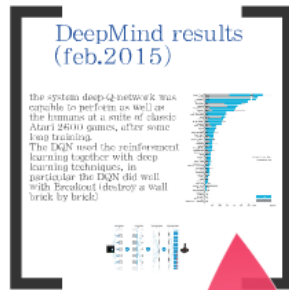


Google AI and Turing's social definition of intelligence

Demis Hassabis vision of the experiment

“humans and other animals seem to solve this problem through a harmonious combination of reinforcement learning and hierarchical sensory processing systems ... the former evidenced by a wealth of neural data revealing notable parallels between the phasic signals emitted by dopaminergic neurons and temporal difference reinforcement learning algorithms” (Mnih, Hassabis, et al. 2015, p. 529).



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So what?

If we accept the representing and intervening connection within science that was underlined from the 80s (Hacking, Latour) we need to assess carefully all AI researches because they are intervening on the representation of the human intelligence. The 'reason' of AI science imposes what is intelligence, and how the brain works, this is a rather puzzling paradox and a true knowledge/object power issue.

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black box philosophy

Turing's social definition of intelligence

Ethics

According to Spinoza there is no ethics rick in itself, it is the output of the social and political environment and judgement.

Ethics and compliance team: "With outside ethics counsel to ensure compliance with all relevant political laws and the associated filings and reports" <http://www.google.com/publicdocs/1486467493.html>

Is the brain a good model for machine intelligence?

According to Demis Hassabis yes, but we need to "better understand the brain's workings at the algorithmic level: the representations and processes that the brain uses to portray the world around us. If we know how conceptual knowledge was formed from perceptual inputs, it would crucially allow for the mapping of symbols in AI language systems to be grounded in its sensory 'reality'" (Nature 23 Feb. 2012, 163)

Michel Foucault on power/knowledge

Discourse is a way of representing things and of concealing things, of making the truth emerge, of concealing things, of rendering them illegible, of making them disappear.

What is and what is not legal?

- For how long the self-driving car will be forbidden in California and elsewhere?
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The power of language in creating object of research

According to Evelyn Fox Keller, a feminist epistemologist.

The creative character of language and its capacity to introduce new categories, to distinguish between things, to create new objects of research, and to create new subjects.

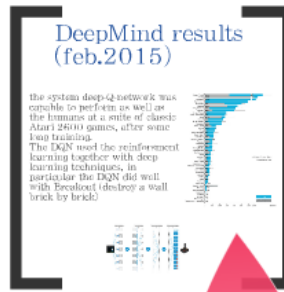
The relationship between knowledge and power is relative to the objects themselves: every representation is a power relation on the object itself.

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Public policy issues

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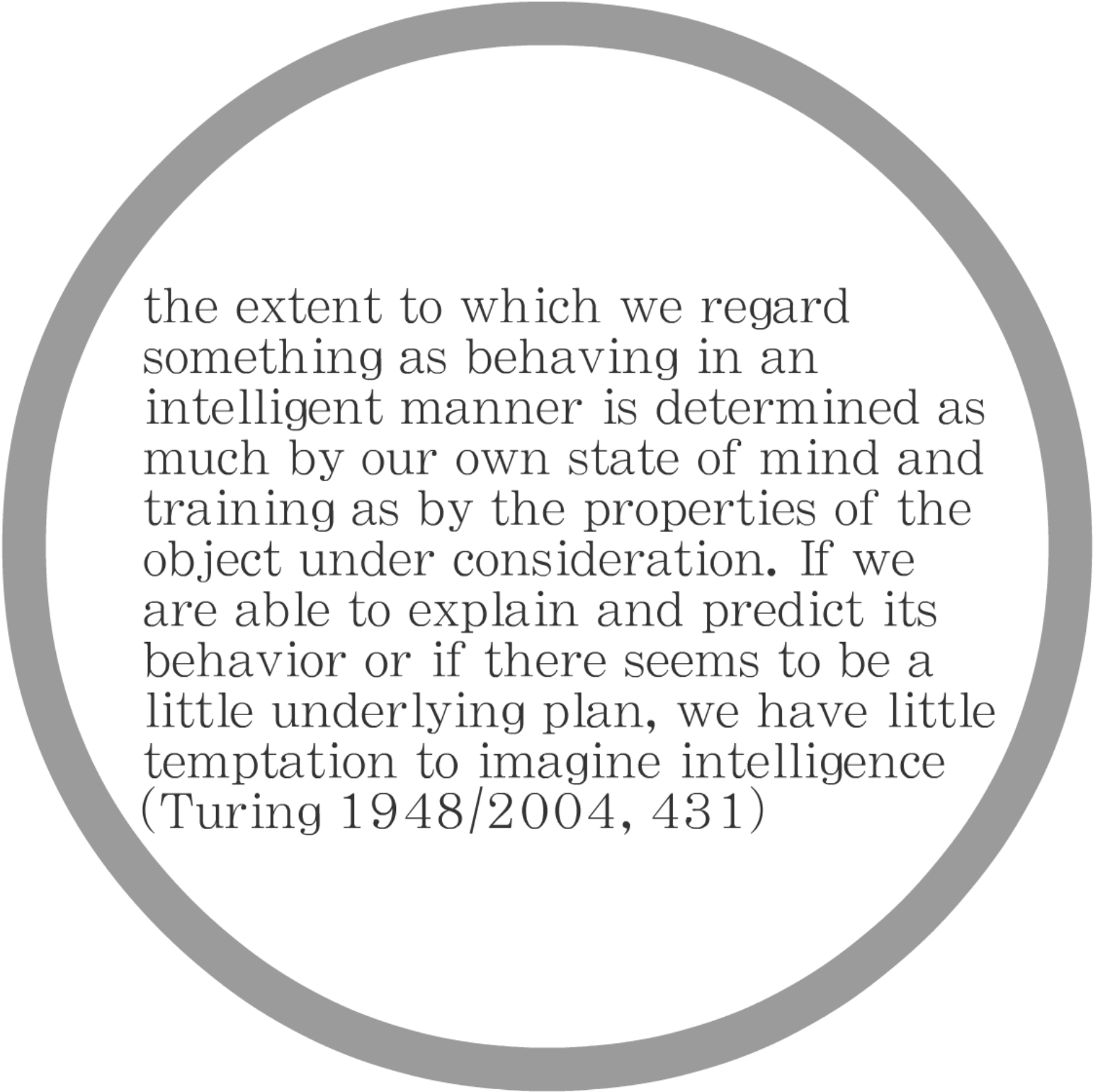
Outline

- Turing's definition of intelligence
- Wiener's concept of black box
- Google AI why it is important for the company
- Knowledge/power in action in establishing the capabilities of the machines

Turing's social definition of intelligence

the extent to which we regard something as behaving in an intelligent manner is determined as much by our own state of mind and training as by the properties of the object under consideration. If we are able to explain and predict its behavior or if there seems to be a little underlying plan, we have little temptation to imagine intelligence (Turing 1948/2004, 431)

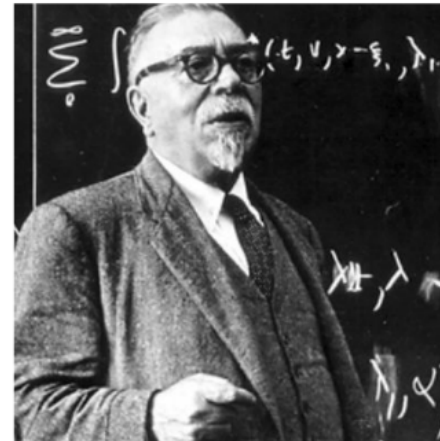




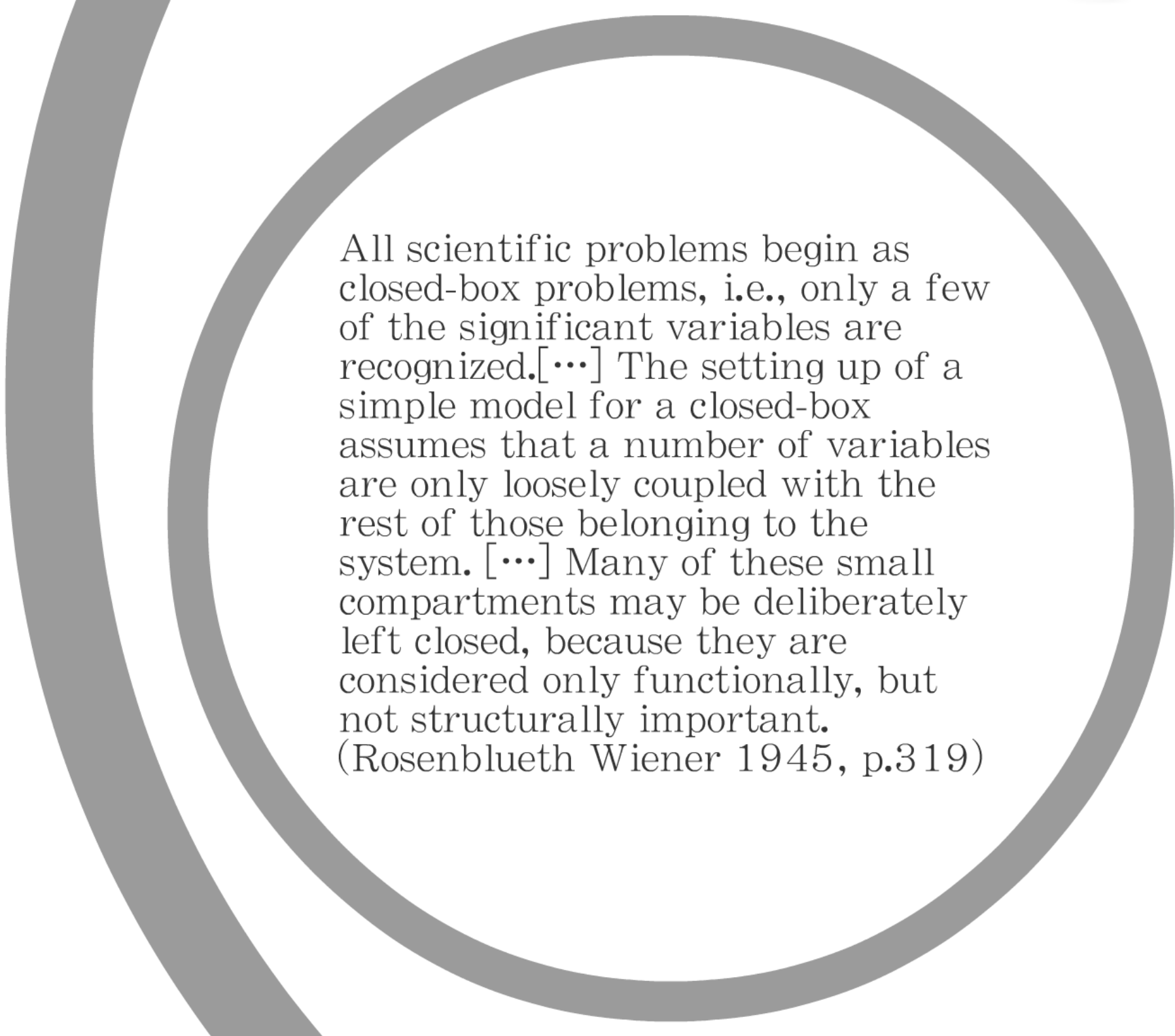
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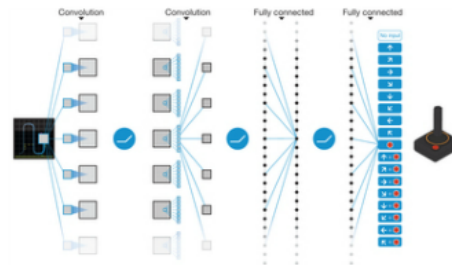
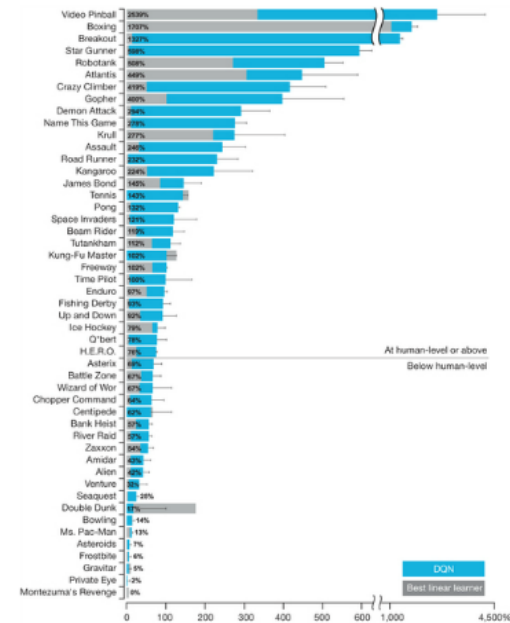
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DeepMind results (feb.2015)

the system deep-Q-network was capable to perform as well as the humans at a suite of classic Atari 2600 games, after some long training.

The DQN used the reinforcement learning together with deep learning techniques, in particular the DQN did well with Breakout (destroy a wall brick by brick)



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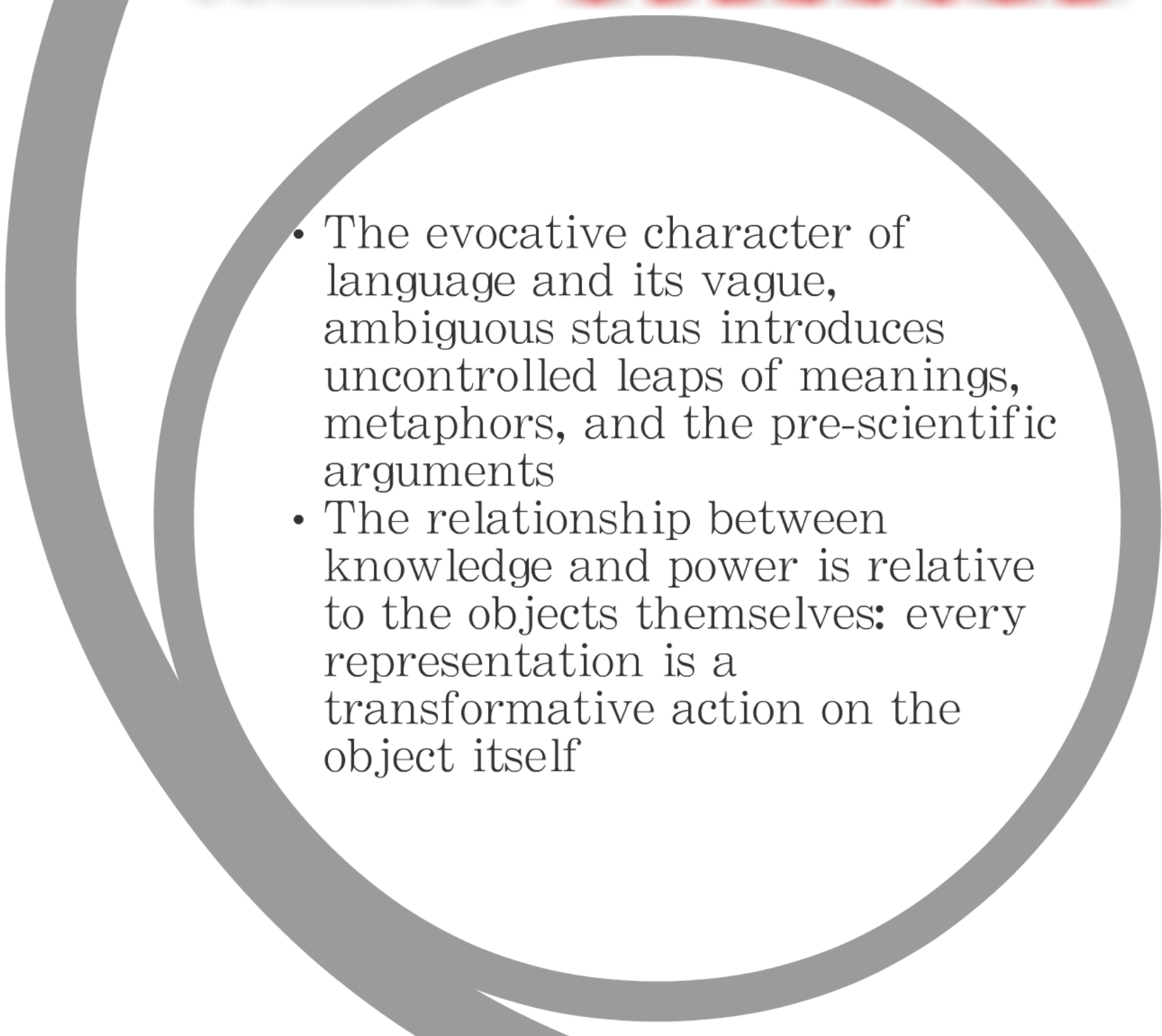
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Comment pourrait être élaborée une conception générale des relations entre la constitution d'un savoir et l'exercice du pouvoir? Foucault 1980, 902

Comment partage-t-on ce qui est légal de ce qui ne l'est pas? Le pouvoir qui est conféré à la loi, les effets de partage que la loi va introduire dans une société, les mécanismes de contrainte qui supportent le fonctionnement de la loi [...] Foucault, 1980, 904

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