A semiotic approach to language technologies: Translation as technological mediation

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Abstract.

I propose a semiotic approach to understanding and assessing language technologies. The engineering of digital language technologies tends to overlook the pragmatic dimension of (human) language, namely that language develops through utterances that, being situated, are conditional. Because they are situated, embodied animals behave conditionally, in terms of *what may be the case* under supposed conditions. Technologies such as large language models tend to ignore that the emergence and production of language is subject to the situatedness of minds. By adopting a recent semiotic and broad concept of *translation* as thermodynamic, developed by Kobus Marais, I bring semiotic theory into the service of philosophy of technology. I explain and illustrate with examples that commonly assumed expectations about language generative technologies are mistaken and misleading when shaped through an ideal of engineering humanlike interlocutors. I find that (software) engineering pursues this ideal, which, fuelled by classic humanism, assumes that language is an anthropological marker. By explaining (technological) emergence as semiosic process, I develop a robust underpinning for the Mind-Technology Thesis, namely the refutation of mind-and-matter substance dualism through an evolutionist perspective that construes technology as mindwork. In this vein, semiotics corroborates with externalist theories of mind and postphenomenology in understanding mind and technology as mutually intrinsic. This leads to a semiotics-grounded advocacy of the view in philosophy of technology, championed by Elena Esposito, that for artifacts to properly communicate with biological organisms, they do not require "intelligence". As such, the product of any language technology is useful only in contingency with a situated mind. Further, this leads to considerations on the literacies necessary for living with computing machines that produce linguistic utterances.

Keywords: interpretation; translation; computation; mind; technology; situatedness.