
Humanizing Animals: The Selection and Justification of the Prairie Vole as an Animal Model for Autism Spectrum Disorders

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Abstract

Against the historical preference for a small set of animal models in neuroscience, some scientists and science scholars have advocated focusing on better-chosen animals for understanding the development and evolution of brains than rats and Rhesus macaques. Where the aim of the research is to shed light on human brain disorders in particular – especially as a basis for translating discoveries from bench to bedside – the importance of justifying experimental research with animals becomes paramount. The disputes have recently been featured in *The New York Times* and *Slate*, raising questions about the internal and external logics of science funding under the banner of translational research.

In this presentation, we explore the establishment of one animal model – the prairie vole – in one set of brain disorders – Autism Spectrum Disorders (ASD) – to assess the character and epistemic warrant of claims about how an experimental animal is or isn't "the right tool for the job".

We situate our historical and philosophical analysis within the current political economy of animal experimentation, and the changing nature of Autism Spectrum Disorders as disease categories in the development of DSM-V. Drawing on literature review and data gleaned from semi-structured interviews, we explain how prairie voles came to be models of ASD, and evaluate the supporting justifications provided by neuroscientists in regard to the reliability and validity of the vole ASD model.

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