Technology troughout time

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Leroi-Gourhan

Eric Böeda

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The phenomenon of hominization is the phenomenon of the technisitation of the living.
Man is nothing other than technical life.
Bernard Stiegler

Anthropologically the first sensible material traces of the double man/environment are technical, like André Leroi-Gourhan stated: « la technique est anthropologiquement constitutive »
Eric Böeda

Two things happen in the industrial revolution:
•the duration of technical systems becomes shorter and shorter. They become so contracted that there is almost no stability in technical systems.

•science discovers in the West and then globally, is that technology has evolved over time, as have animals and plants, and thus technology is caught up in the evolutionary process

Humans are fundamentally technical beings, and yet techniques is always unsettling man, who like all other living beings seeks to conserve himself, to conserve himself as he is. Life is fundamentally conservative.

But at the same time life is transformation, becoming. And mainly when it's technical life. In other words: transformation, becoming, alteration.

Techniques, as it develops, gives rise to a third kind of memory for living beings.
In essence: techniques is memory-support.
Bernard Stiegler

When a prehistoric man or woman knaps stone to cut meat or wood, to catch prey and so on... obviously they don't knap the stone to preserve their memory, but the act of knapping preserves in the stone the gesture of knapping permitting the inscription of his gesture in the stone and in fact permitting the constitution of a new memory support for the humans.

Techniques is the question. As soon as I am technical, I am questioning.
Bernard Stiegler

Definitions of technology

Tekne + logos

In contemporary usage the meaning of technology is just the reverse: namely, the rational principles that govern the construction of artifacts – or more simply, the reason of art rather than the art of reason.

"the totality of the means employed to provide objects necessary for sustenance and comfort"

Four components: *material*, *practical*, *informational*, and *purposive*.

The *material component* pertains to the physical machinery (however simple or complex) or *tools* employed toward some end. Tools in this sense could include both bodily and extrabodily apparatuses.

The *practical component* relates to the activities involved in putting tools in motion toward a desired end. This is the active aspect of technology, related directly to its performance.

The *informational component* contains the knowledge base and strategy sets underlying technological performance. It is not unreasonable to define all goal-directed behavior as technological, but we can constrain the informational component of technology to learned behavior (thereby excluding purely instinctive and predominantly genetic coding).

The *purposive component* recognizes that to be technological, deployment must be goal-directed.

The deployment (practical) of tools (material), toward some end (purposive), according to learned methods (informational).

In our own age the concept of technology has become such an established part of thinking on humanity and the 'human condition' that we are inclined to use it as a window through which to view tool-assisted practices of all kinds, past and present, Western and non-Western, human and animal.
Tim Ingold

We can put forward the idea of technology as a total social fact (in the sense that Mauss used the term) involving political, symbolic, social and legal dimensions and with a history linking it to the history of society. We then see technology as humanized nature and as world-making.

People are formed as subjects by the technology they use.
Michel Focault

Technological evolution

Simondon while analyzing the technological evolution conditions underlines that the objects specific evolution is not entirely continuous or entirely discontinuous. It's always necessary to consider the synergic dialogue between the multiplicity of principles and scientific notions of the abstract technical object and the cause/consequence system of the concrete technical object.

The technical evolution of an object is not only concerned with its own operationality, but also with the diverse modes of insertion and naturalization within culture.

On one side the technical evolution is about the capacity of finding solutions for operational problems of an object, on the other side, although simultaneously, its the effect of a specific human function with its capacity of conditioning the technical present for the future, capacity of thinking, imagining and plan the technical future.

To Simondon technology cannot be conceived merely as the myriad of artifacts created by humans to achieve certain goals.
Technology is above all a set of operational strategies mobilized by humans to accomplish individual and collective goals.

The technical object, thought and constructed by men, it's not only constrained to mediate between man and nature, it is a stable mixture of the human and the natural, it contains human and natural, gives to its content a structure similar to the one of natural objects and allows the insertion in the world of natural causes and effects of that human reality.
Gilbert Simondon

La technique, ou plutôt la technicité, serait un des facteurs de création, d'adaptation et de maintien de l'équilibre entre l'homme et son milieu. *Cet équilibre dépend du mode d'appréhension et de représentation du monde vivant par chaque groupe humain. Pour évoluer la technique a besoin de l'homme, de même qu'elle est un facteur déterminant de l'évolution de l'homme.* ***La technique est donc un facteur d'évolution auquel il nous faut redonner sa juste valeur.***
Eric Böeda

The line includes objects that will evolute after a stable technical principle, according to structural demadings and responding to their own rules. There will be a logic of the object that, in the end of the evolution, will lead from the abstract to the concrete.

There is a co-evolution and co-invention between humans and technology. Humans create technology, technique, and technology is a essential factor of evolution and individuation . As the evolution become, the interaction is more and more intensive.

Simplicity or complexity

Precisely how the simplicity or complexity of a technology is to be gauged, however, has remained far from clear.

Comparisons based on the structural properties of the tools themselves can be misleading.

To comprehend the technical accomplishments of hunter-gatherers, or of any other people for that matter, it is not sufficient just to look at their tools. We have to understand their *knowledge*. Tools are of no use if you don't know how to work with them.

Archeological approaches to technology

Although previous studies of craft technology focused narrowly on the reconstruction of manufacturing techniques, many recent studies focus on the role and meaning of technology in society, the relationship between technological strategies and socioeconomic organization, and the social/political implications of differences in technology.
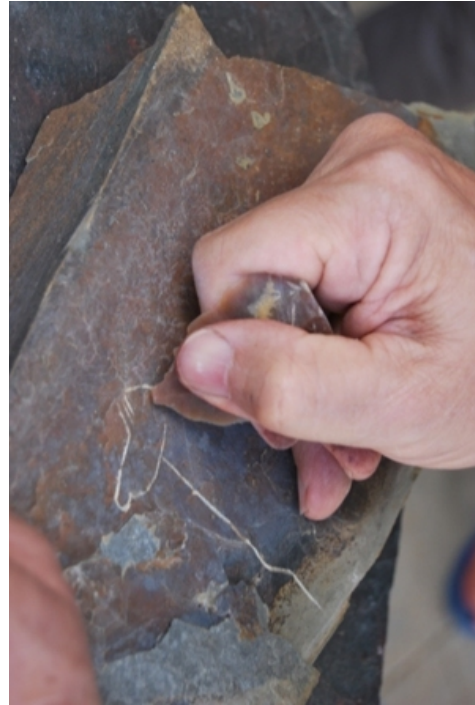
To go even farther, technology can be discussed as ways of *doing* something rather than simply ways of making something (that is, creating an object), so that there are technologies of prayer and of storytelling as well as of pottery production and weaving.

This returns us to Leroi-Gourhan's view of dance as a technology; gesture as well as material culture is important.

Archaeology and the history of technology must continue to exploit cultural studies, anthropology, social theory, and the philosophy of science in order to broaden explanations and to evaluate interpretations.

Past technologies also deserve more attention because lessons may be drawn from them to conform to Western expectations of growth.

Archaeologists have reconstructed many of the ancient processes of production, from manufacturing techniques to labor organization.
These reconstructions are of use for modern artists, craftspeople, labor specialists, and managers, as they portray the strengths and weaknesses—both technical and social—of different pathways to the production of objects.

Thank you!

You know my method. It is founded upon the observation of trifles.
Sherlock Holmes
(Doyle 1988)