
Computer Science between Science and Technology: A Red Herring?

Marcello Pelillo*¹, Teresa Scantamburlo*¹, and Viola Schiaffonati*²

¹Ca'Foscari University of Venice – Italy

²Politecnico di Milano [Milan] – Piazza Leonardo da Vinci, 32 20133 Milano, Italy

Abstract

Computer science has been plagued since its beginnings by the elusiveness of its very nature, being halfway, as the name itself implies, between science and technology. In time, the interdisciplinary nature of computer science has been widely recognized and, accordingly, it is now defined partly as scientific, partly as mathematical, and partly as technological. There are some subfields, however, in which the mutual exclusiveness of the scientific and technological paradigm is still dominant. This is quite evident in some areas of artificial intelligence, such as machine learning and pattern recognition, where few systematic attempts to understand the interplay between technological and scientific factors have been made. In this paper, we approach the issue by making use of some recent developments in the philosophy of technology and science. They suggest that we have to rethink the classical dichotomy between science and technology as, at the conceptual level, the boundary between the two camps is more blurred than is commonly thought, and that they stand to each other in a kind of circular, symbiotic relationship. Our analysis will be complemented by historical examples taken from the field of artificial intelligence.

*Speaker