WEB METAPHYSICS BETWEEN LOGIC AND ONTOLOGY

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Abstract

One of the possible intersections between the Web and Philosophy lies in the use of the term 'ontology' by the Web architects. Indeed, the term "ontology" belongs to the classical vocabulary of the branch of philosophy called Metaphysics, which is concerned with the very nature of the world. Considering the Web as a form of (virtual) world, one could very well apply traditional philosophical questions to the stuff of this universe. Is it made of items (datas), processes (actions), or even things? What kind of ontology do we need to describe it? In this paper, we will argue that philosophy should focus less on ontology than on logic (namely, semantics) to tackle the issue, therefore slightly changing the way the problem is set. We shall take the case of Web Translation as an example. In so doing, we will show that a philosophy of the Web is justified to the extent that it somehow plays the role of psychoanalysis of culture, beyond the idea of a Critique (Kant) and of a psychoanalysis of knowledge (Bachelard).

Keywords

Ontology, Metaphysics, Semantics, Translation

INTRODUCTION

Whether the Web is a genuine philosophical object or just another fashionable way to recycle traditional concepts (the Web as a "rhizome"), authors ("Deleuze and the Web"), issues (is the Web a "real" world?), or disciplines (aesthetics, ethics, theory of knowledge) by applying them to a new (and shiny) domain can hardly be discussed *from a general point of view*. Rather, it might prove more efficient to tackle the problem through the investigation of a *precise* question (Web translation). In fact, such an inquiry will reveal that the metaphysics of the Web hesitate between two different possible orientations –let alone the normative aspects, in particular the legal ones (is the Web a public space? Do Web contents constitute a common good? [6]). Indeed, one might want to question the *ontological* nature of the Web, its "stuff" as a space of information and a virtual domain of action (digital environment): what is it made of? Items (datas, metadatas), processes (actions, operations)? What are their relations? But one might also question the relevance of this question, which leads to the current proliferation of ontologies. Isn't the focus on ontology the symptom of a misconceived theory of signification that links meaning to reference (datas) and inference (operations on datas, through metadatas)? A critical investigation into semiotics could show that the so-called ontological issue is in fact a semantic one, by unveiling an unconscious dimension of the metaphysical problem.

AN ONTOLOGICAL TURN?

The development of the Web has given way to many attempts of constitution of "ontologies", to the extent that their multiplication may give the impression of a permanent confusion, due to the uncertain nature of the Web individuals (documents, datas, resources?) [9]. Are ontologies the new battlefield of contemporary Web Metaphysics, or just the product of a rational misconception? Could a *critical* inquiry distinguish, in the concept of ontology, what concerns semantic networks (such as WordNet, for instance) and what concerns the traditional philosophical issue of the description of the world and of its majors elements (substances, categories, etc.)?

From a historical point of view, even if computer scientists declare that their 'ontologies' have nothing to do with the philosophical concept, we must note the analogy between their positions and the positions of the Logical Positivism in the 1930s [2]. Also, from a philosophical perspective, the link between semantics and ontology only seems obvious when word analysis implies the description of the world materials; that is: when signification is conceived as directly linked to reference (and sometimes inference, as opposed to difference), as it is the case in the logical and grammatical tradition [12]. For instance, for Aristotle, words refer to substances and accidents, according to a hierarchy that is to be discovered both in the language and the very stuff of being. Now, this lexical conception of meaning is precisely the one pervading the WordNet ontological project and its hierarchy between first, second and third order entities (from the Aristotelian list of categories, turned into a list of top concepts, to the individuals). The problem with this type of onto-logical classification –with the Porphyrian tree, and its wide use of the genus/species difference, as its paradigm– is that it rules out competing conceptions of meaning, upon which insists other linguistic tradition. Namely, the rhetorical, hermeneutical (and structuralist) approach underlines the importance of interpretation. If representation is the norm of language, then synonyms are a problem (how can two words have a different meaning, if they have the same reference?); but if interpretation is central (and not subsidiary) to the comprehension of meaning, then the context is to be taken into account, to the extent that there hardly exist any synonyms (they are individualized by their concepts). As a consequence, one must consider whether so-called "ontological" disputes concerning the Web mean actually anything more than semantic problems.

A LOGICAL (SEMANTIC) INQUIRY

As François Rastier argues [11], the Semantic Web, as originally designed by Tim Berners Lee after the model of formal ontologies, is a hierarchy of hierarchies. Its positivist vision of "datas" therefore only reproduces the above mentionned ambiguities of the referential conception of meaning. A proper semantics, on the contrary, could address the difficulties of information retrieval in another way. It would imply to conceive the semantic web as a social semantic (or a hermeneutical, or a pragmatic) one [13].

Interpretation, as a meaningful creation process, would not be conceived as secondary (in comparison with a set ontology) but as constitutive (along with a dynamic vision of signification) [12, 10]. Datas, which are supposedly given, neutral and non-interpretive, would be better understood as a complex construction. Instead of pretending to ground Web Semantics on a pile of standardized layers (as in the famous "layer cake"), one would rather imagine a flexible Semantics for the Web, consisting of a dynamic process including a document (with a testimonial value, submitted to description, revision and signature, according to a particular inquiry), interpretation (heuristic modelization), intersubjectivity (rational comparison of different points of view, organization of the conflict of interpretation) [1].

These remarks can be particularly well highlighted through the examination of the case of translation. And this is no coincidence. Indeed, one must insist on the importance of translation for the philosophy of language. It is an epistemological guide, which reveals the central role of interpretation in semantics, and which is all too often neglected by rigid positivist conceptions of meaning (e.g. in logical positivism, but also in the computationnalist view of cognition) [8].

WEB TRANSLATION AS A CASE STUDY FOR METAPHYSICS

According to Gilles-Gaston Granger, the "dream" of Contemporary Reason consists in the desire to create machines that could produce singularities [7]. For instance, machine translation would –allegedly– automatically produce individualized texts translated from an original source into various languages. Now, one has to distinguish between two cases of machine translation: the grammatical approach focuses on grammatical rules (as in the original Systran device); the statistical one on most frequent uses (a device made recently popular by Google Translate). However, both focuses on regularities rather than on singularities, which are equally important in linguistic productions, as the romantic and hermeneutic traditions clearly stated [4,5]. In order to get the best of the two worlds, many machine translation tools try to combine both regular approaches (as the new Systran). Still, they fail to reach the accuracy of human translation. Consequently, most computer assisted translation tools nowadays combine automatic translation with a human 'retouch' device, such as the Google Translation Toolkit, thus providing users with the ability to modify an automatically performed translation, while building their own translation memories [14]. From a critical perspective, such an evolution is actually not surprising, since it is obviously trying to make up for an all too often neglected dimension of language – its creativity.

As Rastier remarks, when people make fun of inadequate automatic translation, they fail to notice that this is less due to the performance of the machine than to the inappropriate underlying theory of translation [12]. Indeed, if the knowledge of rules is required in order to translate, it is however not sufficient. One does not translate from a language to another, but rather from a text to another one; and, in so doing, one does transform a system of norms into another one. And these norms cannot be reduced to the existence of grammatical or statistical rules, but they also include cultural categories, for instance: genres, styles, centuries, etc. For instance, in order to translate a play by Oscar Wilde into Arabic, one must construct an equivalent of the genre "theater" in the Arabic culture, where there existed no such thing before the colonial period.

One could therefore imagine to build a computer assisted translation device that would proceed in a different way, starting with human translation and using automatisation only for suggestions retrieval: such is the philosophy underlying the TraduXio project [16]. One does only use the machine to consult the concorder, browsing for relevant segments within a specific set of texts. Such a tool could help to build corpora in a reflexive and problem-oriented way, rather than in a merely quantitative perspective [4]. Not only does it illustrate the idea of a paradigm shift in Artificial Intelligence, switching from Machines that think to Machines that make people think [1]. But it actually stresses the crucial role of interpretation in semantics and, consequently, underlines that the issue at stake in "ontologies" is less a truly ontological than a *semantic* one.

CONCLUSION: WEB PHILOSOPHY AS PSYCHOANALYSIS OF DIGITAL CULTURE

The Web is a world of *meaning*, that is: of meaningful documents, and not a set of datas. It is therefore a complex universe that cannot be reduced to a composition of atomic items ("simple" datas), which could be organized in a rigid way (fixed "meta-datas") through the identification of robust standards. By unveiling the unconscious aspects of current ontological investigations, philosophy helps to convert Web Metaphysics from an ontological problem to a semantic one. The question switches from "What kind of world is a world of datas?" to "What is the meaning of these documents and corpora, according to what people do with them?" Hence the idea of a *socio-semantic* or *pragmatic* Web, based upon the idea of an interpretive semantics.

In so doing, philosophy does not criticize the power of reason in order to avoid confusion between representations and reality *per se* (phenomena and noumena); nor does it aim to limit the dogmatic use of reason by restricting its relevance to its empirical domain. Rather, it plays the role of a cultural psychoanalysis, beyond the traditional function of *critique* (in the Kantian sense) and the idea of a psychoanalysis of knowledge (Bachelard), which is tantamount to uncovering the unconscious that pervades the rational conception of the world and hinders objectivity. In the case of Web translation, the unconscious fantasy of contemporary reason (after Granger: to build machines that could produce singularities) clearly implies a misconception of translation and of semantics itself. Excavating this unconscious desire of our reason might help us to understand better our language, and therefore change our vision of the mission and scope of its automatic treatment.

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