Cognitive Alignment via Artefacts in Distributed Innovation: The Role of Initial Code in Open Source

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Abstract

This paper casts light on the role of artifacts for cognitive alignment of creative workers in distributed product development projects. Drawing on the research on system integration, modularity and artifacts as coordination devices, we develop two hypotheses stating that (1) the provision of an initial version of the artifact to be jointly developed fosters the cognitive alignment of distributed innovators, and that (2) such alignment increases the probability that a project effectively produces an outcome. We test both hypotheses studying a sample of 5703 open source projects hosted on SourceForge during 2005 and 2006, and find that the provision of some initial code fosters cognitive alignment of programmers, and that this in turn increases the probability of observing the release of a new version of the program later on.