Maturationally Natural Cognition and Radically Counter-Intuitive Science

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Abstract

Natural cognition, which concerns processes in perception, thought, and action that operate instantly, intuitively, and (largely) unconsciously, comes in two varieties. Practiced naturalness concerns abilities that result from having extensive experience in some domain. Experts, including scientific experts' perceptual, cognitive, and practical skills possess practiced naturalness and can sometimes differ widely across persons, cultures, and theoretical orientations. Maturational naturalness, by contrast, concerns natural cognition that arises spontaneously in human beings, that does not depend upon instruction, artifacts, or culturally distinctive inputs, and that virtually all humans share. Maturationally natural capacities address fundamental problems that human beings must solve, such as the perceptual recognition of things in their environments (e.g., individuals' faces), the cognitive discriminations between the kinds of things in their environment (e.g., species), and the action capacities for managing them (e.g., contaminants). Maturationally natural capacities constitute, in effect, theories with which humans are typically equipped and which perpetually influence their implicit cognition. The cognitive products of science are unnatural in the sense that they reliably traffic, usually sooner rather than later, in representations that are incompatible with the deliverances of our maturationally natural mental systems. Science also requires the mastery of esoteric cognitive tools such as mathematics and probabilistic inference that humans find hard to acquire and employ. Experimental evidence suggests that acquired, radically counter-intuitive scientific theories' influence on human judgment, even when those theories come to enjoy a measure of practiced naturalness, is susceptible to persisting intrusions of maturationally natural predilections.