UNIVERSITÉ PARIS 1
PANTHÉON SORBONNE

FORSCHUNGSNOTIZBUCH

MII

SYNCO

CONTENTS

16TH WEEK - NOËL

01/01/2019

I am thinking about how to structure the thesis to limit the reading list to a manageable expression.

I might have a somewhat clear idea of what to put in the first chapter: background on the Cold War and the computer, Simon's place in the context of the creation of the computer, and Simon's history between the computer and artificial intelligence. This part could benefit from relating the computer to artificial intelligence. After all, Simon did write about the computer in his writings, but as far as I am aware, he spoke more about artificial intelligence than about computers per se.

Perhaps, in that sense, it would be worth it to look at all of Simon's explicit writings on the computer ...it seems I would need to read, on top of "Administrative Behavior", his "The Sciences of the Artificial". I would like to limit the amount of books to read for the thesis, but it seems unavoidable to read one book on the history of the computer. Should I fall short of time, it should be Edward's "The Closed World".

As in my previous discussion with Prof. Lenfant, we agreed that introducing the topic of artificial intelligence is more difficult than it appeared at first sight, we might be forced to talk more about the organization of labor rather than artificial intelligence. In fact thinking about it, we should, perhaps, forget about artificial intelligence at this point, and talk about the computer as a social technology.

I am beginning to sense that the biggest challenge at this point really is choosing the corpus. The problem is that if the topic is to broad as to require a vast amount of reading to treat satisfactorily, the thesis will be ambitious but an utter failure. The topic must be adjusted to reduce the reading to an amount that is manageable within the time constraints and that allows a satisfactory treatment of the subject.

Today, I am checking Simon's "Models of Bounded Rationality, Vol 3.", which was published in 1997, just a few years before his death. Vol. 1 dates from 1982. Vol. 2 from 1982 (1984 the softcover edition). It is very likely that the motivation for this collection comes from his receiving the Nobel Prize in Economics in 1978. In other words, there is a 15 year gap between the first volumes and the third. It would be interesting to find out the history behind the motivation for the publication of the third volume, but this would be impossible to undertake at this point.

The following is the description of Vol. 2 from the MIT Press website:

> *The Nobel Prize in Economics was awarded to Herbert Simon in 1978. At Carnegie-Mellon University he holds the title of Professor of Computer Science and Psychology. These two facts together delineate the range and uniqueness of his contributions in creating meaningful interactions among fields that developed in isolation but that are all concerned with human decision-making and problem-solving processes. In particular, Simon has brought the insights of decision theory, organization theory (especially as it applies to the business firm), behavior modeling, cognitive psychology, and the study of artificial intelligence to bear on economic questions. This has led not only to new conceptual dimensions for theoretical constructions, but also to a new humanizing realism in economics, a way of taking into account and dealing with human behavior and interactions that lie at the root of all economic activity.*
>
> *The sixty papers and essays contained in these two volumes are grouped under eight sections, each with a brief introductory essay. These are: Some Questions of Public Policy, Dynamic Programming Under Uncertainty; Technological Change; The Structure of Economic Systems; The Business Firm as an Organization; The Economics of Information Processing; Economics and Psychology; and Substantive and Procedural Reality.*

Most of Simon's papers on classical and neoclassical economic theory are contained in volume one. The second volume collects his papers on behavioral theory, with some overlap between the two volumes. The second edition of Simon's widely read and referenced The Sciences of the Artificial was published by The MIT Press 1981 and is available in both hardcover and paperback.

Volume 3	**Volumes 1 and 2**
Simulating Large Systems	Structure of Economic Systems
The Advance of Information Technology	The Economies of Information Processing
Motivation and the Theory of the Firm	The Business Firm as an Organization
Behavrioral Economics and Bounded Rationality	Economics and Psychology Substantive and Procedural Rationality
The Structure of Complex Systems	Causes and Possible Worlds

From the preface to Vol. 3, it seems to me that Simon had a big say on what papers were chosen for these volumes. He claims that the papers contained therein have historical interest. They constitute, to his judgment, the principal papers in economics. Thus, as we can infer from the introduction to the third volume, since these papers do not get into his published books, taking those aside, these papers constitute the *principal* papers Simon wrote dealing with economics according to his personal appreciation.

Simon claims that the reason the categories used in Vol. 3 doesn't match those of the previous volumes is that his interests changed dramatically. Apparently, vol. 3 includes mostly papers from the 1980s and 1990s, such as formal representation of causal ordering (closely connected with the identification problem) in dynamic systems., the implications for our society of the new information systems that are being generated as products of the rapid deveoplment of computers and electronic communication networks, and the nature of employee and managerial motivation in the bvusiness firm, and the implications for economics of the propensity of human beings to identify with the goals of organizations, and the state of economics itself (its changing attituted toward formal theory vis-à-vis empirical research). It is interesting that the topic of the apllication of economics to governmental administration and policy, and rational choice under uncertainty and technological change are hardly represented in this volume.

Use the following guide when comparing the changes in Simon's thought between the two volumes:

In any case, for now I think we better just finish up the three papers we had begun reading: the one by Hunter Heyck, the two by Simon. Then, we can discuss what to read next, although the papers in Vol. 3 dealing with the impact of communications technologies seem to be next. Likewise, reading "Administrative Behavior" seems to be a must. For now, let's stay clear of books on the computer, for they may not be relevant to Simon's own thinking: I must find out who were Simon's intellectual forefathers in terms of thinking about computing.

What I've uncovered in a lot of my work is that nature is used to define the economy, and the economy is then used to define nature. It's just this incredible round robin.

...constantly, they are taking these models over and defining the market to operate like a physical process.

The dominant images of nature have never been very far removed from dominant images of economic activity. Indeed, many of the same formalism and ontological commitments tend to cover both, although, the periods of orthodoxy in the respective fields may move out of phase. Therefore, on the long horizon of Western thought, nature is not something external that hems the economy in. Rather, they constitute and mimic one another. For in the West, it is as hard to sustain the pretense that economy and nature are pitted in remorseless conflict as it is to acknowledge that Jesus was not a Caucasian or that money never buys happiness. Philosophers such as Derrida have made us more aware of the unstable antinomies or, as he dubbed them, the ghost of the undecidable.

Philip Mirowski, Lecture presented by the UTS Cosmopolitan Civil Socities Research Centre and the Australian Working Group on Financialisation at the University of Sydney (24-25th July 2012).

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The corpus must not be delimited arbitrarily. Instead, the research question must be thinkered with to reflect upon a corpus. In other words, the research question will be the one to determine the corpus. I must change the research question for it to define an appropriate corpus that fits the time constraints of the Master's.

I believe that some way of combining history of ideas (Rabinbach), sociology of science (Vatin, Meda, Castel), and the work of Herbert Simon would be nice for a PhD thesis but not for a Master's thesis. For now, we should reduce our ambitions and …

17TH WEEK

10/01/2019

Taking into accoun the little time left for research, I have decided to stick to Mendeley for managing pdfs, and instead use a custom bibliography file to use BibLaTeX's 'origdate' field. As of today, none of BibLaTeX's default styles use this field, which necessitates redefining a macro, for it to print at all. Unfortunately, this is the only *reasonable* modification available for having this information displayed. Although a LaTeX package, `chicago-bilatex` exists, the documentation is extensive (over 150 pages), which is more than I can afford to read at this moment on 'carpentry'. After the Master's thesis is completed, time could be devoted to stuyding this package in detail, but not for now.

The other problem is that Mendeley does not implement the 'origdate' field in its templates, which forces me out of it. Should Mendeley implement this field in future releases, there would be no reason to change, since, as of today, I haven't come across a better alternative to manage pdfs. Although people have suggested Zotero, its meager BiBLaTeX support completely defeats the purpose of using it. Although using Mendeley's collections is perhaps of little use, since Emacs Org mode is better at organizing those for research (briefly, Mendely is too slow), keeping files organized in forlders by 'author', named with the format 'name-year-title', is something Mendeley excells at. Although using a combination of free software tools could accomplish the same thing, I prefer having all that in one neat package that includes pdf highlighting, pdf search, etc. Until a better alternative arises, Mendeley stays, if only for its powerful organizing tools.

18TH WEEK

16/01/2019

I feel that centering the thesis around Herbert Simon sort of forces the argument in unnatural ways. The past few days, I have almost finished creating the snippets to speed up collecting bibliographic data. It seems to me that it is not very efficient to collect absolutely everything in BibTeX format: Even with current technology, it still takes too much time to classify everything.

The strategy for the meantime is as follows: To prevent spending too much time reading primary sources with only a tenous connection to the argument, we have to identify a *feiulle de route* to guide our approach to the primary sources. That is, to avoid spending weeks perusing archival material, we let a connoisseur of the archive guide us to the relevant primary sources. We consult the primary sources, we extract what we need, and only then, should something be missing, we go back to the archives. Otherwise, one risks trying to reinvent the computer a second time. The whole point of scholarly research is to build upon the shoulders of giants. In this point, I disagree profoundly with the advice of two professors against approaching primary sources from secondary sources: They are wrong in thinking that doing so *colors* one's perspective on the primary sources to the point where developing an original reading is made more difficult. It is necessary to consult the secondary sources *first*, in order to check whether one's hunches about a particular point of view have been explored in the literature already. Only by knowing *that,* can one have an original point of view. Otherwise, the risk is too high of ignoring an important primary source that has been already studied. Briefly, attack secondary sources first; then, go for primary sources!

Regarding the actual thesis work, I had originally planned several planning stages before undertaking actual writing, but this approach seems laughably unpractical. Rather, I already finished the actual Emacs org mode file to use for writing the thesis. The typesetting and the title pages are all complete. Now, we can focus for the most part in writing ...more or less. There are a few BibLaTeX macros I haven't coded, but I will code them as I go.

Regarding the subject matter, I am reorienting the whole edifice towards the reading that Simon makes of Babbage, and the reading Babbage makes of Prony. I am thinking about the difference between several levels: What the actions and texts of these authors represented for the people at the time, that is to say, how people living at the time, including the author himself, interpreted the significance of their actions (works, texts, etc.). The other level is how other people ...one could call them commentators, have interpreted these actions later on, because it is usually the views of famous commentators that becomes the standard way of interpreting (one could even say *reading*) the event. Thus, in order to evaluate an event, we must be aware of these three dimensions: how the authors interpreted his own actions, how the people at the time of the author interpreted them, and how the commentators have successively interpreted the event. This questioning will in fact open the way for our own interpretation.

Regarding, M. Prony, his contribution is well known, and it is still known in circles dedicated to the history of computing and the history of mathematics. So, in the first part, I could, in fact, list the different readings of de Prony's project, to try to differentiate how it has been interpreted by Prony himself, by living people at the time, by Babbage, and by other scholars. Of course, the idea is to focus on the interpretation that Babbage makes of the significance of the project. And then, we can use this, to discuss the interpretation that Simon makes of Babbage. In other words, we could just discuss the texts where Simon discusses Babbage's project to glance at what his interpretation was. But, we must be careful to avoid focusing too much on issues on interpretation because the whole point of the thesis is not to simply discuss interpretations of this one event in post-revolutionary France; the whole point is to discuss these interpretations in the context of thought on work and the organization of work.

Essentially, my goal with the thesis is to open the way to rethink the place, the importance, and the conceptualization of work within economics, all in the context of the transformation of labor in the 21st century, which will be shaped by ICTs. What I want to discuss is that ICTs transform labor not just because they suddenly appeared, and there's lots of them today. I want to claim that they have been shaped by particular conceptions of what labor is, and they in turn now shape what labor will be. But, the point is not to encourage a technological determinism *a la* Marshall McLuhan. The idea is to claim that technical objects can embody certain conceptions, but changing conceptions can also transform technological objects.

In the case of the computer, what would it be like to interact with the computer, as if it was a conversation? What would it be like to interact with a computer democratically?

On a different note, this is some idea I drafted while on the RER today:

> *How Can the history of the computer clarify the transformation of labor in the 21st century? Can this history help us understand the way the relationship between artificial intelligence and the changes it portends over work? Could an understanding of this history clarify the way to question the definition of what work should be and the way it shoube evaluated in the 21st century?*
>
> *With this thesis I would like to ...*
>
> *In the first part of the thesis, I will discuss and retell the history of the origins of the computer in political economy and the engineering mentality.*
>
> *In the second part of the thesis, I will discuss the ...*

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