

## Origins- Abstract

Some of the most successful scientific discoveries that overhauled received beliefs about the past were of origins. Darwin's discoveries of the origins of species are the most obvious examples. But other important discoveries of origins include the discoveries of the origin of the universe, the Big Bang; the origin of the continents, the supercontinent Pangea and the drifting continental plates; the African origin of humanity and the origin of non-Africans in interbreeding with Neanderthals; the common origins of language families such as the Indo-European languages, and so on. Though the inferences of origins changed historical consciousness and orientation in time, discussions of origins are missing from metaphysics, epistemology and the philosophy of science.

This article analyzes the metaphysics and epistemology of origins. Origins are information sources that transmit encoded information signals to receivers. These receivers may be decoded to infer their origins or some of their properties. Information as reduction in uncertainty fits the metaphysical assumptions and epistemic practices of the historical sciences that infer origins including Cosmology, Phylogeny, Geology, Historical Linguistics and Historiography. I demonstrate that information transmission and causation are metaphysically and epistemically distinct and irreducible to each other, despite partial overlapping extensions. I demonstrate the distinctions between origins and causes by comparing origins with causation according to the major theories of causation, without arguing for or against the theories of causation. Theories of causation are useful as foils to highlight the conceptual, metaphysical, and epistemic distinctiveness of origins. Metaphysical and epistemic theories of origins are simpler and less challenged by counterexamples and counterintuitive results than comparable theories of causation. Consequently, the substitution of origins for causes may simplify and clarify some philosophical problems associated with causation and facilitate their solutions.

Origins transmit information signals that receivers preserve. Effects do not always preserve information about their causes. Origins and receivers are exclusively tokens. Causes and effects are types or tokens. The relation between origins and receivers does not depend on type-type regularities or contiguities because receivers preserve information transmitted from their origins. Receivers can preserve information to different degrees. The distinction between origins and mere conditions of receivers is easier to make than the distinction between causes and conditions, and is value free. The *information* that nests in receivers is conditional on their origins. The *existence* of receivers is conditional on other conditions, including causes. These differences allow the metaphysics and epistemology of origins to avoid similar challenges to those that theories of causation have had to face.