Can cells cause behaviors of organisms? - Why philosophers think that interlevel-causation is problematic and how we can solve these problems

Dr. Beate Krickel
Ruhr University Bochum

In everyday life as well as in scientific practice, we tend to take assertions like the following to be at least possibly true: The cause of her death was the failure of her heart; my exercising caused my muscles to become stronger; the alcohol in his blood caused him to stumble and fall. These assertions make claims about *interlevel causation*. Philosophers are worried about claims like these because, so it is argued, their truth commits us to mysterious causal interactions between wholes and their parts. Furthermore, they are in conflict with the famous *Causal Exclusion Argument*. This argument shows that higher-level phenomena cannot do any causal work—neither with respect to what is going on at the same level, nor what is going on at lower-levels. Causation takes place only at the fundamental level, rendering all other phenomena either non-existent or epiphenomenal. If these philosophers are right, not only would we speak falsely every time we make claims like the ones stated above. Also, the autonomy of higher-level sciences, like chemistry and biology, from fundamental sciences, like particle physics, would be in severe danger. But are these philosophers really right?

In this talk, I will explain first what philosophers mean by “level”, “causation”, and “interlevel causation”. Then, I will introduce the two main objections against interlevel causation. Finally, I will present my theory of interlevel causation which provides solutions to the two objections.