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Département de philosophie
Université de Genève

Philosophy of Physics: Geometric Possibility
SE 2h, A, Me 12-14, L208
Modules: MA6, MA8

http://wuthrich.net/teaching/_MA6_PhilPhys_2021.html

Primary reading: Gordon Belot (2011). *Geometric Possibility*. Oxford University Press.

All other readings will be made available on moodle.unige.ch (ID 2422).

22.09.	Introduction to the seminar and the topic (CW)
	*Dasgupta (2015).
	*Hoefer, Huggett, and Read (2021).
29.09.	Newtonian spacetime
	Stein (1967).
06.10.	Newton vs Leibniz
	Earman (1989), Ch. 6, pp. 111-136.
13.10.	Manders (1982).
20.10.	Space, relationalist space
	Belot, Ch. 1, pp. 8-34.
27.10.	Belot, Ch.2, pp. 35-53.
03.11.	*No seminar* (semaine de lecture)
10.11.	Field (1984), pp. 56-74.
17.11.	Best-system approaches
	Huggett (2006).
24.11.	Belot, Ch. 3, pp. 54-77.
01.12.	Primitivist approaches
	Carroll (1994), Ch. 4, pp. 86-116.
08.12.	Guest seminar: Siska de Baerdemaeker
15.12.	Belot, Ch. 4, pp. 78-101.
22.12.	Belot, Ch. 5, pp. 102-133.

Readings marked with an asterisk (*) are not mandatory.

Course description

The philosophy of physics deals with methodological, epistemological, and metaphysical issues in physics. This seminar has the dual purpose of systematically introducing the background necessary to do research in philosophy of physics as well as discussing current research in the field.

What is the nature of space? What is its structure? Is it ontologically prior to matter, or should we seek to ground all claims about the structure of space in facts about actual and possible configurations of matter? In this seminar, which will be organised around Gordon Belot's monograph 'Geometric Possibility', we will discuss these and related questions. In particular, with Belot, we will investigate the particular notion of geometric possibility that relationalists seem to rely upon, and study its tenability in the context of Humean, primitivist, and necessitarian views of possibility. Consequently, the seminar will be of interest not only to philosophers and metaphysicians of space and time, but also to anyone interested in laws of nature and modality.

While some background in physics, mathematics, and philosophy will be helpful, we will not assume any specific knowledge beyond high school mathematics.

This seminar will be in English.

Course requirements

For credit in philosophy:

- *MA6:* travail écrit de recherche avec soutenance (env. 25 pages, 50'000 signes)
- *MA8 (demi-module):* travail écrit de recherche (env. 12 pages, 24'000 signes) ou présentation orale durant le séminaire

Contact me if you need credit in physics or in another programme.

My expectation is that everyone prepares the assigned readings ahead of time, actively participates in the seminar (including those featuring a guest speaker), and accepts a reasonable share of presentation duties.

Seminar presentations

I expect everyone to do a brief presentation on one of the assigned readings. When it is your turn, please keep the following points in mind:

- While you will be the leader for the entire seminar on this day, including the discussion, the initial presentation should last (if given in one piece) about 15 to 20 minutes.
- Therefore, it is important to stick to the main points, the author's *main thesis* and their *main argument*, rather than to give a complete or chronological list of points raised in the article.
- I encourage you to use some *visual complement* (blackboard, powerpoint slides, handout), and to see this seminar as an opportunity to experiment with a format you have not yet tried.
- Make sure to read the article sufficiently ahead of time, so that we have time to make an appointment if you want to meet and discuss it before your presentation.
- Don't stress out if there is something in the article you don't understand after having made an effort to grasp it. In this case, try to articulate precisely what it is that you don't understand—and it may well become the topic of our seminar discussion.