

# Information overload and virtual institutions

Daniel Memmi

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**Abstract** The Internet puts at our disposal an unprecedented wealth of information. Unfortunately much of this information is unreliable and its very quantity exceeds our cognitive capacity. To deal with the resulting information overload requires knowledge evaluation procedures that have traditionally been performed by social institutions, such as the press or universities. But the Internet has also given rise to a new type of social institution operating online, such as Wikipedia. We will analyze these virtual institutions to understand how they function, and to determine to what extent they can help manage the information overload. Their distributed and collaborative nature, their agility and low cost make them not only a very interesting social model, but also a rather fragile one. To be durable, virtual institutions probably need strong rules and norms, as well as an appropriate social framework.

**Keywords** Information overload · Knowledge management · Social institutions · Virtual institutions · Wikipedia

## 1 Introduction

It is by now evident that the Internet has ushered in a new era, offering a previously unimaginable wealth of information. Electronic networks coupled with various mobile devices mean that anybody, anywhere, anytime can access practically any information quickly and at little cost (given the right infrastructure, which is usually available in developed countries). This is of course an extremely

beneficial development, for individuals as well as for society as a whole. Because so much information has already been digitized, we have at our fingertips most of human knowledge, useful daily information and unlimited human contacts.

But this abundance of riches comes together with an associated curse. It looks as if we had made a pact with the devil, gaining information wealth at the price of cognitive overload. The quantity and variety of information greatly exceeds our cognitive capacity for processing it. The issue of cognitive overload is not totally new (Wilson 1996; Bawden et al. 1999; Edmunds and Morris 2000; Eppler and Mengis 2004) but electronic networks have made it even worse. We are simply not built to process so much information in limited time, because our cognitive equipment (both biological and cultural) was developed long ago in simpler times.

For example if one looks for information on a disease, or in order to solve some technical problem, there are often thousands of Web sites potentially relevant to the question. But how can one find and read so many Web pages? And how can one be sure of the pertinence and reliability of each document? In case serious decisions have to be made (e.g., the appropriate cure for a disease), this turns out to be a vexing problem of very real importance.

Of course, mankind has always looked for information and has had to ascertain the reliability of any information that could be found. Various methods have been devised in history to manage human knowledge, ranging from priestly castes to public libraries. And material techniques such as writing and printing have proven to be very important informational tools, with momentous social consequences (McLuhan 1962; Eisenstein 1983). But our main point here will be that knowledge management is ultimately performed by social institutions, because no technique as yet

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D. Memmi (✉)  
University of Quebec in Montreal, Montreal, Canada  
e-mail: memmi.daniel@uqam.ca