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The Automata & the Engineer

Herbert Simon's Quest for the Governing Machine

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Per il professore Giorgio Israel.

*Benché i nostri destini fossero uniti da quell'anno fatale del 1492,
ho mancato il nostro incontro.
Sono arrivato in ritardo, come la coscienza della nostra generazione.
I campi sanguinanti sono così prossimi
che le gocce accarezzerebbero gli occhi.
Eppure, nessuno vede niente.
Tante informazione, ma così poca conoscenza.
Anche le lacrime non bastano per addolcire i cuori.
Nel frattempo, riposa in pace, maestro.*

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PREFACE

PREPARATORY RESEARCH

RESEARCH PROPOSAL

MOTIVATION

Generally speaking, I am interested in questions of methodology in the social sciences. More specifically, I am interested in the role of metaphors in the construction of social theories, and the place that these have accorded to determinism. Thus, I would like to explore the parallels between the understandings—about the essence of nature, society, the mind, and the universe—in economics and those in the other natural and social sciences. Without any ambition to elevate the regime of truth of economics, I am genuinely puzzled by its acceptance by the general public, as if economics was a type of discourse about a certain reality with portentous social consequences. But what is this social reality that is the object of economics? How and why have economists come to think about social reality in this way? With this master's thesis, I want to contribute a tiny bit towards a better comprehension of this impasse.

As we have discussed previously, I want to focus my master's thesis around Henry Simon; therefore, the question of how he fits into the picture I just painted requires an answer. For the record, I am neither sympathetic to Simon's vision of the social world nor to his project of a general *science of the artificial*. Rather, I decided to structure the thesis around him because unlike many neoclassicals of his generation, Simon fully drank the cyborg Kool-Aid of the postwar systems sciences, and thus, he took to heart the man-machine analogy to its final consequences—to the point where he was one of the founders of the field of artificial intelligence. Given that today artificial intelligence presents itself as the next holy grail of science, I find it valuable to write about Simon also as an excuse to study more about computer science and its ontology.¹

1. As Mirowski shows in *Machine Dreams* (2002), the development of the computer and its entourage of systems sciences have had profound consequences for postwar neoclassical economics.

SUBJECT-MATTER

I would like to write about the computer as a political technology, specially in its guise as the so-called *machine à gouverner*: the ultimate delegation of political authority and responsibility to machines—or more generally, to automatic decision mechanisms.² Therefore, in this thesis, I will trace the genealogy of Simon’s ideas on the computer and computation to understand their influence on his views on social organization. By doing this, I wish to inquire about Simon’s pessimism on the prospects of human rationality and his delegation of decision-making to “more capable” systems such as machines and organizations.

My opinion, so far, on Simon is that his idea of bounded rationality served as a kind of excuse to subordinate and reduce the individual to play a very minor role in social organizations and the conduct of human affairs in general. And, from what I have read, Simon’s epistemic pessimism—which, by the way, is not too distant from Hayek’s—has roots both on a kind of personal obsession of his with the relation between individual responsibility and ethical choice,³ and on his fascination with the fledgling computer technologies and their prospects. Therefore, in this master’s thesis, I would like to dedicate an important part to Simon’s relation to the computer. This is necessary to account for the importance of the treatment of information in his theories of organization. In fact, I surmise that what really preoccupied Simon wasn’t rationality per se, but information.

In the second part of the thesis, I would like to discuss the political implications of Simon’s ideas on the computer and computation. Unfortunately, I cannot say more about this, since my reading hasn’t taken me that far, but I will very likely base this section on Philip Mirowski’s *Machine Dreams* and Paul Edwards’s *The Closed World*. Moreover, in Simon’s article *Heuristic Problem Solving: The Next Advance in Operations Research*, he discusses the relation between Charles Babbage and Adam Smith’s ideas, which echoes a discussion in the second chapter of *Machine Dreams* on these same men. I surmise that there could be some insightful material therein to construct this section. Although, I would like to mention Babbage and Jevons at some point to compare their thinking to Simon’s, it is unlikely that time will allow for this.

2. The idea is certainly not Simon’s. In fact, as far as I know, the term *machine à gouverner* comes from a 1948 article in the newspaper *Le Monde*, in which a Dominican friar, Père Dubarle, reviewed Norbert Wiener’s book *Cybernetics*. In fact, in his latter book *The Human Use of Human Beings* (1950), Wiener explicitly cites and discusses Dubarle’s idea.

3. I am not aware that Simon was a particularly religious man, but these concerns are quite clearly influenced by christian morality and Simon’s American-style liberal values.

Main question

What is Herbert Simon's definition of the computer? How did this concept influence his ideas of *the human*? And, what are the political consequences of this vision of man and machine?

Secondary Questions

What was the relation between the natural and the artificial for Simon, and how does this relation relate to his late-life project of a Science of the Artificial?

How do Simon's ideas on automation relate to his political views?

Did Simon subscribe to the unity of science thesis?

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