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Research pair outlines new field of 'web science'

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Credit: Wikipedia

(Phys.org)—A pair of web scientists has written a Technology Perspective piece for the journal *Science* outlining the newly developing field of "web science." In their article, James Hendler with Rensselaer Polytechnic Institute and Wendy Hall, with the University of Southampton, also offer some arguments for the importance of social sciences regarding the internet as technology continues to change our world and the way people interact.

The internet is not very old, the researchers note, and the applications and interconnected websites found on it are even newer—but it has grown to become an incredibly important part of daily life. This, they suggest, means that the time has come for recognition of a new branch of science—that of web science—a field that will include not just sociologists, but engineers, computer scientists and others from fields across the academic spectrum, because the web has come to touch nearly all those that are currently recognized.

Web science, the pair notes, focuses on the way the web has been used in the past, the way it works now and the ways people will likely use it in the future—but it will also include issues associated with the internet and those that use it—including data mining, privacy issue and hacking, and perhaps the impact it is having on elections, political messaging and brand association. The internet, they remind us, is not just a collection of users; it is also an information warehouse holding types and amounts of data that have never before been stored in one place in human history. For this reason, they note, it is imperative that scientists from around the world become involved in web science—to help predict internet evolution; to provide a means for nurturing and guiding its growth so that it will remain useful; and to highlight pertinent issues, such as whether it should be free to everyone as a worldwide utility.

The authors also note that as new additions to the internet arise, such as devices that are part of the "Internet of Things," crowd sourcing, or

collective intelligence gathering, it only makes sense for serious study looking into the impact that such technologies may have on individuals, societies, nations or the world at large. This, they claim, would allow humanity to "chart out a research agenda" to ensure that the internet remains a positive part of our collective existence.

Summary

Ten years ago, Wikipedia was still in its infancy (and totally dismissed by the establishment), Facebook was still restricted to university users, Twitter was in beta testing, and improving search capabilities was the topic that dominated Web conference research agendas. There were virtually no smartphones, online surveillance of activity and data storage was largely unknown beyond security services, and no one knew that being a data scientist was one day going to be "the sexiest job in the world".