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Although it was initially an "Information management proposal" [1] the Web really is a successful « application integration platform » [2]. More importantly, it is both. It is a self-documenting hypermedia system for application and information integration, and that makes the Web very special. Just like it is important to propose a Web of linked data and distributed RDF knowledge graphs as an alternative to data silos [3], the Web must also support an alternative to intelligence silos and thrive to host a wealth of distributed artificial and natural intelligence forming hybrid communities [6] and managing distributed resources [10]. This is a call for hMAS: Hypermedia Multi-Agent Systems [4] [5].

Among the success factors of the Web are a number of non-functional properties purposefully enforced at design time including: simplicity, generality, portability, extensibility and the systematic search for compatibility [8]. For instance, the simplicity meant, at the time, accepting to simplify solutions (e.g. SGML vs. HTML, HTTP vs other protocols) but also proposing viral approaches for adoption to learn to "weave by weaving" including copy-paste facilities of Web pages codes to start to contribute and what will later become the wiki-way too. The fact the Web proposal was put in the public domain by CERN in 1993 was also critical in reaching the threshold in volume of attractive resources and trigger the network effects and Metcalfe's law. All these lessons learnt should be kept in mind when specifying hMAS.

Making autonomous agents a first class abstraction of the Web architecture requires importing important MAS concepts (environment, workspace, platform, situatedness, observability, organizations, norms, regulation, interactions). But to maintain extensibility

and forward compatibility hMAS must be a friendly architecture for all types of agents [9]: reactive vs cognitive, knowledge reasoning vs connectionist, stygmergy-oriented vs contractual protocol ones,... In this picture, semantic Web and linked data [7] have a key role to play both in weaving the hypermedia fabric for the agents' environment and in providing the semantics to capture the key concepts of hMAS in ontologies to ensure interoperability. Extensible top ontologies are needed to setup the architecture and support extension by domain-dependent and task-dependent ontologies needed for practical concrete applications.

Linked data also come with solutions and concepts to be used and aligned with hMAS for instance LDP [11] principles and containers or languages such as SPARQL to manipulate RDF data, SCHACL to validate and exchange constraints, and extensions such as LDScript to program on top of linked data [12], a language that could be a candidate to align with agent programming languages. For instance, the notion of norms in MAS could be positioned w.r.t. rule languages and validation languages like SHACL which use cases already include both the validation of outputs and inputs of a software and the validation of interactions with a human like we would have in hybrid communities.

In parallel, Web of things, thin servers [13] and Digital Twins [14] are giving more and more substance to the Web resources that shadow physical resources. The URI could lead to more and more informed Web resources and put in touch a variety of digital twins and autonomous agents with the potential of supporting multi-model approaches at an unpreceded scale. Here again, the linked data framework holds the potential for deeply linking all these models [15].

To conclude, one of the hardest tasks for Tim Berners-Lee in the early 90s was to make people imagine a world with a fully deploy Web. Years later, it is hard to imagine a world without the Web. We have the same cold-start problem with the hMAS and we need to find incentives for this change to happen and to reach the threshold in terms of usage that will trigger the network effect and make it go viral. Therefore, together with a proposal of a standard architecture, we need to find incentives and added values for hMAS to be taken on by industry and developers.

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