

Is observation a process of inference? This ancient question remains controversial, in psychological discussions of whether perception is direct or indirect, and in philosophical discussions of whether observations are theory laden or theory neutral. An answer depends, of course, on what we mean by "observation" and "inference". Recent work in perceptual psychology has led to a precise formulation of observation, and recent work in probabilistic logic has led to a precise formulation of probabilistic inference. Given these, the question of whether observation is a process of inference can be answered by a mathematical theorem. We present the formulations of observation and inference, and a theorem which concludes that, under certain technical assumptions, observation is indeed a process of inference.