A (Dis)embodied Language(s): Style and Fictions of AI Research

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The relation of AI to human language is a complex one. While rooted in mathematics, biology and a burgeoning computer science, the "fathers" of AI, as they came to be known, relied on a range of ideas taken from both a history of scientific thought as well as from a history of accounts of autonomous, machine-like beings in order to master "the word". Those involved in the early stages of AI research (e.g. Turing, McCarthy, McCullough, and Wiener) have implicitly based their work on assumptions resulting from an entanglement of beliefs around science, the brain, language and inanimate matter, resulting in opposing approaches. These beliefs, straddling the line between fiction and scientific hypotheses, offer a new perspective on the linguistic implications of AI research and production.

The main question, then, is how do those fictional approaches manifested in concrete implemetnations? Can we trace a connection between the conceptual postures and the practical results? Through this genealogy, we will examine how scientific dicsourses can themselves qualify as fiction, as the line between theory and fiction gets modulated by effectiveness of implementation. The main theoretical framework for this inquiry will be the one developed by Gilles Gaston-Granger in his understanding of style as an epistemological device[1].

By examining the scientific and fictional concepts that those individuals engaged with in the 1940-1970 period in the United States, and how those concepts manifested into notations and tools, this contribution aims at expliciting the thin line between the scientific work of AI pioneers and fictional accounts of all-powerful languages and symbol manipulation. Particularly, I will focus on the connection between the myth of the Golem in Jewish folklore[2], Freud's narrative accounts of human psychology[3], as well as Leibniz's *characteristica universalis*, a fantasized universal formal language[4] and noise filter diagrams in neuroscience publications. The interplay of these different fictions provides a backdrop for the contemporary approach of AI methodologies, in which a certain power of language is considered foundational. The result, I will argue, is a pair of paradigms through which form can be entirely separated from content, in which meaning no longer has anything to do with its vehicle, or through which meaning emerges from a mass of noise.

Developing this point further, this contribution will examine the styles and discourses surrounding two approaches to language in AI research: Lisp and GPT3. The first is a programming language designed by McCarthy for the specific purposes of AI development, and still in use today. The second, a large-scale neural net, can generate natural text syntactically

1   Gaston-Granger, Gilles, *Essai Pour Une Philosophie du Style*, Odile Jacob, 1988.
2   Wiener, Norbert, *God & Golem, Inc: A Comment on Certain Points where Cybernetics Impinges on Religion*, MIT Press, 1964.
3   McCullogh, Warren S., *The Past of a Delusion*, Chicago Literary Club, 1953.
4   McCorduck, Pamela, *Machines Who Think* (2nd ed.), A. K. Peters, Ltd, 2004.

on part with human writers. A semantic analysis of Lisp itself, as well as a discussion of the social contexts in which Lisp is evoked or referred to (sometimes as *"God's language"*[5]), will reveal a technical object whose perceived power is based on flexibility and abstraction, while GPT-3's is based on a *materiality* of language. This contribution will, through the analysis of the different styles and approaches to notation of these research trends, highlight radically different, and yet complimentary, approaches to human language.

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Biography

Pierre Depaz is an academic, developer and artist. He is currently lecturing at NYU Berlin and Sciences Po Paris, while completing his doctoral thesis on the aesthetics of source code at Paris-3 Sorbonne-Nouvelle, under the direction of Alexandre Gefen and Nick Montfort. 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.

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5   Kanefsky, Robert, *Eternal Flame (Song parody)*, GNU email list, 1996, retrieved from: https://www.gnu.org/fun/jokes/eternal-flame.en.html on 26/09/2020.