

# Laws, Modality, and Properties in Naturalistic Metaphysics

Tomasz Bigaj and Christian Wüthrich

Phil 285, Spring 2015

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Class schedule:	Tu 4:00-6:50pm, HSS 7077 (Philosophy seminar room)
Website:	<a href="http://philosophy.ucsd.edu/faculty/wuthrich/">http://philosophy.ucsd.edu/faculty/wuthrich/</a>
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This seminar focuses on core problems in naturalistic metaphysics, i.e. metaphysics informed by science and relevant to scientific investigations. Our first core topic is the nature and status of laws of nature. Two main camps in the debate on the metaphysical character of laws are usually distinguished: a Humean regularist approach and anti-Humean necessitarianism. In this seminar, we will study this debate and discuss contemporary variations of Humeanism and of anti-Humeanism (such as dispositionalism and primitivism), as well as anti-realism and the structural approach to laws of nature. Humeans usually subscribe to the thesis known as ‘Humean supervenience’, which states, roughly, that all facts (and properties) about complex systems supervene on the individual facts (and properties) about their fundamental components. We will analyze the implications of modern science (in particular of physics) for Humean supervenience. These discussions lead directly to further metaphysical questions regarding the status of modalities and fundamental properties. Regarding the former, we will investigate whether a cogent distinction can be made among various types of necessity—such as logical, metaphysical and nomic necessity—, and what the grounds of nomic necessity might be. Regarding properties featuring in fundamental laws, our main interest will be in the question of their essential character, i.e., whether they are essentially dispositional or categorical, intrinsic or extrinsic.

*Prerequisites:* Graduate standing or permission of the instructor.

*Distribution requirements:* This course can be counted towards the fulfillment of the distribution requirement in philosophy of science or in metaphysics (but not both).

## Required texts

- Mandatory (and some recommended) readings will be made available through e-reserves or online (password is ‘cw285’).
- The Stanford Encyclopedia of Philosophy (<http://plato.stanford.edu/>) has many excellent background and survey papers.

## Course requirements and evaluation

The following are necessary and jointly sufficient conditions to obtain letter grade credit for this seminar:

1. **Participation:** You are expected to attend all classes and to actively participate in discussions. If you have to miss a class, you must let me know promptly.
2. **Class presentations:** Every participant should expect to give three presentations of roughly 15 minutes. You are expected to do something visual (blackboard, overheads, handout). Do not try to be comprehensive; rather, synthesize the important parts (main thesis, main argument) and offer some critical thoughts for discussion. You will then also be expected to lead the ensuing discussion.
3. **Short papers:** Submit 4 short papers of 4 to 5 pages, reflecting readings for the meeting when the paper is submitted. I want to see a clear statement of the main thesis of the article you are discussing, a brief summary of the main argument, and *your independent judgment, critical reflection, and possibly some positive contributions.*

or

**Seminar paper:** Submit a term paper of 15 to 20 pages or so, on a topic approved by CW. Please submit a paragraph-long outline of your project by Tuesday, **26 May 2015**. The full paper is due by Thursday, **11 June 2015**.

## Topics and readings

The general plan is go through the papers more or less in the order that they are listed. The reading list is tentative and will be adjusted to meet participants' interests. In particular, I only expect us to cover a strict subset of this list, and possibly some papers not on the list. Talk to one of us if you would like to read some general background texts in metaphysics or in philosophy of science or read up on a particular topic. All readings should in principle be available through e-reserves.

### (1) Laws of nature

- Helen Beebe. The nongoverning conception of laws of nature. *Philosophy and Phenomenological Research* **61** (2000): 571-594.
- Ned Hall. Humean reductionism about laws of nature. Manuscript.
- Jonathan Cohen and Craig Callender. A better best system account of lawhood. *Philosophical Studies* **145** (2009): 1-34.
- Kerry McKenzie. In no categorical terms: A sketch for an alternative route to Humeanism about fundamental laws. In M. C. Galavotti, S. Hartmann, M. Weber, W. Gonzalez, D. Dieks and T. Uebel (eds.), *New Directions in the Philosophy of Science*, Berlin: Springer (2014), 45-61.
- Alexander Bird. The dispositionalist conception of laws. *Foundations of Science* **10** (2005): 353-370.

- Stephen Mumford. Laws and lawlessness. *Synthese* **144** (2005): 397-413.
- Nancy Cartwright. *How the Laws of Physics Lie*. Oxford: Clarendon Press (1983). Excerpts.
- Marc Lange. A note on scientific essentialism, laws of nature, and counterfactual conditionals. *Australasian Journal of Philosophy* **82** (2004): 227-241.
- Marc Lange. *Laws and Lawmakers: Science, Metaphysics, and the Laws of Nature*. Oxford: Oxford University Press (2009). Chapter 1: Laws form counterfactually stable sets.
- Tim Maudlin. *The Metaphysics Within Physics*. Oxford: Oxford University Press (2007). Chapter 1: A modest proposal concerning laws, counterfactuals and explanations.
- John Roberts. A precis (ha!) of *The Law-Governed Universe*, a book forthcoming in 2008 from Oxford University Press. Manuscript.
- Angelo Cei and Steven French. Getting away from governance: A structuralist approach to laws and symmetries. *Method: Analytic Perspectives* **3** (2014): 25-48.

## (2) Supervenience and properties

- David Lewis. Humean supervenience debugged. *Mind*. **103** (1994): 473-490.
- Barry Loewer. Humean supervenience. *Philosophical Topics* **24** (1996): 101-126.
- Elizabeth Miller. Humean scientific explanation. Forthcoming in *Philosophical Studies*.
- John Earman and John Roberts. Contact with the nomic, I and II. *Philosophy and Phenomenological Research* **71** (2005): 1-22 and 253-286.
- Tim Maudlin. *The Metaphysics Within Physics*. Oxford: Oxford University Press (2007). Chapter 2: Why be Humean?.
- George Darby. Relational holism and Humean supervenience. Forthcoming in the *British Journal for the Philosophy of Science*.
- Michael Esfeld. Quantum Humeanism or physics without properties. *Philosophical Quarterly* **64** (2014): 453-470.
- Brian Ellis and Caroline Lierse. Dispositional essentialism. *Australasian Journal of Philosophy* **72** (1994): 27-45.
- Alexander Bird. Laws and essences. *Ratio* **18** (2005): 437-461.
- Alyssa Ney. Are there fundamental intrinsic properties?. In A. Hazlett (ed.), *New Waves in Metaphysics*, London: Palgrave Macmillan (2010), 219-239.
- Jennifer McKittrick. A case for extrinsic dispositions. *Australasian Journal of Philosophy* **81** (2003): 155-174.

- Gabriele Contessa. Do extrinsic dispositions need extrinsic causal bases?. *Philosophy and Phenomenological Research* **84** (2012): 622-638.

### (3) Modality

- Marc Lange. A counterfactual analysis of the concept of logical truth and necessity. *Philosophical Studies* **125** (2005): 277-303.
- Ned Hall. Physical = metaphysical necessity. Manuscript?
- Stephen Leeds. Physical and metaphysical necessity. *Pacific Philosophical Quarterly* **88** (2007): 458-485.
- Jenann Ismael. An empiricist's guide to objective modality. Forthcoming in Z Yuddall and M Slater (eds.), *Metaphysics and the Philosophy of Science*, Oxford: Oxford University Press.
- Quentin Smith. The metaphysical necessity of natural laws. *Philosophica* **67** (2001): 901-925.
- Alan Sidelle. On the metaphysical contingency of laws of nature. In T. Gendler and J. Hawthorne (eds.), *Conceivability and Possibility*, Oxford: Clarendon Press (2002), 309-336.
- Tim Maudlin. *The Metaphysics Within Physics*. Oxford: Oxford University Press (2007). Chapter 5: Causation, counterfactuals and the third factor.
- Ted Sider. *Writing the Book of the World*. Oxford: Clarendon Press (2011). Chapter 12: Modality.
- Boris Kment. Counterfactuals and the analysis of necessity. *Philosophical Perspectives* **20** (2006): 237-302.

Please let us know if there are particular topics or readings you would like to discuss in the seminar. We (and the class) may be willing to accommodate your wish.