

## Chapter LIII

# Seek and Ye Shall Find

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### ABSTRACT

*This chapter proposes that search engines apply a verticalizing pressure on the WWW many-to-many information distribution model, forcing this to revert to a distributive model similar to that of the mass media. The argument for this starts with a critical descriptive examination of the history of search mechanisms for the Internet. Parallel to this there is a discussion of the increasing ties between the search engines and the advertising market. The chapter then presents questions concerning the concentration of traffic on the Web around a small number of search engines which are in the hands of an equally limited number of enterprises. This reality is accentuated by the confidence that users place in the search engine and by the ongoing acquisition of collaborative systems and smaller players by the large search engines. This scenario demonstrates the verticalizing pressure that the search engines apply to the majority of WWW users, that bring it back toward the mass distribution mode.*

### INTRODUCTION

The 20<sup>th</sup> Century was the century of mass communication, during which cinema, radio and television flourished using the irradiative (one-to-many) distribution model. In its last decades, however, a new practice emerged from military institutions and university *campi*: computer mediated communications (CMC). At first sight, this did not seem to be more than the transposition into a new technological environment of some

pre-existent modes of interpersonal (one-to-one) communication, such as the postal system or the telephone. This was proved not to be the case however, as CMC developed into an epidemic (many-to-many) mode of communication, what was mostly due to the technological configuration (networked) and the cultural environment (both the university background and the proximity between the hacker community and the counter-culture movements).

With the popularization of the Internet, and in particular with the implementation of the World

Wide Web, the possibilities of many-to-many communication were extended to an unprecedented number of people. In the context of the 1990s, defined by the apparently insuperable hegemony of the model of mass communication, it was almost impossible to not welcome the “subversive” potential of CMC. Despite the absolute numbers obscuring the fact that only a very reduced portion of the world’s population has full access to digital communication networks, it is undisputable that CMC has exponentially increased the number of individuals that are capable of adopting the role of producers of communicational processes on a large scale, thus provoking a rearrangement of the mediatic scenario. Without detracting from the merits of this new communication mode, it is just as important to be aware of the negative consequences of the many-to-many model.

First of all, a large number of senders implies an increased number of messages. In a paper that has become a classic on the subject, Lawrence and Giles (1999, p. 2) estimate that there were 800 million indexable<sup>1</sup> pages available on the Web in 1999. One year later, Murray (2000, p. 3) calculated the number of indexable pages had already exceeded two billion. In January of 2005, Gulli and Signorini (2005, p. 1) calculated the existence of no less than 11.5 billion pages. As if the sheer magnitude of these numbers were not enough, it is worth remembering that the Web is essentially dynamic and self-organized. In the year 2000, when the daily increase in the number of pages was estimated at 7.3 million (Murray, 2000, p. 3), Arasu, Cho, Garcia-Molina, Paepcke, and Raghavan (2001, p. 3) reported that the half-life of pages with a “.com” domain did not exceed 10 days<sup>2</sup>. In addition to this it is necessary to consider the immense variety of languages used on Web pages (text, sound, static and dynamic images) and the dynamism of the pages’ content.

The scenario constituted in this way is of such exuberance that it brings to the foreground the crucial difference between the multiplication of the number of people capable of “publishing” on

the World Wide Web and the visibility of each of these people. The question cannot be reduced to the one about the quality or pertinence of the material presented, given that there are many different conceptions of pertinence. Under the hypothesis—highly improbable—that all of the millions of terabytes on the Web are of interest to everyone, the problem of excess is still not resolved. In the absence of an entry gatekeeping control, as is the norm in analogue communication media, the many-to-many environment of the Web favors the emergence of selection filtering mechanisms “on the exit.” In this scenario, search engines constitute an obvious and apparently innocuous solution.

Nevertheless, as this chapter proposes, search engines apply a verticalizing pressure that places at risk the epidemic format of the WWW. In order to understand how search engines have been transformed into forces of massification requires a review of some key moments in the history of Internet search. Thus, the next section of this chapter intends to not only identify the technological advances made over the years, but also to describe and discuss how the increasing connections between search tools and the advertising market ended up placing the search engines themselves in jeopardy until a new generation of search tool emerged.

## **BACKGROUND: A BRIEF (AND INCOMPLETE) HISTORY OF SEARCH ENGINES**

The need for guidance in the midst of the profusion of material available on the Internet dates back to before the emergence of the World Wide Web. In 1990, the first indexer—called *Archie*<sup>3</sup>—appeared. It collected information on files available through anonymous ftp servers and kept this up to date by checking the information on a thirty day schedule. Users of *Archie* searched for character sequences (regular expressions) in the names

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