



EGU24-21063, updated on 11 Mar 2024  
<https://doi.org/10.5194/egusphere-egu24-21063>  
EGU General Assembly 2024  
© Author(s) 2024. This work is distributed under  
the Creative Commons Attribution 4.0 License.



## The sociology of modelling: how we shape a perception together

Lieke Melsen 

Hydrology and Environmental Hydraulics, Wageningen University, Wageningen, the Netherlands

Science, despite its status as objective and searching for truth, is inherently a social activity. Research is conducted by scientists that collaborate, work in teams, get advised by their supervisor, get funding to study particular questions, know one another from earlier projects, and so on. In these social interactions, we together define what we consider important to study, or what we deem unimportant. This occurs at multiple levels: Funding agencies, for example, have the power to determine which research questions should be addressed. As hydrological modelling community, we have implicitly agreed that discharge is the main variable of interest - focusing on other fluxes or states is often presented as an advancement. And at the modelling team level, we often (implicitly) agree on a modelling vision. From interviews with modellers from different teams, it for example became apparent that one team had the modelling vision to *'keep things as simple as possible'*. Given this vision, the modeller was inclined to choose the simpler parameterization over a more complex one to describe the same process. In another team, *'scale invariance'* was considered more important, and therefore process representations were selected based on their scalability. Therefore, if we want to "advance" process-representation in models across spatial and temporal scales, the theme of this session, we should acknowledge that different researchers have different perceptions of what advancing comprehends, that there is no objective measure to define advancement, and that the first step probably is, that we have to clarify and express our modelling vision.

**How to cite:** Melsen, L.: The sociology of modelling: how we shape a perception together, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-21063, <https://doi.org/10.5194/egusphere-egu24-21063>, 2024.

