

Selen Eren

Enacting a non-positivist credibility in big ecology

Big data in ecology raises challenges for ecologists not to compromise scientific credibility. Discussions in the literature can be clustered in two groups: one aiming for a positivist understanding of credibility through socio-technical improvements in data quality, variety and analysis methods (Hampton et al. 2013; Bayraktarov et al., 2019); and the other analysing credibility practices by understanding socio-technical negotiations (Turnhout & Boonman-Berson, 2011; Leonelli 2019). I will first show that the understanding of credibility reflected in the first group is problematic. It stems from a misleading understanding of data as representing the world and/or prioritizes the role of data analysis for credible knowledge claims. Although the second group's works are of crucial importance to explore how knowledge claims are produced and validated in practice, they in turn do not provide ecologists with practical strategies to internalize what a constructive perspective entails for their everyday work and how they can deal with their current problems from such a perspective. To conclude, I will call for a new understanding of "credibility" that is more in line with current scientific practices (i.e. materialsemiotic co-production of knowledge claims); and offer a particular understanding of responsibility as a way of enacting such "credibility": a responsibility aiming to acknowledge both (1) existing but overlooked interactions in knowledge infrastructures (e.g. between ecologists, data collection tools and their designers, or between researchers, data storage platforms, and standards), and (2) other relevant interactions that could not have been established so far (e.g. different epistemic cultures or levels of digitalization).