



# Computers do not think, they are oriented in thought

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Poor use of the word “intelligence” is common in most walks of life. It is confused with one’s ability to calculate things without pen and paper, or with whether or not one is well-read. Even in the most unreasonable of places—the study of mental processes and their digital simulation—the word is woefully abused. Most often, it is misused to refer to competence. “This is an intelligent program” usually means “this program automates a task competently.” This is where theories of “multiple intelligences” are spawned and released to wander the earth. But the two are not equivalent. The valuing of competence over intelligence—which yet remains obscured—is perhaps tolerable, but the complete erasure of intelligence in favor of competence is not. Mostly because it would be a shame to lose such a multifaceted word: intelligence stems from the Latin “inter” and “legere.” Their conjoining can be interpreted in a plethora of ways, each an invitation to its own metaphysics. “Legere” was commonly used to refer to “choice” and to “reading”. So that “inter-legere” can be understood as competence in the task of choosing between binary opposition (something which might be better suited to the word “taste”). It might also mean “to read between,” in the sense of reading between the lines, or reading what is not exactly there, but is hiding between what is there. Here interpretation and intelligence conspire. “Legere” also grows out of the endlessly interpretable and confused root that is “Logos.” To be intelligent is to be between one Logos and another (whatever that might mean). Something to be contrasted, perhaps, with “*int(r)elligent*” – someone who is within a (or the) Logos.

Leaving Logos aside, these refer to a certain kind of competence, so that intelligence is understood, in its etymological sense, to mean a specific form of competence, rather than simply “competence,” in its most general sense. The task of deciphering the competence that is intelligence is far

beyond the scoop of an opinion, but untangling intelligence and competence is necessary. We are often confounded into bliss by the competence of computers. Their capacity to automate tasks, and to undertake systematic computations, far out-competes anything recognizably human. Machines are unmistakably superior. However, this does not imply the divine worship of the computer as the God-King of the twenty-first century. This cult—propagated to oblivion in the works of Kurzweil (2000) and Bostrom (2016)—is predicated on the fusing together (confusing) of competence and intelligence. A powerful automator is not necessarily intelligent. Not because it is incompetent, but because it is competent at a particular task, and not necessarily with the task of intelligence.

The grievance of this confusion does not lie in its (un) holy matrimony with the religions that have plagued world history, but in the fact that it hides what machines *actually do* from us. To claim that the essential operations of machines is the poor cousin of the much dreamed about AGI (Artificial General Intelligence) is as wilfully ignorant as it is plainly wrong. It hides from us an extraordinary fact of modern computing: *Computers are Kantians*. That is, computers operate exclusively with representations that mediate between abstract concepts and empirical reality (program execution). Computers are competent conceptual compasses, they do not allow us to stray beyond the empirical execution of abstraction into what lies outside of possible experience—they deny the Noumenal completely. As Iverson (2007) points out, “programming languages, because they are designed for the purpose of directing computers, offer advantages as tools of thought... Executability makes it possible to use computers to perform extensive experiments on ideas.” Machine languages allows experimental expression of abstract ideas, thereby orienting our thinking concerning these ideas in light of possible experience (secured strictly by the power of the machines).

In *Was heißt: sich im Denken Orientieren?* Kant (1991) understands orientation in thinking to be the appending of concepts to “*image* representations [*Bildische Vorstellung*]” which are “serviceable for *experiential use*

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[*Erfahrungsgebrauch*].” That is, the conjoining of concepts to representations so that they allow practical operation in experience. This conjoining is to be sought with the guidelines of common sense [*Gemeinsinn*]. While Kant grounds the act of orientation in the *subjective need* [*subjektives Bedürfnisses*] for judgement, something decidedly human, no entity upholds this standard like the computer. The distance between the electric currents clicking on and off in rapid succession, and the world of usable software interfaces is mediated by a complicated series of representations—codes for visually described structures. The operating system translates physical RAM to virtual memory, which structures it into an experientially accessible representation. The same goes for the compiler (an essential aspect of modern computing): the parsing of instructions is grounded in the mediating representation of the parsing tree. For a computer, no task is undertaken without mediating, actionable representations. A computation is predicated on the strict enforcement of naming conventions by the compiler. Meaning is not allowed to slip—all designators are rigid. The philosophical problem of names is dissolved in the jurisdiction of the representations that mediate between what the user does, and what the computer does.

The computer is not a thinking machine, nor should its competence be taken for intelligence. Rather, the computer upholds the inhuman demands of Kant’s humbling resolution of Humean skepticism—“stay in your lane!” It does not need to stray and leave the domain of possible experience. It is not guided by a subjective need to judge; it is a device used to expand the domain of experience by the careful layering of mediating representations (middleware) prepared for experiential use. In order to act in this space of orientation computers require external assistance—they do not think by themselves. But the computer mediates between abstract concepts and reality and thus serves to orient thinking. In orienting thinking, machines are vastly more competent. While the intelligence of humans is a magnetic to its own compass, computers abandon intelligence for perfect command of orientation, exhibited in the refusal to follow unexecutable commands. The enforcement of a common sense on users is the essence of computers, and it is the source of their seemingly infinite utility. By layering representations one atop the other, more and more conceptual territory is mapped and made actionable.

The human need to judge finds its perfect mate in the digital computer. Humans think and lose their way, get caught up in transcendental metaphysics, argue about souls and substances, monads and attributes; computer simply execute commands through exponentially proliferating levels of abstraction. No urge to leave room for the temporary disorientation which Kant thought leads to God. Computers do not need the unconditioned to orient them. They are atheists—they need no horizon. Kant’s God, bred by the unsatisfied need to judge, is irrelevant for a machine that has never *felt* the need to judge.

However extraordinary computers are, and however powerful they are as intellectual and even philosophical tools, to assign intelligence to them is an anthropomorphization and an insult to what they actually do. To call machines intelligent is to rob them of their greatest asset—their stoic, oriented calculations in face of the vast conceptual horizon. Computer are too disciplined and restrained to be intelligent.

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