for Natural Kinds*

March 24, 26 and 29, 2021

Keynote speakers:

Anjan Chakravartty (University of Miami)

Laura Franklin-Hall (New York University)

Marion Godman (Aarhus University)

Thomas Reydon (Leibniz University Hannover)

Matthew Slater (Bucknell University)

The workshop is organized as a part of the research project Scientific Classifications in the Biomedical Sciences (KUBIM); grant number: uniri-human-18-265, sponsored by the University of Rijeka.

Wednesday, March 24, 12:00 pm - 3 pm EDT (17:00 - 19:00 CET)

ZOOM meeting link:

<https://us02web.zoom.us/j/82282483116?pwd=Znl0R01zclp3cDBqcGRqMnM2bVRuZz09>

12:00 pm – 12:45 pm EDT
17:00 – 17:45 CET

Laura Franklin-Hall (New York University)
“Sexes as Historical Explanatory Kinds”

12:45 pm – 1:00 pm EDT
17:45 – 18:00 CET

Coffee break

1:00 pm – 1:45 pm EDT
18:00 – 18:45 CET

Marion Godman (Aarhus University)
“Human Kinds as Historical Kinds: The Virtues of Historical Thinking in the Social Sciences”

Friday, March 26, 10:00 am - 1 pm EDT (15:00 - 18:00 CET)

ZOOM meeting link:

<https://us02web.zoom.us/j/87936912787?pwd=N2FzVnJpMy8wU3dEQVo2MUQxR2kwQT09>

10:00 am – 10:45 am EDT 15:00 – 15:45 CET	Thomas Reydon (Leibniz University Hannover) “What is the Right Dose of Metaphysics in Theories of Natural Kinds?”
10:45 am – 11:00 am EDT 15:45 – 16:00 CET	Coffee break
11:00 am – 11:45 am EDT 16:00 – 16:45 CET	Anjan Chakravartty (University of Miami) “Realism About Science and Kinds: Truth and Mind Independence”
11:45 am – 12:00 pm EDT 16:45 – 17:00 CET	Coffee break
12:00 pm – 12:45 pm EDT 17:00 – 17:45 CET	Olivier Lemeire (KU Leuven) “A Kind Theory for Scientific Generics”

Monday, March 29, 10:00 am - 1 pm EDT (16:00 - 19:00 CEST)

ZOOM meeting link:

<https://us02web.zoom.us/j/88441690972?pwd=VURPRkYzMEg3OVBMStDZ2EwUnVNZz09>

10:00 am – 10:45 am EDT 16:00 – 16:45 CEST	Matthew Slater (Bucknell University) “Desiderata for Philosophical Approaches to Scientific Classification”
10:45 am – 11:00 am EDT 16:45 – 17:00 CEST	Coffee break
11:00 am – 11:45 am EDT 17:00 – 17:45 CEST	Gregory J. Morgan (Stevens Institute of Technology) “Are Viruses or Viral Species Natural Kinds?”
11:45 am – 12:00 pm EDT 17:45 – 18:00 CEST	Coffee break
12:00 pm – 12:45 pm EDT 18:00 – 18:45 CEST	Aleksandar V. Božić (University of Rijeka) “How Kind is Life?”

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Short abstracts

Aleksandar V. Božić (University of Rijeka)

How Kind is Life?

Is life a natural kind? And if it is, what kind of a natural kind is it? The inability of science thus far to arrive to a universally accepted definition of life is seen by some as a failure of the essentialist account of natural kindness of life. This situation motivates a radical move to deny the existence of a natural kind „life“ and to advocate instead that familiar terrestrial life is an individual and not an instance of a kind (Mariscal and Doolittle, 2018). Strategies that aim to preserve the natural kindness of the category of living entities propose non-essentialist accounts, such as the promiscuous natural kind proposal (Soler Parra, 2019) and property cluster accounts (Diéguez, 2012; Ferreira Ruiz and Umerez, 2018). In this talk I will examine several of the aforementioned accounts that aim to provide an answer to the question whether there is a natural kind comprising living entities.

Anjan Chakravartty (University of Miami)

Realism About Science and Kinds: Truth and Mind Independence

Scientific realism and realism about kinds often come together, but they are typically discussed separately. I suggest that recent developments in the former, however, would helpfully inform the latter. Generally, scientific realism is committed to both the (approximate) truth of our best scientific theories and models, and to the idea that these descriptions concern a mind-independent world, but recent developments of the view emphasize the objective truth of scientific claims in relation to a mind-independent reality while recognizing that not all scientific categories need correspond to mind-independent entities per se. A parallel insight, I contend, would benefit realists about kinds. Recent work in this area has demonstrated the implausibility of thinking that most (even) scientific kinds exist mind independently, but claims regarding them may be objectively true nonetheless in virtue of the mind-independent existence of other things.

Marion Godman (Aarhus University)

Human Kinds as Historical Kinds: The Virtues of Historical Thinking in the Social Sciences

In my recent book (2021), I have argued that the historical kind model, originally presented in relation to arguments about species as real kinds, is fitting also for many kinds in the social sciences, such as gender, religion and ethnicity. These human groups are historical kinds as they are underpinned

by cultural lineages of reproduction. Such reproduction occurs because we humans are socially motivated learners (we both like to do things together with others and like to do things the way they do it). This means we identify with and learn from pre-existing cultural models (of say a particular gender or a religious practice), eventually leading to continuities of kinds and identities across generations. I briefly spelling out this idea, and then turn to two main virtues that such historical-reproductive thinking has for the social sciences.

First, the lineages of historical kinds suggest an improved way of individuating and demarcating kinds for induction. Particular lineages can better demarcate a relevant kind by, for example: (1) Encouraging reclassifications that have an improved fit with the temporal and cultural constraints of historical kinds; (2) Recognizing a trade-off between the scope of how many instances the generalization covers and how many generalizations one can perform based on a historical kind. (Basically, over longer periods of time, an increased number of instances are covered by a generalization, but a decreased number of generalizations can be made); (3) Providing general principles of what questions are relevant to pose about (potentially newly discovered) historical kinds.

Second, there are moral-political motivations for such historical kind classification. I argue that we need both a robust and a three-dimensional understanding of kind membership to be able to track what injustices that occur qua membership, as well as to assist evidence-based policies and laws that aim to compensate and repair for historical injustice.

Olivier Lemeire (KU Leuven)

A Kind Theory for Scientific Generics

Generics are generalizing sentences that are not explicitly quantified, like 'Ravens are black' and 'Electrons have negative charge'. Generic sentences like these are commonly found in every scientific discipline. Yet recent research on the semantics of generics suggests this might be a problem, given that generics are thought to express psychologically primitive and biased generalizations. In this talk, I respond to this worry, arguing that generics have a fundamental epistemic role in science by virtue of their kindhood semantics. According to this semantic theory, a generic sentence says that the generalized property is part of what makes the designated individuals a kind. 'Kindhood', furthermore, is argued to be a context-sensitive notion. Within a particular epistemic context, like a scientific discipline, it denotes those groupings that accommodate the contextually relevant epistemic concerns. It is this context-sensitive notion of 'kindhood' that explains

the variety in meaning between generics of various scientific disciplines, as well as their fundamental epistemic role in each of these disciplines.

Gregory J. Morgan (Stevens Institute of Technology)

Are Viruses or Viral Species Natural Kinds?

Although virology is over 120 years old, the nature of viruses is still open for debate. How viruses should be defined depends on which aspects of a viral life cycle are given more weight. Focusing on “virus factories” within infected cells rather than virions that exist between infections gives a different picture of the essence of a virus. Whether viruses always form well-defined species or hierarchically organized higher order taxa are also not settled questions. Driving much of the uncertainty about these questions is the mosaicism caused by lateral gene transfer, which appears to be a major mechanism of viral evolution. Prolific lateral gene transfer can be represented by a reticulated network. Relatedly it is unclear how to best incorporate viruses into the tree of life, which is usually depicted as largely tree-like and mostly unreticulated structure.

Thomas Reydon (Leibniz University Hannover)

What is the Right Dose of Metaphysics in Theories of Natural Kinds?

Two recent articles (Lemeire, online first in *Synthese*; Kendig & Grey, online first in the *British Journal for the Philosophy of Science*) have criticized so-called “epistemology-only” accounts of natural kinds, arguing that accounts that are wholly devoid of metaphysics are unable to do the work that any adequate account of natural kinds should do. Accordingly, some amount of metaphysics is required as part of accounts of natural kinds, or at least as background assumptions when applying the accounts. On the other hand, Ereshefsky & Reydon (2015) have criticized available accounts of natural kinds for containing too much metaphysics and not being sufficiently naturalistic. This raises the question about the right dose of metaphysics: how much is too much, how little is too little? I will try to answer this question by presenting an account of natural kinds, the Grounded Functionality Account, that I suggest contains just the right dose of metaphysics.

Matthew Slater (Bucknell University)

Desiderata for Philosophical Approaches to Scientific Classification

With only some trepidation, I would suggest that interest in natural kinds has reached a historical peak in the last ten years. I am even more confident that the diversity among the available views has never been higher. These facts (if facts they are) are presumably related: a wider net, as it were, can capture more potential interest. But the diversity of views has also enabled a level of critical engagement and reflection on foundational assumptions that, while productive from some vantage points, has also encouraged some skepticism about the very idea of a successful philosophical account of natural kinds. Perhaps the field has departed from what one might think of as philosophical “normal science” and devolved into internal squabbles about foundations. I will propose an analysis of what I see as the present state of play, distinguishing between a few coherent sets of philosophical assumptions and desiderata, and some salient avenues for further exploration.