

The Internet: a philosophical approach

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Introduction

First, I have pleasure to thank for this invitation Prof. Maria Fernanda Palma, Prof. Olga Pombo, and all the persons who maintain and develop the Doctoral Program of Philosophy of Science, Technology, Art and Society of the University of Lisbon, and also the Faculty of Law.

Second, I feel sad not to be among you, because of this pernicious pandemic, about which I will certainly say a few words.

I exchange with you through a new and unstable medium. And I imagine that the microphone of my computer will amplify my French accent. For this reason, I will also show you the slides of my conference *written* in English. Hence, my face will disappear from the screen and, consequently, the *value of illocution* (concept developed by David Olson) of my conference will again be lowered. These are the cumulative constraints of the pandemic and technology.

Nevertheless, we finish to get used to these problems of communication : due to language, to the specificity of our various knowledges, and to representations of the world. As you know, the role of philosophy is not to reduce these problems, but to make bridges between these continents (archipelagos ?) of knowledge and representations, to organize them and sometimes to forget or refuse some of them.

Method

This introduction may explain the main thread of my conference. I know the advantages of concepts, of clear articulations between them, of overarching analyses (*analyses surplombantes*).

- Nevertheless, I am wary of conceptualization when it forgets the detail. I often prefer the crossbreeding (*métissage*) of thought, the continuity of reasoning, the notion of milieu. In this philosophical method, I therefore share Riemann's approaches, as developed by Deleuze, and those of Jean-Claude Beaune about the milieu : we are inside technology as a fish is in a lake. And the fish cannot put the lake in front of it : the fish cannot objectify the lake.
- The second point is : if I can find a shortcut, a detour that allows me to better understand this environment, that allows me to put forward a hypothesis, I do so. In this sense, I feel in the filiation of Archimedes (with his calculations and his leverage), of René Descartes (algebra), of François Dagognet (philosophy of industry : *L'invention de notre monde : l'industrie, pourquoi et comment ?*), of Jack Goody (writing), of Gilles Gaston Granger (the thought as the convex envelope of calculation, therefore of technique : *Sciences et réalité*).

And I appreciate graphics and simple examples.

Here is the general framework of my approach and therefore of my lecture.

The Internet as a technology

- The Internet clearly appears as a technology, with its computers, cables, routers, data centers, large companies : a technical system (Gille) that deploys from a few specific protocols such as TCP and IP.
- For the public at large, the Internet is the sum of networked computers, tablets, cell phones and similar devices, extended to the online programs people use : search engines, intermediation platforms, route guides, etc.
- In France, the Internet is synonymous with *web* or *(the) digital*. Despite its intense development, which constitutes up to 99% of the Internet in its secular uses, the web remains a branch of the Internet (protocol http). It is difficult to define *the digital*, except to specify its explicit relationship to the number (and maths).
- We can also use the expression « computers in network » as a synonym for the Internet, following Clarisse Herrens Schmidt, who sees the Internet as a new form of writing electronic and reticulated (*filet* : network).

In first conclusion, **the Internet = machines + people + writing.**

What is writing ?

This gives us the opportunity to define writing in two steps.

- It is first of all the sum of 4 components :
 - a system of signs,
 - supports,
 - intellectual and personal activities,
 - and schools.

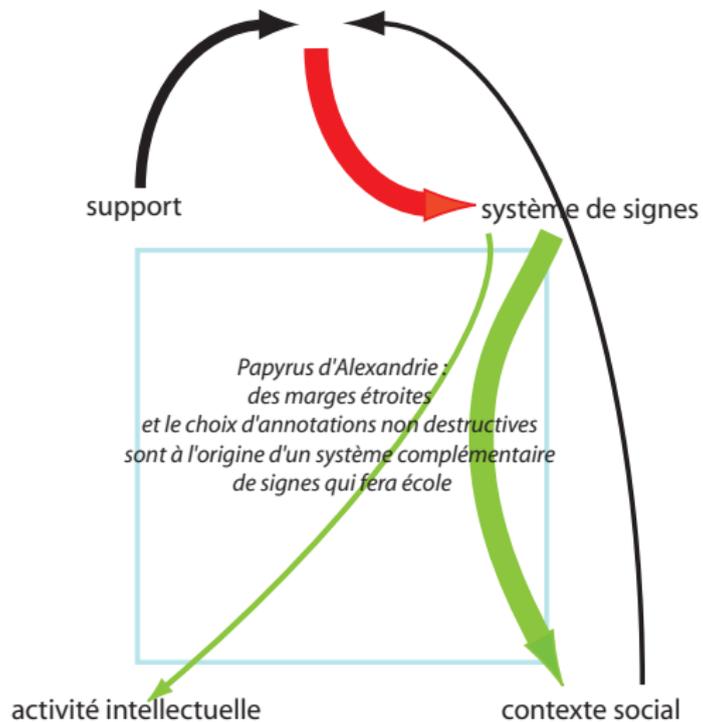
Intellectual activity is manifest when we write and read. Our apprehension of other people's texts and our learning of signs and their uses is not possible without socialization, exchange and learning.

Media have long been forgotten, if not confused with signs, until the Internet.

- In the second stage, writing is the iterated sum of the relationships that are built from these four bases.

Writing is defined by Jack Goody as a *technology of the intellect*.

Writing



Precautions

Two common directions are not so useful when we try to understand the Internet

- Uses and practices. Highly developed, fruitful if you want to design software and appliances, or to do a thesis in communication or marketing. It can be interesting if you look at your own practices.
- Technical determinism, which says that technology influences society. This common theory is wrong and avoids political analysis. Cf. later.

Advantages and inconvenients of the Internet

- Its reveals our practices (as a developing bath in photography) : with these machines, screens and keyboards, we see the material dimension of writing, of our thought. This is a very interesting point. It brings to reflexivity.
- A non-stabilized technique. Mostly because of competition between enterprises (and advertising), protocols, softwares, programming toolkits and appliances change very quickly. We must throw most of them to the garbages (our writings included), we cannot develop a culture of writing. The Internet is a « young technology ». This is a sad point for education.

All this is very quickly explained. For references, see (in French)

<http://barthes.enssib.fr/outils/Biblio-numerique-Guichard.pdf>.

Technology of the intellect

Here are three points I would like to comment.

- 1 Goody has proven that writing is a technology. I hope that this is obvious : we learn how to write, we make exercises, we use a lot of recipes, like cooking. Even dissertations and demonstrations follow strict technical steps. Endly, we often write the same things (shopping list).
- 2 The same anthropologist has shown the social effects of writing ; in the same time, he described the various choices of societies in contact with writing ; he (and many others) also showed the ways societies transformed writing and developed a culture of writing : between a shared know-how (savoir-faire) and reflexivity (questions raised by writing).
- 3 Considering the relationship between the components of writing and know-how, we see that, for the public at large, two components have changed : signs (0/1) and support. These changes induce a new culture of writing, adapted to the new know-how related to these components. We can consider that digital culture is nothing else than culture of writing adapted to digital writing.

Commentaries

- 1 If writing is a technology, we can no more accept the reduction of technology to a tool. Perhaps technology is not objectivable. In other words, the older oppositions (subject/object, thought/stuff) are perhaps fragile.
- 2 Point 2 shows that we are far from technical determinism. Technique and culture are much more interrelated than what we imagine (fact obvious with point 1 : writing is inextricable from culture).
- 3 The changes in culture of writing induced by digital writing is clear. We can give lots of mere examples : how to find a word in a book or in a hard-disk, how to display a list or a graph in 1900 or in 2020, etc. But how many of us are digitally literate ?

If the number of people mastering this new culture of the written word is reduced, it means that we are sent back to societies where few people know how to read and write, and many do not. In this case, as we know, the former have a lot of power (in any field : political, aesthetic, intellectual), the latter have only crumbs. Hence, digital culture may have the same effects than the old culture of writing : (massive) segregation and (reduced) emancipation.

Power of writing

To forget for a few seconds theory and history, and even the Internet, leave me give an example of what writing can do. It even can do demonstrations.

$$1 + 2 + 3 + \dots + 99 + 100 = ?$$
$$100 + 99 + 98 + \dots + 2 + 1 = ?$$

Vertical reading :

$$101 + 101 + 101 + \dots + 101 + 101 = 101 * 100$$

With this planar writing, the sum of the two lines is obviously $101 * 100$.

Hence, the sum of one line is $101 * 100 / 2 = 5050$

Once you know this recipe, do you think that you are clever or that writing can *do the demonstration* ?

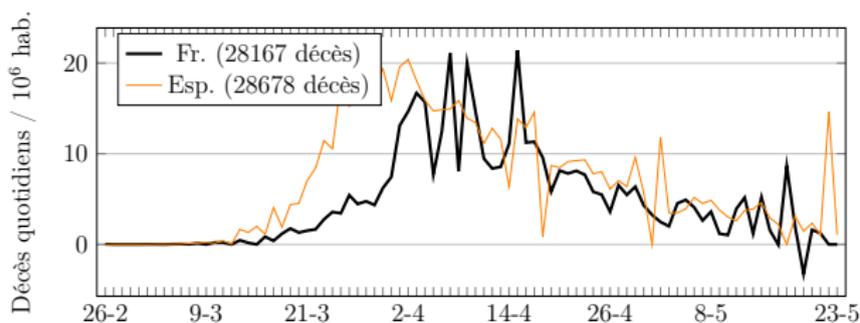
Perhaps the following very useful result can be obtained with something which exceeds pure calculation : pure technique (cf. la pensée comme enveloppe convexe du calcul : Granger).

$$\sum_{i=1}^{i=n} i = \frac{n(n+1)}{2}$$

In fact, many types of knowledge have developed, since Descartes, the practice of planar writing, perhaps just to make the best use of writing, which becomes a second skin. As most of our technologies.

Writing and technology

Let me give a second example, *written* with a certain tool, \LaTeX , to induce the idea of reflexivity : an easy deal with figures (take the daily number of covid-19 deaths, divide it by the population of the country, represent it graphically) helps us to compare countries and brings unexpected results.



Deaths from covid-19. Source : <http://barthes.enssib.fr/coronavirus>.

We are surprised by the erratic nature of this graphic and, above all, by the resurrected : the negative dead, which appear in France around May 19.

To put it another way, writing (and this graphic is pure writing, I can testify to that) teaches us as much about the gravity of a pandemic as it does about the disorganization of state institutions. This opens us up to instructive intellectual perspectives.

Let us trust our favorite technology

Ultimately, technology of the intellect is not a question of new and old, but of the trust we have always placed in writing and of the efforts we are willing to make to : 1. maintain that trust and 2. shape writing according to our desires and needs of scholars and citizens (as we always did).

- It is not more difficult than before. Flora Vern, doctor of law, develops part of \LaTeX (for lawyers), many literary students use \LaTeX and Linux, and so on.
- At the same time, at the French University, and in social sciences, very few know how to write (or read) digitally.
- We may have the impression that digital writing has become easier with blogs, that we circulate easily on the web, that our knowledge is growing. This is largely false. Conversely, we have seen how much a certain relationship to writing can condition (positively) our thinking. Logically, the inverse effects are possible.
- For instance, Paul Mathias wrote (*What is the Internet ?*, Vrin, 2009) : « we are no longer masters of the path of our thinking ».
- The relationship between writing and thinking is intimate. More precisely, the relationship between the writing tools at our disposal and thinking is intimate. It is time to proof how much industrial tools suffocate us intellectually.

The new masters of writing

At this step, the situation is complex : on one side, the Internet, as a present form of writing, is a very accurate « tool » to help us to think, to develop our thought. On the other side, I begin to imply that « the Internet » may hinder our capacities to compare, analyse, synthetize, and reduce our free will.

Roberto Casati (*Contre le colonialisme numérique*, Albin Michel, 2013) insists : « My subject is the colonization of our daily life and our mental life. Digital colonialism not only threatens our rights, but poses very serious problems in preserving our integrity as individuals, capable of knowing, learning and developing ».

How can we say that the Internet facilitates thought through writing and that it colonizes us ?

Before I clarify this point, let me note another one : It is exactly in the face of this type of alternative, in the face of this type of rather frequent discourse, that the philosophy of the technique can help us :

- on the one hand by specifying what a technique is,
- and on the other hand by asking the question of the judgment of the technique, which will be the object of my conclusion.

Industry of writing

I do not neglect the specific research in computer science necessary for an industrial development of the points I will develop. It would be a good opportunity to go back to epistemology, to show the link between computer science and mathematics, between mathematics and the history of science, between the history of science and knowledge.

It seems to me possible to describe the digital industry as a writing industry. This is obvious when we look for a train timetable, when we imagine how Google sorts its answers, when we communicate via social networks. It's all about textual arrangements, word circulation, conditional assignments (e.g. machine translation), systematic use of written orders interpreted by remote machines via writing.

I do not deny the importance of knowledge in these processes : they are complex and numerous. But if there is a difference between the industry of today and that of 1960, it is linked to the monumental place of writing in this new industry.

Alphabet

In 2020, some companies have built up real monopolies around writing, which is, I would remind you, essential in the deployment of our reasoning. Writing is a framework for our thinking. These companies therefore have mental power over us.

Let's consider all the services offered by Google, more precisely by the holding company Alphabet (with our agreement to its Terms and Conditions).

- search engine,
- exchange (with Gmail),
- video viewing (YouTube),
- browser (Chrome),
- phone operating system (Android, 85% of phones sold in 2019),
- itineraries (Googlemaps),
- consultation of books (Googlebooks),
- estimation of the notoriety of colleagues (G... Scholar),
- collaborative writing (G... Docs), etc.

Shell or Facebook ?

Imagine in 1990 buying Esso gasoline, Esso cars, Esso encyclopedias, Esso pens and watching Esso television in a world where our mail would be delivered by Esso.

Wouldn't we have wanted to free ourselves from such an abusive monopoly, if not to worry about the potential abuses of the multinational oil and gas company, which could monitor us and profile our thinking ?

Today, few of us are moved to be tracked (via the GPS of our cell phones), to make their social networks available to Google or Facebook, to inform these companies of their most intimate preferences (emotions, requests, internetic circulation), to obtain search results biased by their own profiles (we do not get the same answers as our neighbors or colleagues).

And this situation now concerns billions of people.

Stolen data

We do not pass on only information of which we are aware. We also transmit the four identifiers of our Android phone and the time we wake up via our phone's accelerometer. All this is stored, analyzed, compared to data from millions of other people, and over years.

Google is the number one digital advertiser, and derives 90 percent of its revenue from this activity. Even in Europe, where the recent law on the RGD (general regulation on data protection) has curbed this voracity towards intimacy, we live in an era of total surveillance. This sad technological imaginary, not very compatible with the concept of free will, has only one goal : to sell us by compartments.

Thus, in a decade or so, the multinational Internet companies have gone from being service providers to being gigantic advertising companies that singularize us to a degree that we cannot imagine : to sell data that concerns us, without our consent, without us obtaining the slightest financial compensation for this predation. G. and al. multiply the invasion of our privacy, trade their abuses, and moreover, ask us to accept this status of consenting victim via the TCU (*CGU*).

These companies are in the process of acquiring information about our health and intend to resell it at a high price to the States, pension funds, etc. They can also sell us to political parties (cf. American elections, 2016).

Law

We will need laws, both national and international, that prohibit this trade in our actions, our curiosities and what makes us intellectually and culturally (a big job for lawyers).

We know that such laws do not go against the economy. Numerous examples attest to the fact that an industry rebuilds itself in less than 10 years when a ban (such as child labor in the 19th century) forces it to transform itself (Feenberg).

Such a political project is therefore realistic. It is a first step towards reappropriating the common good of writing.

Method for critical thinking

In order to deploy effective critical thinking, but also to continue to understand what the Internet is, it seems fruitful to me to adopt a three-pronged approach.

- 1 Prove that we can read, write, document and communicate without these multinationals.
- 2 Understand what made their success, discover that their recipes are centuries old and to reappropriate them to us.
- 3 Explain theoretically what happens with digital technology : anthropologically and philosophically. A way to fight the magical thinking, so deeply rooted when we talk about digital.

I won't have the time to go into detail about this three-pronged approach.

Forces at work

- 1 I would like to recall that mastering contemporary writing and identifying initiatives or places of high quality production makes it easy to emancipate from these monopolies. The process of knowing how to read, write and think today is in (almost) all respects in line with that of the 17th century.
- 2 The Gafams and their Russian or Chinese equivalents are simply applying what has made the success of places of knowledge at all times, of European universities over the last two centuries : interdisciplinarity, intellectual (thinking about the link between technology and culture) and scribal audacity, understanding of what makes a scholar famous (his originality, his ability to bring disciplines together : cf. Bachelard), recognition of the importance of ancient knowledge, and therefore of ancient books. Finally, focus on statistics and typography : knowing how to count and how to write, in the most banal and profound sense of the term. In short, as in 1450 : cf. Gutenberg + the so-called Arabic numbers + the taste of the contemporary.
- 3 Finally, the reference to the literate worlds and the great cultures of the past allows us to understand the importance of a widespread *literacy*, the role of writing. The link between writing and critical thinking is obvious. The link between technique and moral values remains to be clarified.

Summary and opening

We have seen with writing that the technique is a rather intimate thing, less easy to put at distance than expected, and at the same time very collective : shared.

It is something that can be appropriated, diverted : for emancipatory as well as coercive purposes (religion), to maximize one's power or benefits.

It seems possible to fight against its monopolizers, especially in societies under strong law such as ours. Nevertheless, it is sometimes more complicated than expected, as we see today with the Internet industry nebula.

It remains to be seen whether we can judge the technique as we can judge the individuals who appropriate it. We do it often.

Here, a triple problem appears :

- Is it logically possible to judge technology ?
- How to make the technique humanistic ?
- What to do with general speeches on technology, industry, capitalism ?

Let's start with the third point (then the second. . .)

Capitalism ?

Accusations directed at the Internet and technology on the grounds that they are produced by capitalism are fragile.

- Not all of our online tools come from industrial players who aim at the decerebration of their customers. The example of Wikipedia shows that altruistic projects exist and that the association between capitalism and industry is not systematic : Wikipedia is an industry without shareholders or owners.
- Many of the tools we use are quite old and have been invented outside industry (at university) or supported by states, like the USA 30 years ago.
- When we begin to mix ancient and modern industry or capitalism, when we evoke a machinic world order that would appear to be oppressive and guilty, we often revisit history and put technology, industry and capitalism in the same bag, the accusation addressed to the latter being almost automatically transferred to the first two terms. Rather than quoting (well-known) authors who hold this belief, I suggest reading Valérie Charolles and Andrew Feenberg, who remind us that things are more complex, more subtle.
- Finally, our criticism will be fragile if it conveys beliefs and paradoxes : the idea of a dehumanized modern world, of an ideal ancient world, etc. Dagognet has shown that ancient times were not enchanting, that industry produces furniture, houses, instruments impossible to produce by craftsmen and more reliable in terms of safety.

Spiritualism ?

Our perception of the world is logically influenced by masters of thought who have sometimes done great damage at the University. I will mention just one of them.

Technique does not carry values by essence. The anxiety of a Heidegger faced with a technique that would henceforth be monstrous, such as the hydraulic power station that no longer has anything to do with the good « old windmill » is meaningless, except to imagine on the one hand a face-to-face between Man and technique, and on the other hand a transmutation of the latter that would give it definitive autonomy.

We can appreciate Heidegger's poetry : « In the realm of these consequences, which follow one another from the introduction of electric power, the Rhine River also appears as something committed. The power station is not built in the Rhine's current like the old wooden bridge that for centuries has linked one bank to the other. Rather, it is the river that is walled up in the power station » (The question of technology, p. 20–22).

But it can't do anything with it. For we know that the modern wind turbine will not wall up the winds and that the idea of nature has also been forged by Man (concretely and conceptually).

Moral values of the technique

Moreover, the technique is certainly plastic, easily reformable, but it is neither neutral nor does it carry intrinsic values : it carries values, inserted by humans : the prohibition of child labor in American textile factories in century 19, incorporated into machines at adult height (Feenberg), the cult of liberalism and enterprise (the *start-up* in the French Internet, private bus companies against the national railway company) and of course, many safety measures built into machines, such as seat belts for automobiles or simply, aesthetics integrated into technical objects.

Simondon is explicit on these points, and uses the word « value » four times in his brief introduction to *Mode of existence of technical objects*.

It is up to us to insert these moral values into the Internet and to eliminate those we do not like today. Incidentally, this means that the political stakes of technology are perhaps more important than those that carefully avoid it.

There is a lot of work to be done here.

Temporalities

We showed before this fact : it is not the technique that must be judged, it is its monopolizers, owners. Let us specify in spite of everything the impossibility of judging a technical form that is widespread and has been in existence for several decades or centuries.

A technical object that is widely socialized, that is to say, that has a social penetration (and importance), like the passenger train today, sheet metal or the bicycle (Edgerton), is the result of a technique that has been profoundly hijacked by uses, polemics, economic competition, a whole lot of factors that have become diluted in its history and that it is difficult to disentangle from each other, let alone accuse.

Moreover, such a technical object is now the emanation of a technical system : a complex combination of human beings with their know-how and their representations ; of protocols, inventions, concretizations whose future has oscillated between authoritarian choices and alliances, legislative decisions and ingenious solutions to delicate problems (mechanics is reluctant to take the easy way out), unforeseen detour or borrowings from other know-how that are the source of new norms. Finally, a complex culture.

In short, let us not address to things, however sophisticated or material, intentions or lawsuits that we dare not address to (groups of) humans.

Present techniques and abuses

I repeat it, my purpose is not to produce an idyllic portrait of the technique. We are aware of the fact that our world is unequal and cruel in many ways, and that many monopolies and hijackings of technology (as in today's Internet) are the cause of rapid enrichment, denial of solidarity, forgetting that we are all the same.

The opportunities, the effects of enchantment and the corollary alienations are more common when a young technique appears ; and therefore difficult to stop.

It is up to us to extend the work of investigators who identify abuses, violations of rights or freedom, enrichment and spoliations too quickly.

We must fight against the excessive profits that follow, especially if they are based on a growing illiteracy whose political effects (rise of populism) become evident.

But the matter is all the more complex because this recent history does not fit in with the long history, where technical appropriations and misappropriations can be spotted, where critical thinking and culture have been able to redeploy.

Three culprits

By way of humorous synthesis, I will deliver three culprits to the judge :

- The owners and monopolists of the technique, including forms of theft that go as far as that of our identities, of our intimacies.
- Some of the great systems philosophers of the previous two centuries, who often despised technology as much as they kept away from mathematics. Let us not forget their importance in the training of the European elites, especially the Latin ones.
- Us! With our will to make simple, to prefer large generalizations to the fine and thorough study of techniques (here Simondon can help us).

The technique is **innocent**.

Is the technique objectifiable ?

The basic question is : does the technique belong to us, is it part of us or is it outside of us ? For a long time we have opted for the second answer, which makes the process of the technique possible.

The examples of misappropriation given by the historians of technique call this approach into question, as do the obvious links between technique and art, between technique and literature.

How can we think of the exteriority of technique when we write with computers that run on electricity, like our refrigerators ? When we travel with bicycles and cars ? When our bodies are full of prostheses, from glasses to telephones, bone spits and dental fillings, when we survive thanks to medication ?

In a certain way, computers resolves a paradox : it is because writing appears to us as an external phenomenon, produced by machines, that we understand that there are techniques that we cannot put at a distance : objectify. Writing is such a technique, based on learning, know-how and recipes.

Back to writing

Like any technique, writing will make people talk about it. Especially since it carries a major disadvantage and an advantage. As for the inconveniences, it is profoundly dysfunctional (like any technique?). It transcribes speech very badly, even more so if it is reported.

It took 4500 years to build a writing system with minimal hermeneutic reliability. Previously, problems of interpretation were recurrent, they fed multiple comments and reflexivity.

Today, writing is back to its dysfunctions that we thought were over : witness the rapidity with which conflicts unfold following a hastily written email, our anger when faced with a program that refuses to work because a semicolon is missing, or that refuses to open a file.

Reflexivity

The advantage of writing lies in its reflexive nature : one can explain what it is in writing. Goody remarked that it is the only intellectual technique with the language that has this disposition : we will never be able to explain what calculation is with logarithmic tables or with slide rules. This reflexivity combines quite well with our need to comment on the effects of writing.

These debates, combined with the (slow and often painful) learning of the technical and also deeply socialized aspects of writing (cf. grammar) lead to a culture of writing.

The technical, scholarly and reflexive dimensions of this culture are obvious. This is why, since writing is « digital », digital culture is this culture of historical writing, declined in contemporary forms.

It is still in its infancy, still to be invented, and will not be transmitted or stabilized without efforts nor institutions. It will be our second skin, just as the culture of the printed word was.

But where then lies the supposed difference between culture and technique ? It seems to have been destroyed, just like the one of a frontier between man and technology.

Let's acknowledge to the Internet to offer us this evidence, which seemed unthinkable for many centuries.

Conclusion

The technique is too intimate to be objectifiable. It often has a reflexive dimension, as writing and the internet show us. It allows us, through all the instruments, standards and methods we make, to live our world to the fullest : in an experience that makes sense, and therefore more than science, always a little distant. This experience takes us away from philosophical concepts that were forged a long time ago. Matter (Bachelard), nature, and the subject itself can no longer be defined in the terms of the ancient Greeks or even in those of century XVII.

Our relationship to the world, our representations arouse our desire for technique and are in turn influenced by what we *make* in collectives.

Is it still necessary to draw a boundary between the immaterial (mental, social) and material (referring to an external tool) constructions that we construct ?

Our thinking is mostly technical and we tend to think that sharing this technicality promotes reason, dialogue and peace. Perhaps it would be appropriate to make sure that the greatest number of people can benefit from contemporary « technical culture ».

And philosophy would gain in unity because it could be harmoniously merged with the philosophy of technology.

Merci

Thank you !

Eric.Guichard@ens-lyon.fr

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