# constraint

a limitation of a system that consequently limits the people, beings, things or entities using, interacting with, or being governed by, this system.

The concept of constraints as computational devices goes back to the literary writers group Oulipo (founded in Paris in 1960) which in turn was inspired by mathematics and by rule-based poetics of the European Renaissance era.

Through a wider oulipotic lens (that transcends the Oulipo group), algorithms are always constraints. Programmed systems - including AI systems - then need to be thought of as being (a) internally constrained and (b) externally constraining. As opposed to a conventional humanist position, this does not mean disapproval. In the collective work of Oulipo and others following its model, formal constraints are being embraced, collected, and playfully self-imposed.

The understanding of new technologies as constraints contradicts their more common understanding as *extensions* (of human capabilities). The latter had been established by Marshall McLuhan in the 1960s and become, by the 1990s, the Internet economy’s “Californian Ideology”, with an implicit equation of technological progress and societal progress, and a culture of techno-solutionism, version updates and even techno-eschatologies such as the “Singularity”.

What seems to be missing in both mainstream and alternative systems development (including Free/Libre/Open Source Software and new media arts) is a design philosophy that does not simply promise to remove - or “liberate us” from - the constraints existing within and being exercised by programmed systems, but which acknowledges, discloses and critically embraces them.

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