

# Artificial Intelligence versus Collective Intelligence: the Hidden Philosophical Lineage of the Web.

**Harry Halpin**

Early in the history of computing, pioneers such as Alan Turing and John McCarthy subscribed to the vision that either the human mind was itself computational or could be simulated via a computer. If this hypothesis, dubbed "artificial intelligence," is true, then humans could easily be replaced by suitable AI computers, which were typically envisaged as robots. To historicize the period of AI in the 1950s and 1960s, AI was conceived as a technological solution to the problem of labour in an era of full employment and traditional factory production. Attempts to renew AI by abandoning the notion of representation and focusing on embodied systems have produced more biologically plausible robots and a more accurate view of human intelligence, but have never come to fruition: to date, there is no human-level intelligence that is simulated purely computationally. However there exists a separate and forgotten stream of work that started at the same time as McCarthy and Minsky's AI project in the 1950s: the Human Augmentation Project of Douglas Engelbart to achieve collective intelligence. Instead of attempting to replicate human intelligence, Engelbart sought to augment existing human intelligence via computational functions that complemented human intelligence. Despite being ignored by philosophy of the mind and computation, it is precisely this project that has achieved long-standing historical impact: from the invention of the mouse to the inception of the World Wide Web. In fact, in an era of mass unemployment and distributed labor, while AI-enabled robots are economically unfeasible, social computation as exemplified by crowd-sourcing via the Web is now central to the modern economy. However, unlike AI, Engelbart's thesis on collective intelligence has never been phrased in terms of its underlying philosophical assumptions, but only articulated as an engineering project. We will detail the metaphysical assumptions of the autonomous intelligent individual based internal neural representation that underlie AI, and contrast these with the philosophical assumptions of human-machine-environment couplings dependent on external digital representations that characterize collective intelligence. It is precisely the inspection of the neglected philosophical assumptions of collective intelligence that can shed light on the philosophy of the Web.