



Article Impact Means Journal Impact

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Impact factors: they only mean what they mean

These days there is a lot of misunderstanding of scientometrics and we often see a confusion of the research with its indicators. Science ministries and university administrators try to push their country's or institution's "research impact" by telling researchers to increase numeric figures that were invented as proxies for later assessment. In obvious juxtaposition to common sense this even leads to direct orders to postdocs "to only publish in high impact journals" and not to engage in other important activities scientists of well-rounded stature will routinely perform, like publication in medium impact journals of their immediate field, in startup journals, in conference proceedings, of book chapters, as grey literature or intended for dissemination to the general public, reviewing, editing, writing blogs etc.

Of course, due to the competition for space and recognition the journal impact is an indicator of high quality of an article, but much less so than often reflected in the career determining decisions that are rightly criticized in the *San Francisco Declaration On Research Assessment* (DORA, 2013) and in a recent editorial in *Science* (Albert, 2013).

With online publishing *article impact* now gets more and more dissociated from journal impact (empirically shown, see Lozano, Lariviere, and Gingras, 2012), because readers can directly find and download the unit of interest: an article rather than a whole issue or a book chapter rather than a whole book. However, while in the past articles may have profited much more from the popularity of their journals with the need to buy a bundle of articles, this decline of journal impact on article impact is not true in the opposite direction: journal impact will always be affected by the impact of its articles, by definition. The larger entity profits from its parts, while parts will profit less from the whole and from other parts, as the larger entity changes its function.

But what does the interplay between article impact and journal impact mean in the present time, with journal impact still being taken as a proxy for article impact? In our opinion publishing an article in a low impact (= not widely read) journal that then becomes a frequently cited article seems a more risky and thus more respectable achievement than publishing an infrequently cited article in a high impact (= frequently read) journal.

Indices designed to measure journal impact are often criticized. Yet, journal impact continues to be one of the main factors for researchers to choose a journal as an outlet for their work. As editors, we are frequently asked by potential authors whether and when the International Journal of Internet Science will be listed in ISI Thomson's Journal Citation Report (ISI JCR). ISI is the most widely used impact factor and is highly regarded by many

institutions. One issue that may bias the ISI journal impact lies in what are considered citable items, as Wikipedia noted (Impact factor, 2011):

For instance, editorials in a journal are not considered to be citable items and therefore do not enter into the denominator of the impact factor. However, citations to such items will still enter into the numerator, thereby inflating the impact factor. In addition, if such items cite other articles (often even from the same journal), those citations will be counted and will increase the citation count for the cited journal.

Consequently, the present editorial would formally raise IJIS's journal impact factor substantially, if it was yet listed in ISI Thomson. We thus ask our readership to kindly disregard the references to IJIS articles below for purposes of estimation of impact.

Thomson Reuters has confirmed the International Journal of Internet Science continues to be under evaluation for inclusion with the ISI Web of Science database. You may have seen from our editorials in issues 3(1), 6(1), and 7(1) that calculations show high journal impact, and it continues to grow, as we will show below.



Figure 1. Web page for the International Journal of Internet Science in Google Scholar, available at <http://scholar.google.com/citations?hl=en&user=OCYy1o4AAAAJ>.

Our journal page on Google Scholar Citations (see Figure 1) at <http://scholar.google.com/citations?hl=en&user=OCYy1o4AAAAJ> allows one to track citations to the journal and its articles, link as an author, and enter one's e-mail address for automatic notifications. When we calculated the impact in late December 2011

Google Scholar showed 198 citations (Reips, 2011). Now, in June 2013, there are 441 – meaning within one and a half years the number of citations has more than doubled from those that had been made in the six years before.

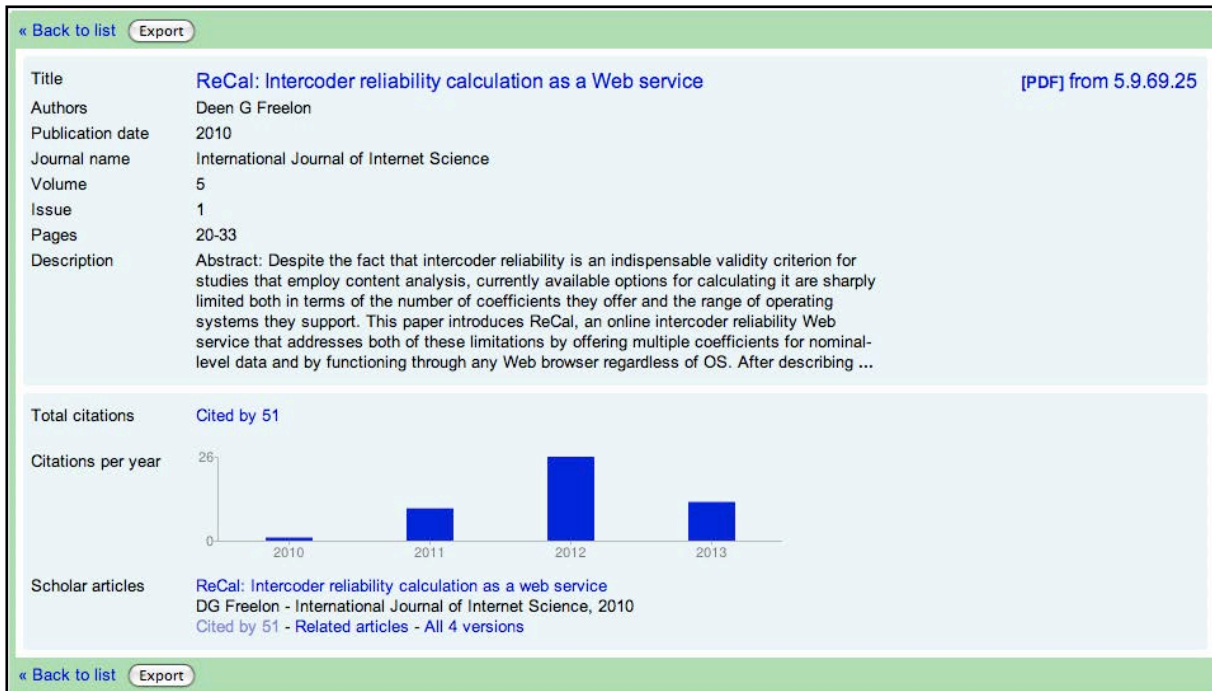


Figure 2. Citations per year graph for Freelon (2010) in Google Scholar Citations, available at http://scholar.google.com/citations?view_op=view_citation&hl=en&user=OCYy1o4AAAAJ&pagesize=100&citation_for_view=OCYy1o4AAAAJ:UebtZRa9Y70C.

The three most frequently cited articles are by Göritz (2006), Freelon (2010), and Mesch and Talmud (2006), with 122, 51, and 43 citations, respectively. Remarkably, the Freelon article has reached an audience from many different disciplines inside and outside the social and behavioral sciences and will likely surpass the Göritz classic in a few years as most cited article in this journal, if its citation rate increases as much as suggested by Figure 2.

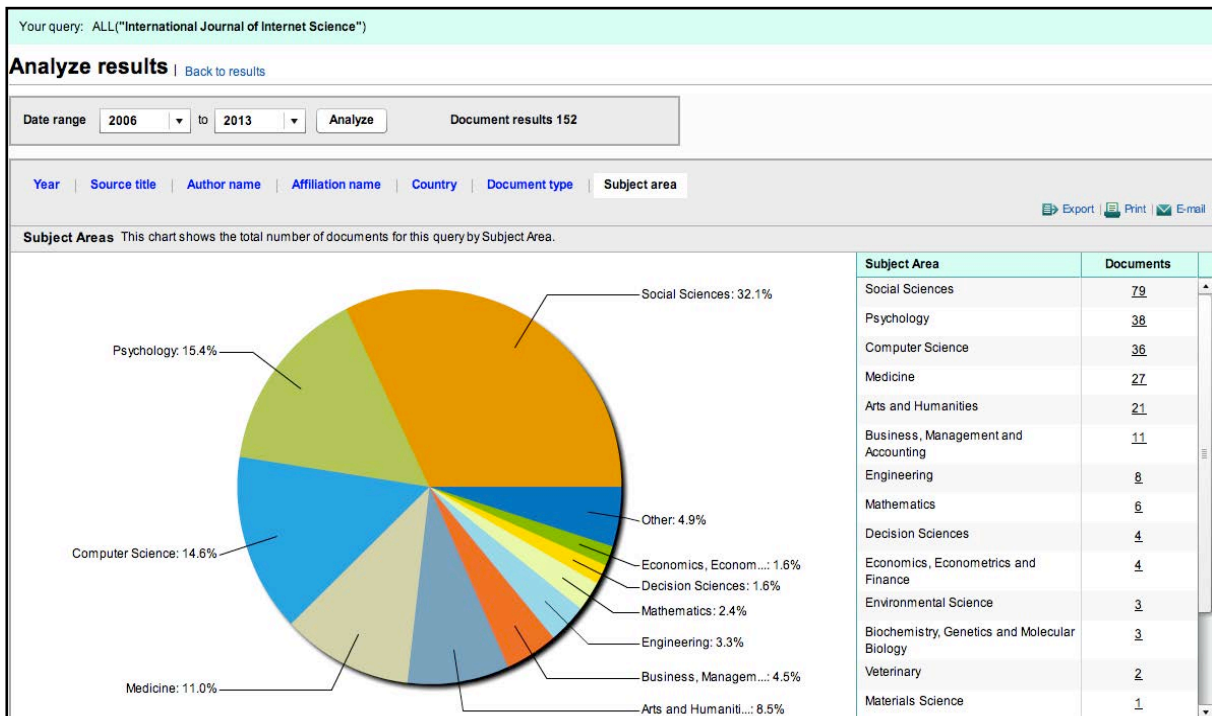


Figure 3. Distribution of disciplines of articles referencing “International Journal of Internet Science”.

To get an idea of the direction of the impact of articles from the *International Journal of Internet Science* to different disciplines we searched *Scopus*, another popular citation database for the term “*International Journal of Internet Science*” and then looked at distribution of home disciplines of the articles that mentioned or referenced the *International Journal of Internet Science*. Figure 3 displays the results: even though our journal is mostly referenced in the Social Sciences and Psychology (in line with our scope and mission), it clearly also has a sizeable audience in many other fields, markedly Computer Science, Medicine, Arts and Humanities, and Business, Management and Accounting, and even in Engineering, Mathematics and Materials Science, among others.

IJIS' 2012 impact: > 6.1 (ISI_{IJIS} not included > 2.3; ISI_{IJIS} included > 2.9)

The ISI journal impact is calculated as the average number of citations in a year given to those articles in a journal that were published during the two preceding years. The most current journal impact that can be calculated is thus the one from 2012. We therefore need to count all citations in 2012 to articles that appeared in the *International Journal of Internet Science* during the years 2011 and 2010.

To estimate impact factors for the *International Journal of Internet Science* we processed the 441 references Google Scholar returns. For the seven articles that have appeared in either 2010 or 2011 we find 38 citing references in 2012 (without self-citations). The most frequently cited article, Freelon (2010), was cited 26 times: by Aranyi, van Schaik and Barker (2012), Berglund (2012), Bergrem (2012), Bergstrom (2012), Boodhun (2012), Camara, Katznelson, Hildebrandt-Sterling and Parker (2012), Cordeiro (2012), Devarachetty (2012), Ghosh, Ameling, Zhou, Lacey, Creamer, Dolan, et al. (2012), Hah (2012), Harvey and Tang (2012), Jooness-Roy (2012), Koepfler and Fleischmann (2012), Kritz (2012), Massa and Pearson (2012), Masursky, Dexter, Kwakye and Smallman (2012), Meintjes (2012), Nawka, Rukavina, Nawkova, Jovanovic, Brborovic and Raboch (2012), Owczarzak, Dang, Rankel and Conroy (2012), Peruta, Ryan and Acquavella (2012), Reips and Buffardi (2012), Rukavina, Nawka, Brborovic, Jovanovic, Rojnic Kuzman, Nawková, Bednárová, et al. (2012), Seeburger (2012a, 2012b), Slezák, Námer and Waczulíková (2012), and Tillery and Chresfield (2012). The article by Bachmann, Kaufhold, Lewis, and Gil de Zúñiga (2010) was cited by Bachmann, Correa and Gil de Zúñiga (2012), Bloomberg (2012), Chadha, Avila and Gil de Zúñiga (2012), Gil de Zúñiga, Correa and Valenzuela (2012), Gil de Zúñiga and Harvey (2012), Kissau, Lutz, and Rosset (2012), and Rothenbuehler, Ehrler and Kissau (2012). Whitty and Buchanan (2010) was cited in Aust, Diedenhofen, Ullrich and Musch (2012) and in Davison (2012). Opgenhaffen and d'Haenens (2011) was cited in Li (2012) and Opgenhaffen and d'Haenens (2012). Alqudsi-Ghabra, Al-Bannai and Al-Bahrani (2011) was referenced one time, by Oiarzabal and Reips (2012). Furthermore, our 2010 editorial (Dillman, Reips, & Matzat, 2010) was cited in four ISI-listed journal articles and one report, by Longmire (2012), Marchis (2012), Reips and Buffardi (2012), Reniers and Anthonie (2012), Sánchez-Fernández, Muñoz-Leiva and Montoro-Ríos (2012), increasing the total number of journal impact relevant citations to 43.¹

Thus, not counting four references from the *International Journal of Internet Science*, the **currently official 2012**

journal impact calculation without self-citations is $43 / 7 = 6.1$, with self-citations it is $47 / 7 = 6.7$. If we calculate only with citations that appeared in ISI journals (Thomson only includes journals in its calculations that are already in its database), then we arrive at an **ISI impact of $16 / 7 = 2.3$** for the *International Journal of Internet Science*. If we calculate as if the *International Journal of Internet Science* was already part of the ISI database, then

its **ISI impact is $20 / 7 = 2.9$** , because our 2012 editorial cites Reips (2011) and Newman, Dutton and Blank (2012) cite three 2010 and 2011 IJIS articles (these citations are also not yet captured by Google Scholar). Importantly, all figures calculated here are conservative estimates, because more citing articles published in 2012 are not yet known and couldn't be included in the present analysis.

The IJIS thus compares well with other long-standing journals in the field, examples are *Behavior Research Methods* (ISI impact of 1.9), *Computers in Human Behavior* (2.1), *Cyberpsychology Behavior and Social Networking* (1.8), *International Journal of Human-Computer Studies* (1.4), *New Media & Society* (1.8), *Social Science Computer Review* (1.3) and *Information Society* (1.1, all values from the 2012 JCR Social Science Edition).

¹ Note that increasingly articles appear as “Online First” articles that have not yet been assigned volume and page numbers. Thus, Google Scholar lists one 2012 reference for Stiglbauer, Gnams and Gamsjäger (2011) that we do not count here, as it appeared in 2013.

The present issue

In line with our title, as an *international* journal, the present issue contains articles by authors from institutions located in five different countries.

Deen Freelon (American University School of Communication, Washington, DC, USA) provides *ReCal OIR: Ordinal, interval, and ratio intercoder reliability as a Web service* as a follow-up piece on his most successful 2010 article. The new free Web service he provides calculates intercoder reliability for non-nominal cases, i.e. for data on ordinal, interval and ratio level. The article explains how to use ReCal OIR, includes a discussion of the currently available options for calculating reliability for the ordinal, interval, and ratio levels, validates ReCal OIR's calculations, and presents its usage data.

In the second article, *Does it pay-off to include non-Internet households in an Internet panel?*, Jorna Leenheer and Annette C. Scherpenzeel (CentERdata, Tilburg University, Tilburg, The Netherlands) examine the value of a strategy that some Internet panels pursue in order to increase the representativeness of their data. These panels incorporate randomly selected non-Internet households and offer them Internet equipment for their participation in the panel. The analyses show that, in the studied Dutch panel, the addition of non-Internet households brings the panel data better in line with those from a sample that is representative for the Dutch population, although differences remain. Moreover, the non-Internet households, although they start adopting the Internet through their participation in the panel, remain distinct from the other panel members so that they continue contributing to the quality of the data.

Galit Nimrod (Ben-Gurion University of the Negev, Beer Sheva, Israel) presents the article *Challenging the Internet paradox: Online depression communities and well-being*. Shattering the old myth that Internet use generally has negative effects on well-being (the "Internet Paradox") and especially increases depression and loneliness, Nimrod provides evidence from online depression communities that points to clear benefits from Internet use. Thus, the article nicely contributes to the necessary development of a differentiated view of "the Internet" and its uses. Challenging antiquated views from widely popularized but methodologically flawed past studies this article likely will become an important piece in the debate about the "Internet Paradox".

Constantin M. Bosancianu (Central European University, Budapest, Hungary), Steve Powell, and Esad Bratović (both proMENTE Social Research, Sarajevo, Bosnia and Herzegovina), in their article entitled *Social capital and pro-social behavior online and offline*, examine to what extent there are cross-over effects from pro-social behavior online and offline to social capital online and offline. Using data about Internet users in Bosnia and Herzegovina, Croatia, and Serbia, they find that online pro-social behavior is stronger associated with online social capital than with offline social capital. However, offline pro-social behavior is associated with both types of social capital, online and offline, to a comparable amount. Of special importance to readers interested in the effects of online behavior, they find that online pro-social behavior is associated with so-called bridging offline social capital, suggesting that here the largest potential for spill-over effects from online to offline does exist.

Acknowledgements and Outlook

The current issue of the *International Journal of Internet Science* is a result of the devotion, time, and effort of many individuals and institutions that support and help us. We welcome our new editorial assistant, Ruoyun Lin. She is a wonderful addition to our team and has gradually and most impressively taken over work from Dr. Frederik Funke, who will leave us later this year. As he has done always during the past years, he handled the office work in most professional ways and thus became a perfect role model and great advisor to Ruoyun Lin (and us editors).

Grateful acknowledgement goes to the University of Deusto, the Eindhoven University of Technology, and Webdatanet (<http://webdatanet.eu>) for their institutional support of and partnership with the journal. And of course, we very much would like to thank the members of IJIS's Editorial Board and Panel and its many ad hoc reviewers for their valuable contributions to the quality of this journal.

Thomson Reuters has confirmed the *International Journal of Internet Science* continues to be under evaluation for inclusion with the ISI Web of Science database. Our editorials in issues 3(1), 6(1), 7(1), and the calculations above show very high journal impact that continues to grow. The *rejection rate* for articles submitted to the *International Journal of Internet Science* is at **85.5%**, meaning that roughly one out of six manuscripts passes the stages of desktop rejection and repeated rounds of multiple peer review.

We encourage our readers to stay in contact with us. Our journal page on Google Scholar Citations at <http://scholar.google.com/citations?hl=en&user=OCYy1o4AAAAJ> allows you to track citations to the journal and its articles and enter your e-mail address for automatic notifications. Authors can even link themselves in this role. Facebook users may want to subscribe to and “like” our Facebook page at <https://www.facebook.com/pages/International-Journal-of-Internet-Science/251579034934885>. To get notified of new developments at the International Journal of Internet Science, please subscribe at <http://www.ijis.net/subscribe.html>.

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