



Connecting the World and the Word The Hard and the Soft in Michel Serres's Philosophy

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Abstract

This essay for the inaugural issue of *Technology and Language* builds on work in the philosophy of chemistry and materials science. Like these sciences, it begins in the middle of things and explores the condition of the mixt which precedes the scientific interest in purification. — The essay discusses the difference between the hard and the soft in the writings of Michel Serres. In the real world, there is nothing like hard, brute matter on one side, and soft information, codes, on the other. Not only the body is a system producing language out of noise and information, but everything in the world, whether natural or artificial, is emitting information. We live in an intricate mixt of hard and soft.

Keywords: Michel Serres; Technics and technology; Material cost of symbolic code; Entropic and informational technology; the Mixt

Аннотация

Данное эссе для первого выпуска журнала “Технологии в инфосфере” (“*Technology and Language*”) основана на исследовательской работе по философии химии и материаловедения. Как и эти науки, оно начинается с исследования “смеси”, предшествующего научному интересу к выявлению чистого вещества. В статье обсуждается разница между “твердым” и “мягким” в произведениях Мишеля Серра. В реальном мире нет четкой грани между инертной твердой материей и информационными кодами. Не только тело – это система, производящая язык из шума и информации, но и все в мире, неважно естественное или искусственное, излучает информацию. Мы живем в сложной смеси твердого и мягкого.



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The distinction between hard and soft runs through Michel Serres's works and depending on the context of argumentation it refers to many different things. Hence a mesh of interwoven meanings.

Initially introduced as a mere transposition of hard science (natural science) and soft sciences (humanities and social science), it referred to the physical as opposed to the domain of signs and language.

Breaking rocks, transporting them by the tonne, compacting their sharp edges into a solid mass, demands an energy output measurable in horsepower. On the other hand, drawing letters and crosses with a brush, red on white, recognizing their place within a code, makes energy demands that are not even comparable. The former is measured on the entropic scale, the latter on the informational scale. The former is manual, the latter digital. (Serres, 2008, p. 112)

This contrast is by no means a dualism between nature and culture. Quite the contrary. Serres's major claim is that the hard and the soft do not refer to ontological realms but to two scales of 'energy budget', the difference of magnitude between the entropic and the informational. Relying on Norbert Wiener and Claude Shannon's information theory, he assumed that linguistic work like mechanical work is a struggle against disorder. This tendency toward disorder is named entropy at the scale of thermodynamic machines and noise at the scale of codes and signs. Order is produced out of disorder, information out of noise. Whatever their difference, the two fields are both concerned with energy transfers in a system. Information, whether emitted, transmitted or received, is negentropy ('Origin of language' in Serres, 1992, p. 261). There is no ontological difference between the material world and the immaterial codes and signs but a difference of intensity between the hard and the soft. As they refer to two domains in a continuum, they are commensurable, interchangeable in spite of a huge gap of 10^{16} zeros between them.

In his book *Les cinq sens (The Five Senses. Variations on the Body)*, Serres presents the sensuous body as a blackbox softening the world, a converter of hard into soft. Hard sensory data enter in the box through perception and the output is information and meaning. «Sensation, never pure, filters energies, protects itself and us from excess of it, encodes and passes information : it transforms hard into soft» (Serres, 2008, p. 115).

In his later career, Serres modulated the couple hard/soft in an evolutionary perspective and became more fascinated by the power of the soft and the social-cultural impacts of the digital age. In *Hominescence* (2001) he advocated what he dubbed an «exoDarwinian view» of technology, assuming that all tools, from hammer to computer, are projections of human organs in the outside hard world. He described the evolution of technology as a softening process through three major "revolutions": the invention of



scripture (externalization of memory), the invention of printing machines (second step), and the invention of computers (externalization of brain capacities). To better convey the increasing importance of information in the history of technology, he reformulated the distinction between “techniques” and “technology” in French. “Technique”, he claimed, refers to machines operating at the entropic scale, like the steam engine whereas “technology” (combining technique and logos) refers to machines for exchanging information (Serres, 2001, p. 207). While techniques directly transform the world, the soft machines of the digital age reconfigure the world by changing our way of occupying space and time.

However far from advocating that the soft overtook and eclipsed the hard, Serres insisted on their intricate combinations. In the real world, there is nothing like inert, brute matter on one side, and information, codes, on the other. We live in an intricate mix of hard and soft. In other words the increasing importance of information does not convey human exceptionalism. Scripture and memory are not the privilege of humans. The material world is full of traces and inscriptions that are memory of past events on the Earth. The living world is shaped by the circulation of the genetic code and our genome is the memory of the biological evolution.

But, once again, *who* has memory? Tradition replies: humans, in their cognition, their mnemonic faculty, their traces, written, engraved or drawn, those they decipher. No, for things themselves memorise, by themselves and directly. The past is inscribed in them, it is enough to decipher it from them... Hard things display a soft side; material of course they engram and program themselves like software (*logiciel*). There is software in the hardware (*materiel*). (Serres, 2003, p. 70, p. 73)

Serres claimed that he was above all interested in what happens between the hard and the soft, He insisted on the information buried in the material world, and symmetrically on the hard violence sometimes hidden in language. Words can kill as much as weapons. He could even more directly have pointed at the material cost of computers and internet connections which consume energy at the entropic scale while depleting material resources. Serres so much insisted on the ubiquitous presence of the couple hardware-software that one can say that his entire career has been dedicated to Hermes the Greek god of communication who inspired the titles of five of his early books.

As Serres broke with the structuralist movement in the 1980s, he blamed philosophers for their addiction to language, to the soft, and claimed to turn his attention to the real world, the world of living bodies and machines operating in the industrial world. However while making his “thing turn,” Serres never gave up the domain of language, in the broad sense of a code of signs. In his view, not only the body is a system producing language out of noise and information, but everything in the world, whether natural or artificial, is emitting information. And as a philosopher Serres tried to restore speech to the things, to listen to the world.

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