

CRITICAL COMPUTATIONAL PEDAGOGY: AN APPROACH TO EXPANDING BIOPOLITICAL LITERACIES FOR THE DIGITAL SUBJECT

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Approaches to teaching digital competencies often overlook implications of digital technologies for subject formation. Digital subjects must increasingly confront the consequences of technically embedded ethical, social and political norms which give rise to forms of algorithmic bigotry and subjugation; that is, sexist, racist, colonial, homophobic, etc. outcomes from the manipulation of data. This kind of digital biopolitics can have profound implications in every sector of human activity including justice, economy, health, employment and education.

The transformation of the industrial individual into post-industrial 'dividual' (as Deleuze coined it), presents new conditions for the political subject-citizen. The dividuated subject manifests in fragments of information and code, a procedure through which the bio-subject is rendered legible within digital systems. The making of the datified subject is a form of biopolitics whereby subject formation is an outcome of software. The literacies required for political agency in this context must encounter the ways computational discourses overdetermine subject potentials.

In this study, I analyzed the tactics and techniques used by computational artists, both historic and contemporary, to produce subjective outcomes with computational technologies. Key to understanding the pedagogical potential of these practices was identifying the gap between how computational discourses can capture and direct agency, on the one hand, or expand it, on the other. In other words, some forms of computational practice afford the exercise of more subject agency than others.

Based on study results, I am proposing a 'critical computational pedagogy' framework emphasizing categories of both conceptual and practice-oriented learning. Using these categories, curricula for digital capacity building can be developed that address and emphasize dividual agency through digital practices.

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