LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY (MCMP)

The Concept of Motion in Late Medieval Philosophy

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Munich Center for Mathematical Philosophy

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"Motion" has been the main research subject of natural philosophy from Aristotle's *Physics* to Newton's *Principia* and beyond. Discussions and reflections on it have not only accompanied the scientific revolution of the seventeenth century, they have also played a determining role in the outcome of the new theories of the twentieth century. Thus, "motion" seems to be inevitable if we wish to deal with whatever object of the natural world. As Aristotle put it and became a repeated slogan since the thirteenth century: "Who ignores *motion*, ignores *nature*" ("*ignorato motu, ignorata natura*").

However, it is by no means evident what motion really is or how it is to be defined. For Aristotle and the Aristotelian tradition, "motion" means something more general than the "local motion" from one point of space to another within an interval of time. It includes a more general process of change which Aristotle managed to conceptualise as the transition from potential to actual being. That this conceptualisation is neither simple nor immediately understandable is something that one can appreciate by reading not only Aristotle' texts but also a whole tradition of medieval and Renaissance commentators. Descartes anyway found the Aristotelian-scholastic definition extremely abstruse, regardless of whether we read it in the commentator's Latin or we translate it into French, since these words "*ne sont pas plus clairs, pour estre François*".

From Duhem's pioneer investigations until now, one hundred years of historical research has sufficiently shown us that from the fourteenth century onward natural philosophers assumed a more critical approach to Aristotle. Focusing on new physical cases, using more mathematics and approaching the concept of motion in a more analytical way by using the tools of the new logic, the new currents in Oxford, Padua, Paris, Prague, Vienna, Cracow, Erfurt and other centres of study asked new questions about Aristotle's theory of motion. Was it possible to keep the same theory of motion (the same physics, basically) using such mathematical tools which were unknown to Aristotle himself? Or does this imply that a totally different idea of physics was on the way to emerge? Is the Aristotelian definition to be accepted with the same meaning for all kind of motions? How exactly is the connection between time and motion to be established? And what is the connection of these two to the other two key notions of the Aristotelian physics: infinity and continuity? Is matter a condition or only an accompanying phenomenon to motion? What would happen in a vacuum and why exactly does an arrow keep moving after having lost the bow? To what extent can the field of application of the Aristotelian concept of motion be extended before it becomes "obscure" and "unintelligible", as Descartes meant? Emotions are a kind of motion in or of the soul: Can we then amplify its meaning to the point of covering cases belonging to psychology, ethics and theory of action?

Presenting the results of their own research, a group of specialists will address these and other similar questions in a series of talks at the *Munich Center for Mathematical Philosophy*. The discussion will be centred on late medieval Aristotelian physical sciences, but we hope also to be able to integrate different views about its background and its role in the emergence of the early modern view of nature.

You are welcome to join us by asking questions and discussing the talks with us!

For more information see the programme of the meeting here: https://www.mcmp.philosophie.uni-muenchen.de/events/workshops/container/motion/index.html and contact Daniel A. Di Liscia: d.diliscia@lrz.uni-muenchen.de

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