## **Search Engines and Truth Manipulation**

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Search Engines have nowadays become the primary source of information for Internet and the Web. Their usage has been constantly growing, in parallel with the enormous amount of online information, and the continuous expansion of connected devices, including the smartphones wave.

Search Engines have become in all and all both informative media and social media. Their influence provokes "resonation effects", information that can be amplified and then resonate all over the web and in other crucial social media like Facebook and Twitter. In an ideal world, this would not be much of a problem, but in a vast informative offer visibility is crucial, and amplified by threshold effect. For instance, being out of a top ten in Google is almost equivalent to being unreachable, and therefore invisible. This has caused deep transformation of the web structure, and of the same way of creating and handling information, trying to artificially alter any impartial ranking of information. In this scenario, social and economic interests lead to abuse and manipulation of information at any level, triggering phenomena that touch both the world of news and the world of information in general. Search engines can become the first promoters of fake news, then starting a vicious circle where the same fake information is then amplified more and more by the search engine itself, by progressively spreading it on the online world. But spreading of false information can also happen in subtler ways, by altering some parts of the web information sphere and then spreading, thanks to search engines, over time, becoming more and more difficult to eradicate. As a simple example, a primary mirroring role is played for instance by sites like Wikipedia, which can be infiltrated in various ways (see for instance Negapedia, exposing the underlying negative side where the war for changing information occurs) and then propagate fake information, revisionisms, altered views of society via the search engine itself onto the web and social media, becoming a truth de facto that gets stratified over time, and more and more difficult to eradicate.

The bad thing is that this propagation of fake or anyway distorted information is regulated by threshold effects that can then degenerate into avalanche spreading: that is to say, if this information is not blocked in time it can then spread without control, severely influencing the public opinion, and making very hard to then counter the consequent mass changes in opinions and beliefs.

The situation, from an evolutionary viewpoint, is not good, as these phenomena are constantly growing without real control. This is also due to the role that search engines, and social media sites, try to play along: a "meta" role, outside of control, bypassing responsibilities.

Looking ahead, the solutions are twofold. First, search engines (as well as social media and in general any potential content amplifier) need to take serious pro-active actions to put *content safety* as a first priority along their lines of actions, something that is not the case nowadays. Secondly and complementarily, there is also the need for proper control on such media amplifiers as well: currently search engines protect themselves under a "black shield", using a principle sometimes called "security by obscurity": search engines operate with secret and obscure algorithms, and society need to trust them as superior entities. This is absolutely not the case: like any crucial component of society, search engines and in general content amplifiers like Facebook et alia can well (and ought to) undergo a safety control procedure, providing some due degree of *transparency* in their algorithmic choices while still preserving their commercial interests. These two lines of actions, combined together, would help to shape a different, safer evolution in media amplification, avoiding unfair concentrations of potentially dangerous powers without any real control, and therefore helping to assure that society as a whole is not served poisoned information, being dangerously manipulated at micro and macro levels.