

Abstract

Big Data, the Jungle of Information Evolution [†]

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In the first part, the three basic mechanisms, similar to the biological world, of the evolution of information system are described as the duplication, variation and selection (or elimination). Semantic information is presented by the way that $I = I(P@S)$, connecting a bit string, in this paper. Based on this definition, it will be able to more clearly describe the duplication of information in its evolution. Variations of information come from human communication needs, and other numerous social causes, leading to the landscape of a wide variety of variations. On selection (or elimination), it's not only similar to the biological world, but also has its inherent characteristics, such as: "judging that the information is true or false", "verifying that information is validity or not", this priority not only is very important, and getting more and more tough. However, the suitability and effectiveness of information play an extremely powerful role on selection (or eliminated). Based on WeChat, a huge APP platform, the article shows these characteristics. In the second part, the changes about the evolution of information are presented. The first: the correspondence of semantic information with bit string had made a giant step, by Shannon, in information evolution. The second: every human individual is associated with a large collection of bit string, which is rapid expansion through human activity based on the fast development of IT technology, and has become a brand new resource for human. The third: information evolution with "big data" as the main characteristic has changed the traditional definition and paradigm on knowledge. By applying data directly to the social activities, "flat" mode, much more efficiency, has appeared in the human society. The fourth: the information world is an open complex system, and human society has been its major external environment that supplies promotion and energy to the information world. The fifth: human must remain calm in facing the new state with intelligent machines, to be symbiosis, coexistence, and development together with them, and to dealing right with bad and kind information.



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