The Craft of Code: Practice and Knowledge in the Production of Software

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As digital media and computing technologies have become a defining part of the century, one of its core components—code—has also entered the public discourse. Whether in journalism, academia, economic reports or job applications, "code" is being explained, dissected and criticized. In most of these addresses, however, "code" remains a blanket term encompassing various programming languages, developing environments, theoretical approaches and knowledge practices. Code isn't just "code", it's LISP, Ruby, Julia, JavaScript and Java; it's also shortcuts, IDEs, linters and color themes; it's best practices, cookbooks, style guides and cheatsheets; code is as much a practice as it is a concept. In this light, this contribution addresses the existing, abstract conception of code (which often means "computation" rather than "code") and reframes it within the broader tradition of craftsmanship in order to understand not just as an economic and cultural agent, but also as a human practice rooted in concrete making.

I first intend to show how the practices of writing code tie into older traditions of craftsmanship. Drawing from both cultural studies, sociology and art history, specifically through the works of Sennett, Ruskin and De Certeau, as well as specialized literature from the field of computer science, this contribution will highlight how those who write code have developed relationships to tools, aesthetics and community similar to craftsman guilds of the Middle-Ages in Europe or the Arts & Crafts movement in Industrial England, a reality often overlooked when discussing the material conditions of code production.

In a second part, I will examine how those relationships depart from such traditions in the age of globalized information networks in which they take place. Particularly, this impact will be looked at in terms of open-source projects, as they highlight the evolution of our relationship to tools, as well as in terms of "learn to code" initiatives, redefining learning environments and processes. Collaborative work on open-source projects affects the sense of ownership and knowledge traditionally found in a craftsman's relationship with its tools, and highlights the difficult question of abstraction as it arises specifically during the processes of writing and reading code. Learning how to code, from self-taught, to computer science PhDs and "coding bootcamps", also questions the pedagogical model of the master-apprentice relationship as well as the exclusivity of academic learning as valid source of practical knowledge.

In sum, this contribution resituates the practice of producing code within a larger historical tradition of craftsmanship in order to complement a view of code that is exclusively conceptual. Through this approach, it examines some of the unique aspects of those practices to raise broader questions about knowledge of tools and knowledge of craft.

Indicative bibliography

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Biography

Pierre Depaz is an educator, artist and programmer from France. He is currently lecturing at NYU Berlin and Sciences Po Paris, while completing his doctoral thesis on the aesthetics of code at Paris-3 Sorbonne-Nouvelle. His academic research revolves around how software systems create representational frameworks for inter- and intra-personal organization, while his artistic practice includes digital games, computer simulations, interactive installations, networked performances and experimental web projects, and has been exhibited in NYC, Paris, Cairo, Abu Dhabi, Brussels and Berlin.