



Uncited papers, uncited authors and uncited topics: A case study in library and information science



Liming Liang^{a,*}, Zhen Zhong^b, Ronald Rousseau^{c,d}

^a Institute for Science, Technology and Society, Henan Normal University, Xinxiang 453007, China

^b School of Management, Henan University of Technology, Zhengzhou 450001, China

^c University of Antwerp (UA), IOIW-IBW, Venusstraat 35, 2000 Antwerp, Belgium

^d KU Leuven, Dept. Mathematics, Celestijnenlaan 200B, 3000 Leuven (Heverlee), Belgium

ARTICLE INFO

Article history:

Received 12 September 2014

Received in revised form 3 November 2014

Accepted 4 November 2014

Available online 23 November 2014

Keywords:

Uncitedness

Uncited articles

Uncited authors

Uncited topics and their definitions

Scope of a journal

ABSTRACT

In this article we study three types of uncitedness in Library and Information Science journals: uncitedness for articles, authors and topics. One important aspect in this study is giving accurate definitions of the indicators for measuring uncited papers, uncited authors and uncited topics. It is found that for the period 1991–2010 ratios of uncited papers fluctuate within the interval [0,0.1]. This ratio is relatively stable and not very high. Comparison of average number of pages, average number of references, average number of authors per paper and percentage of single-authored papers between cited and uncited papers shows that no matter the journal, the first three indicators' values for uncited papers are lower, while the values of the fourth indicator are higher, than the corresponding values for cited papers. The fact that almost all uncited authors in a journal published only one paper in this journal illustrates that a journal's uncited authors are the least productive authors in this journal. Yet, productive and highly cited authors also publish uncited papers. As to why some topics fall into the group of uncited topics, the hypothesis is that the combination of unfamiliar keywords forms an unfamiliar topic, a topic authors have elected not to study further. Another assumption is that some uncited topics fall outside the field of Library and Information Science. Retrieval results in the Web of Science for a set of uncited keywords and keyword combinations support this assumption.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Studies related to citations of papers and authors, and especially of highly cited ones, always attract a lot of attention (Van Noorden, Maher, & Nuzzo, 2014), one reason being that citations act as indicators in individual and institutional evaluations (Persson, 2010; Leydesdorff, 2012; Abramo, Cicero, & D'Angelo, 2014; Bornmann, 2014). Citations, moreover, reflect relations in the network of scientific communications (Cronin, 1984).

In scientometric studies title words, keywords (including phrases) and words in abstracts are used to delineate research topics. Highly cited topics represent essential content and may point to the research frontier of a field (Bar-Ilan, 2008; Jones, 2005).

* Corresponding author. Tel.: +86 373 3326908/+86 13503738866; fax: +86 373 3326445.

E-mail addresses: liangliming1949@sina.com (L. Liang), zhongzhen@haut.edu.cn (Z. Zhong), ronald.rousseau@khbo.be (R. Rousseau).

The opposite of “cited papers, cited authors and cited topics” is “uncited papers, uncited authors and uncited topics”. Scientometricians have never ignored uncitedness: more than 30 year ago colleagues were already intrigued by uncitedness in highly visible journals such as *the Journal of the American Chemical Society* and *Nature* (Ghosh & Neufeld, 1974; Ghosh, 1975), and also later different aspects of uncitedness have attracted attention (Stern, 1990; Bott & Hargens, 1991; Peritz, 1991; Rousseau, 1992; Schwartz, 1997; Glänzel, Schlemmer, & Thijs, 2003; Kostoff, 2007; Hu & Wu, 2014; Egghe, Guns, & Rousseau, 2011). It seems that the fraction of articles that are ever cited is increasing, and hence the fraction of uncited articles is decreasing (Wallace, Larivière & Gingras, 2009). Yet, studies on uncitedness have been published less frequently than those on “cited” phenomena. Note that both the notions of “being cited” and “being uncited” are relative notions. Being cited is, usually, determined with respect to a given database. If a publication is cited in this database, then certainly the publication IS cited, but if the publication is not cited in this database, this does not prove that it is totally uncited. Even if one had access to all publications in the world then “being uncited” would still be a temporal phenomenon. A publication may be uncited on the day of investigation, yet, it may always happen that it will be cited later, and, rarely, may even become highly cited in the case of a sleeping beauty (Van Raan, 2004; Li & Ye, 2012).

Which similarities and differences in bibliometric characteristics can be observed between (1) uncited papers and cited papers; (2) uncited authors and cited authors; (3) uncited topics and cited topics? In this paper we explore and discuss these issues making use of the contents of some selected journals in the field of Library and Information Science (in short: LIS journals). Also some other interesting questions such as: *What does the group of uncited authors look like? Do productive and highly cited authors publish uncited papers? Why does a research topic become an uncited topic?* will obtain (partial) answers from our study.

2. Data

Records of journals, including publication and citation metadata, are basic units for this study on uncitedness. As a case study we chose the following four journals in the field of LIS: *Information Processing and Management (IPM for short)*, *Journal of the American Society for Information Science (and Technology) (JASIST for short)*, *Journal of Documentation (JDOC for short)* and *Scientometrics (SCIENTO for short)*. Among all journal document types only those of “article” type are included. In the text these are called articles or papers. Articles lent themselves best to our analysis as other types of publication are known to be cited more than average (reviews), or are cited hardly ever or irregularly (editorials, corrections, meeting abstracts). The data for this study were retrieved from Thomson Reuter’s Web of Science (WoS) in February, 2014. The publication window is 1991–2010 or twenty years of data. The citation window extends from the moment of publication to February 2014. In this way the most recent article still has more than three years to receive at least one citation. During these 20 years the four journals mentioned above published 5966 articles. The term “keywords” refers to author keywords and phrases, and keyword-plus data. We note, in particular that *JASIST* does not publish author keywords.

3. Methods

It is of great importance to work in a well-defined context. Hence we begin with precise definitions of the indicators used in this study. We first note, and will not repeat that the citation status of a paper depends on the database used. In our applications this will be the WoS.

Cited paper: A paper which received at least one citation is called a cited paper. If it is published in journal A it belongs to the set of A’s cited papers. Note that citations may come from any source in the used database.

Uncited paper: A paper which has never been cited is called an uncited paper. If need be it is referred to as one of journal A’s uncited papers.

Cited author: An author who published at least one cited paper in journal A is called a cited author of journal A.

Uncited author: An author who published one or more papers in journal A, and none of these has been cited, is called an uncited author of journal A. An author can be a cited author of journal A and an uncited one of journal B.

Cited author with uncited paper(s): An author, who published both cited and uncited papers (at least one of each type) in journal A, is called a cited author with uncited paper(s) in journal A.

Cited keywords: All the keywords of a cited paper of journal A are cited keywords of journal A.

Uncited keywords: A keyword of journal A that was never included in any cited paper of journal A, is called an uncited keyword of journal A.

Topic: In this submission the term topic refers to the set of all keywords attached to a paper (admitting that in reality an article may study several ‘topics’, in the common sense of the word.)

Partially uncited topic: If a topic contains both cited and uncited keywords, this topic is a partially uncited topic.

Uncited topic: If the keywords representing a topic are all uncited keywords, this topic is an uncited topic.

We have mentioned in the definition of “Topic” that a topic, in the usual sense of the word, may not always be equal to the set of keywords of a paper. It is, however, difficult to determine how many topics, or facets of a topic, are covered by a particular article and which keywords match which topic. To simplify the analysis in Section 4.5 we define the concept “Partially uncited topic” only for the case of one paper covering one topic.

Download English Version:

<https://daneshyari.com/en/article/523914>

Download Persian Version:

<https://daneshyari.com/article/523914>

[Daneshyari.com](https://daneshyari.com)