Software and the unconscious. Can we talk of a psychology of programming?

The purpose of this communication is to investigate the relationship between software and psychology. Can we analyze software through the tools provided by the psychological sciences? How do the psychological dynamics that take place within groups of programmers affect the structure and functioning of software? Is it possible to read software through the tools of psychoanalysis?

The speech is organized in two parts. In the first I analyze and comment on the state of the art: what is software psychology and how it has been conceived. Programming is a process well framed in rules and based solely on logic. Yet programming is also a human activity, and therefore inevitably has a psychological dimension that plays a role on many levels. Programming is a social activity and therefore is affected by group psychological dynamics, as well as the personality of each programmer. "Programming is not just human behavior; it is complex human behavior" as Weinberg says (1971, 55; see Turkle 1988, 2004). Generally speaking, "the computer is not interested in the emotional state of the programmer, although evidences of it may creep into his program" (Weinberg 1971, 54). In order to justify this claim Weinberg points out that "a programmer would not really be a programmer who did not at some time consider his program as an esthetic object" (Weinberg 1971, 56). Humanists "often contend that machines tend to dehumanize people by forcing them to have rigid personalities, but really, the contrary is true. […] Relationships in which one party does all the giving or all the taking are not fully human and tend to produce personality distortions in one or the other" (Weinberg 1971, 67). This is an essential point: in programming design, "in making our adjustments to our particular programming language, we can easily become attached to it simply because we now have so much invested in it. […] We see this effect when we try to teach a programmer his second language" (Weinberg 1971, 68).

In the second part of the speech I introduce some new elements, in part starting from a criticism of Weinberg's approach. I propose a psychoanalytic reading of programming. I therefore introduce the Freudian concept of the unconscious, reinterpreted in part through the cognitive

sciences (Tauber 2014). Like any human behavior, programming also has unconscious dimensions that affect the machine functioning. Furthermore, as programming is a new form of human behavior, it also presents new unconscious dimensions never studied before.

If we consider the unconscious as that part of our memory that is repressed, or inaccessible, even if it emerges indirectly, we can identify many unconscious dimensions of software; for example the phenomenon of ageing or loss of information, the stratification of memories, stratified updates and old versions of software that can often conflict or create problems. There is also the phenomenon of bugs. A rate of errors is always present in the. There can also be errors in data. "The average rate of errors made by a human operator in one hour of activity ranges from 5 to 10. Most of these errors will be corrected, but residual errors will always remain" (Printz 2018, 166).

Can we talk about an "algorithmic unconscious"? Software is a collection of billions of lines of code produced by thousands of programmers. These billions of lines of code that manage every activity in our lives exceed individual minds and consciences. Like the language in Lacan, software is not only a tool that human beings can use for their purposes, but above all a system in which human beings are "caged", a system that pre-determines every human expression and desire. Therefore, software confirms a central idea in Lacan's works: that language impregnates human reality and define its insurmountable horizon. This also means that software is the new place of human subjectivation.

References

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