Philosophy of the Web as artifactualization

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Hypertext? Hypermedia? Information system? Universal medium? The Web received many descriptions over time. It has also evolved as conflicts erupted between companies aiming to secure a leadership position on the market, from the browser war to the search engine one, until the most recent raging battle around social networks. Yet, while the “ecology” of the Web has known many a revolution, in contrast, its underlying “architecture” remained fairly stable. URIs, the HTTP protocol, resources and languages like HTML or, with the advent of the Semantic Web, RDF, constitute the building blocks of the Web.

Among them, URIs, the universal identifiers of the Web, have been called “Web proper names” (Halpin & Thompson), an allusion to logical or philosophical proper names, a central topic in philosophy since at least the pioneering works of Ruth Barcan Marcus. Much of the architectural work accomplished by the TAG (the W3C Technical Architecture Group) was devoted to URIs and, accordingly, has been almost exclusively philosophical in nature. Tim Berners-Lee himself, in his design notes, developed a rhapsodic philosophical reflection where the core orientations of the web were elaborated. Later on, this was subjected to a more systematic treatment with the creation of the aforementioned TAG, in charge of “not breaking” the Web by warranting the consistency and systematicity of it constitutive principles. As Henry S. Thompson, one of its members, puts it, “the TAG deals exclusively with philosophical questions” (sense, meaning, reference, formal semantics, logic, proper names, etc.). It forces us to reckon, as a direct consequence, that a concept like that of proper name has been instrumental in shaping the Web (although it took some time to clarify the statute of URIs, URLs, URNs and URCs and make sense of the Web - even reduced to its most abstract architectural guise).

URIs, by providing their conditions of identity, do no less than identify entities on the Web. But they’re no longer called like that for on the Web there only exists “resources”. While high-order ontologies like DOLCE have continuously tried to provide distinctions between endurants and perdurants (categories that mainly apply to substances), the ontological characterization of resources has relied on vastly different principles, stemming first and foremost from Web specifications (what Tim Berners-Lee calls “the protocol”).

Following these examples, we would like to draw a parallel between the Web, according to its standards, and philosophical systems (in French analytic philosopher Jules Vuillemin’s sense). Like the former, it is concerned with traditional issues pertaining to the philosophy of language (URI as proper names), to ontology (the link between computer ontologies and philosophical ones) and metaphysics
(entities of the Web becoming resources). Unlike philosophical systems, however, the Web is a world-wide technical artifact. As such, it defines a whole new set of constraints. We suggest that these constraints should be understood as some kind of material a priori (in the husserlian sense of the word) grounded in history and technology – in other words, facticity.

One of the most pressing questions that this vision raises relates to the statute of traditional disciplines. In a heated debate between Tim Berners-Lee and Patrick Hayes over URIs and their capacity to uniquely “identify” resources (a condition for not breaking the web), two visions collided: Berners-Lee’s definition of “philosophical engineering”, where engineers decide how the protocol (hence the system) should work - not unlike gods, and Hayes’ own insistence that some truths (here, grounded in formal semantics) transcend such decisions. We interpret this duality as an opposition between a formal a priori and a material one (whose study might require more than a mere decision). Interestingly, Hayes, in his 2009 keynote at ISWC, spoke of a logic for the Web, called Blogic, where proper names are in fact URIs (and, let us add, where referent automatically become resources), thus adding to the formal level constraints peculiar to the Web.

Eventually, what the Web does to philosophy is what we call “artifactualization”. A process where concepts become “embodied” in materiality - with lasting consequences for this discipline. What happens when logical proper names take the form of URIs or when entities become resources with the mediation of the Web? The paradox is that while for the first time some philosophical concepts now exist in a concrete, material form, at the same time, this process tends to lend them some radically new characteristics, largely transforming them into something else. Heidegger posited a filiation between technology [Technik] and metaphysics (considered as the essence of modern technology). This takes a whole new sense now that technology realizes the Western metaphysical project by inscribing its categories directly into concrete matter. Yet, if technology is grounded in metaphysics, it is no longer the result of a metaphysical movement but of a contingent history, full of surprises and novelties. Granted, the activity of standardization in most fields arguably consists in making sense of the technological evolution post hoc, by giving it a backward interpretative glance. Nevertheless, regarding the architecture of the Web, one may argue that its standards were either the result of a process of conscious decision-making by specifying how things – or the protocol – should work or the result of a constant adjustment to the reality of the technical system – with best practices in mind. The very idea of a “Web Science” reflects this ambivalence. After all, the Web may equally be seen as an artifact, a human invention, or as a non-human (to borrow a concept from Bruno Latour), whose study may lead to numerous unintended discoveries.

For all these reasons, the very practice of philosophy is deeply changed by the Web. Once concepts have been artifactualized (and, as a consequence, externalized), thinking, in the full sense of the word, is also doing or conceiving; in the end, a matter of design. Philosophers then have to deal with concepts that may have a lasting effect in spheres like economy, industry and the likes, not just as symbolic objects pertaining to the history of idea (or to ideology) but rather as concrete artifacts. Richard Sennett’s craftsman’s motto might be “doing is thinking”; once concepts have been artifactualized and the mind externalized, thinking is doing.