Digital Thought Collectives and the Reconfiguration of Scientific Rationality

Mark Nader Basafa

Abstract

This paper argues that prevailing epistemological accounts of Artificial Intelligence remain incomplete insofar as they treat AI primarily as a tool, a source of opacity, or a candidate epistemic agent within already established frameworks of rationality. Against this assumption, I develop a historicist account according to which the integration of AI into scientific practice reshapes the conditions under which scientific rationality is constituted. Drawing on Thomas Kuhn's account of paradigms and Ludwik Fleck's theory of thought collectives, I argue that rational normativity is neither fixed nor agent-centered, but emerges within historically evolving and collectively structured systems of interaction.

To capture this transformation, I introduce the concept of digital thought collectives: hybrid epistemic systems in which human agents and machine processes jointly structure the production and assessment of knowledge. I develop the concept of co-thinking to designate a mode of cognition in which epistemic outcomes cannot be reduced to independently intelligible human or machine contributions. On this view, epistemic agency is not eliminated but reconfigured: the locus of rational normativity shifts from individual agents or purely human communities to hybrid systems whose organization constrains what can count as a problem, an inference, or a result.

This account differs from dominant approaches in philosophy of technology and social epistemology by arguing that AI does not merely extend cognition or assist inquiry, but contributes to a reconstitution of the normative structure within which knowledge claims count as rational at all. Scientific progress, on this view, is best understood neither as cumulative growth nor as a sequence of discrete revolutions, but as the ongoing reorganization of hybrid epistemic systems within which co-thinking operates.