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Laws of Thought: From Diachronic Corpora through AI to the Dynamics of Conceptual Change

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Abstract

This paper presents a framework for studying the dynamics of conceptual change in scientific literature. By combining diachronic corpora, neural networks, word sense induction, and bibliometric methods, the proposed pipeline—building on work conducted by independent researchers—opens a path toward empirically studying laws of thought. Recent advances in large open corpora, neural network training, and word sense induction, created a golden era for research on laws of thought. Yet, few exploit these opportunities. I discuss and synthesize methods of studying the propagation, transformation, and development of concepts in scientific texts. My aim is to unify the scattered literature on the topic, offering both a guideline for researchers interested in pursuing it and a unified theoretical perspective to guide future improvements. Finally, I consider the practical prospects of detecting and perhaps even guiding conceptual trends across disciplines, and the ethical issues that such power would raise.

Keywords: *conceptual change; diachronic corpora; word sense induction; neural networks; bibliometrics.*

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