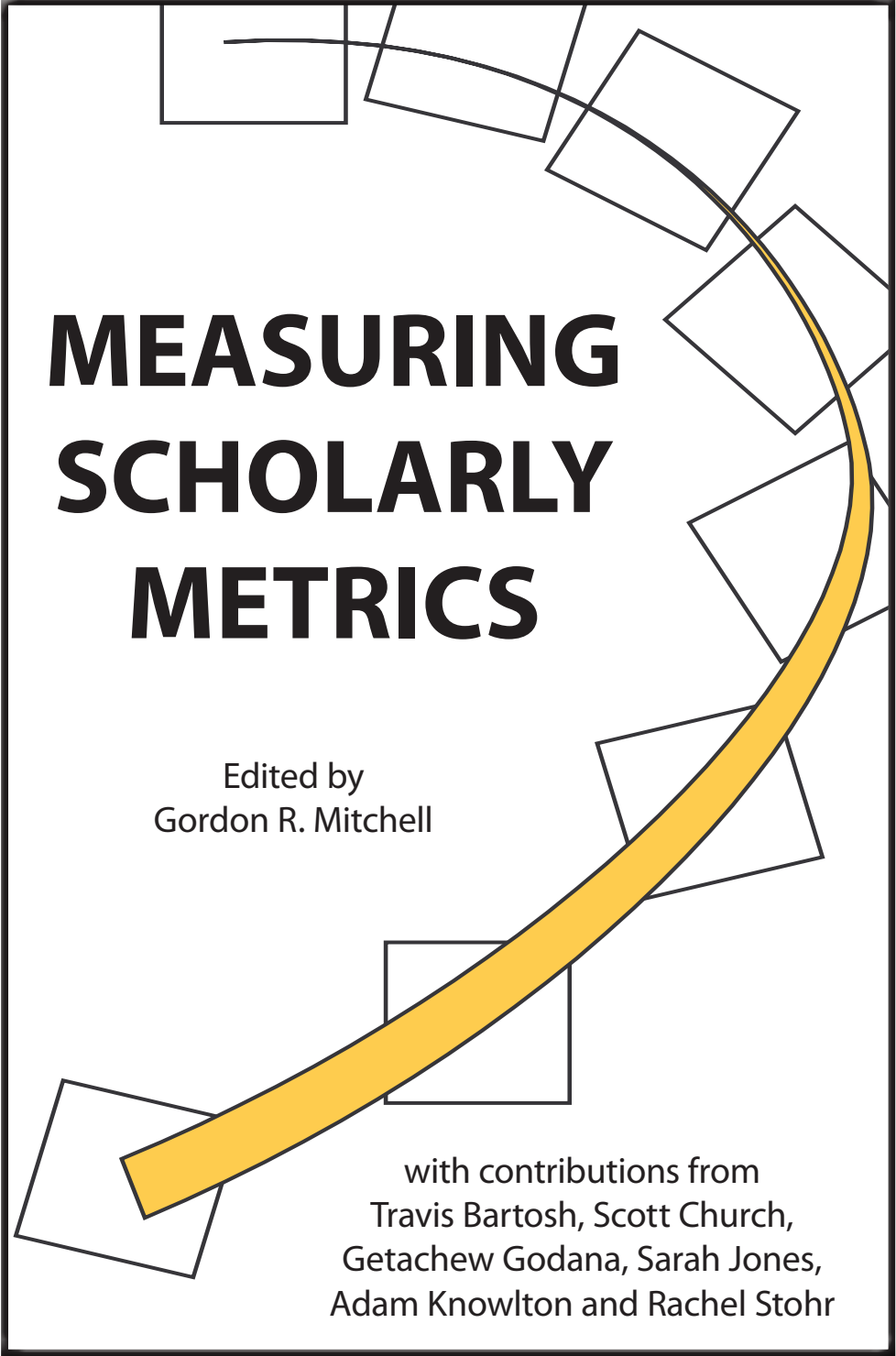


The cover features a thick, bright yellow curved line that starts near the bottom left and arcs upwards towards the top right. Several thin black rectangular outlines are scattered across the page, many of which are tilted at various angles. The title is centered in the upper half of the page.

MEASURING SCHOLARLY METRICS

Edited by
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with contributions from
Travis Bartosh, Scott Church,
Getachew Godana, Sarah Jones,
Adam Knowlton and Rachel Stohr

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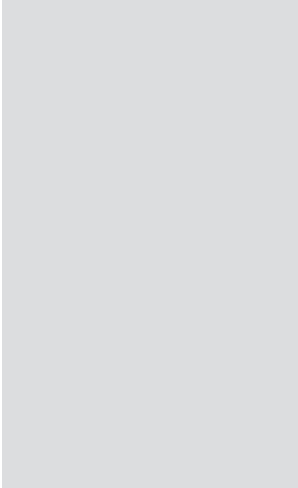
MITCHELL, GORDON R.
Evaluating Scholarly Metrics.

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Of all things the measure is Man,
of the things that are,
that they are;
and of the things that are not,
that they are not.

Protagoras



Preface

Gordon Mitchell

Pressure on financial models for publishing and distributing academic research, systematic erosion of authors' intellectual property rights, and sheer information overload are all factors prompting universities to develop new approaches to dissemination of scholarly research. For instance, the University of Nebraska-Lincoln's Digital Commons Institutional Repository offers new outlets for scholars, such as contributors to this volume, to share their research directly with public audiences at little direct cost. Additionally, the advent of digital scholarship and surging popularity of online databases capable of aggregating and analyzing such scholarship have yielded new ways of measuring the impact of individual scholarly publications, and even individual scholars.

Yet storm clouds accompany these rays of open access sunshine. Ubiquitous open access threatens to undermine traditional academic publishing systems that rely heavily upon subscriber fees to fund production of print journals and books. This report explores how together, these complex trends implicate professional knowledge production in the academic field of Communication, and conversely, how conceptual tools from the rhetorical tradition might help elucidate ways in which the onrush of digital scholarship promises to reshape the intellectual landscape in higher education more generally.

This vector of inquiry steers attention to ways in which the interplay of ancient and contemporary thought animates questions such as: 1) How might the

prospect of engaging wider publics through digital scholarship be understood as a contemporary variant of what Isocrates called *logos politikos*? 2) Does Protagoras' "human-measure" fragment speak to how the digital age's new metrics of scholarly authority may increasingly bear on hiring, tenure and promotion judgments in higher education?

With these questions as keynotes, the following chapters explore six contemporary metrics of scholarly authority (Journal Impact Factor, Web of Science citations, h-index, SCImago, article download usage data, university press book publication), considering each metric's strengths and weaknesses as measurement tools, and speculating on the consequences their widespread utilization of each might mean for the field of Communication, the academy, and society.

Leaving the task of a systematic meta-analysis of scholarly metrics for another day, this report instead is designed to work as an entry point for readers interested in how the advent of new digital measurement tools carry potential to compete with traditional gold standards such as publication of scholarly books and placement of peer-reviewed articles in print journals. Although the contributors write from different perspectives and hold diverse opinions on the value of the new digital metrics as tools to measure scholarly authority, they agree on the importance of learning about them in order to facilitate informed, situated judgments regarding their application in specific cases.

Having lived during a time when the Greek written phonetic alphabet was a relatively new invention, Protagoras left precious few fragments of his thought for future generations so ponder. In one of the surviving fragments, Protagoras says: "Man is the measure of all things: of things which are, that they are, and of things which are not, that they are not." Here, Protagoras proposes that by harnessing the power of speech and reason, humans can argue together collaboratively to reach valuable measurements. Protagoras' principle not only serves as a touchstone for critical analysis of each scholarly metric considered within this report; it also provides a reference point for understanding the methodology used by the contributors to arrive at their own judgments.

Each of the contributing authors developed and refined their chapters during my doctoral seminar in rhetoric taught at the University of Nebraska-Lincoln (UNL) in June 2010. The syllabus for that course, published as an appendix to this report, details much of the source material supporting the contributors' findings, as well as description of how the editorial workflow was integrated into the structure of the curriculum.

The appended course syllabus has been annotated with high-resolution snapshots (zoom-in recommended) of white board notes documenting the texture and tenor of discussion during several of the pivotal Skype sessions where prominent topic area experts interacted live with the students. Many thanks are due to those experts (listed in the photo caption on the following page) who enriched our research and reflection greatly through generous gifts of time and thought. UNL's own digital scholarship wizard, Paul Royster, graciously hosted one seminar meeting in his office and dazzled students with PowerPoint pyrotechnics that both informed and entertained.

Essential staff support was provided by UNL Department of Communication Studies staff members Cheryl Kruid and Donelle Moormeier. Faculty in that Department spurred the project along by sharing warm hospitality, contributing research ideas, and contributing pedagogical feedback. Special thanks go to Department Chair William Seiler for extending the invitation for me to visit, and faculty members Chuck and Dawn Braithwaite, Kathleen Krone, Karen and Ron Lee, Kristen Lucas, Jordan Soliz, and Carly and Damien Woodsmith for going the extra mile to welcome a fellow traveler.

Pittsburgh, Pennsylvania

January 2011

Skype-mediated Research Approach



As part of their research conducted during preparation of the manuscripts featured in this volume, student contributors interacted with leading topic area experts via Skype during seminar meeting periods. Featured in the photograph above is a Skype-mediated discussion linking the student contributors with Michael Jensen, the National Academies of Sciences Director of Scholarly Web Communications. Other Skype visitors included:

- David Perlmutter, Director of the School of Journalism and Mass Communication, University of Minnesota (June 8, 2010)
- Edward Schiappa, Paul W. Frenzel Chair of Liberal Arts, University of Minnesota (June 10, 2010)
- Michele Kennerly, Predoctoral Fellow, Department of Communication, Northeastern University (June 17, 2010)
- Philippe Baveye, Associate Professor of Soil Physics and Environmental Geophysics, Cornell University (June 22, 2010)

I

Journal Impact Factor

Scott Church

In a recent issue of *Human Communication Research*, Thomas Hugh Feeley notes, “journal impact rankings provide objective data for tenure, promotion, and, possibly, grant review committees on the quality of scholars’ work.”¹ Though the metric is widely regarded as the conventional measure to assess the influence of a journal in both the social and physical sciences,² many doubts regarding its effectiveness have been raised.³ This essay assesses the effectiveness of the Journal Impact Factor (JIF) as a scholarly metric. After first considering the metric’s history and developing a working definition of JIF (part one), next I delineate its strengths and weaknesses as a measurement tool of assessing journal prominence (part two). Then in part three, I argue that the amount of credence placed upon the metric by tenure and promotion committees needs to be critically examined, because these decisions are often based on the flawed and biased data provided by the JIF. The closing section addresses the appropriateness of the JIF for evaluating scholarship in the field of Communication.

1 Thomas Hugh Feeley, “A Bibliometric Analysis of Communication Journals from 2002 to 2005,” *Human Communication Research* 34 (2008): 506.

2 Feeley, “Bibliometric Analysis,” 511.

3 See Brian D. Cameron, “Trends in the Usage of ISI Bibliometric Data: Uses, Abuses, and Implications,” *Libraries and the Academy* 5, no. 1 (2005): 105-125. This article, though quite incendiary in tone, provides a systematic approach to the limitations of the metric.

History and Definition

The Journal Impact Factor is a number calculated every year that purportedly is a measure of a journal's scholarly impact on its respective field. It was created in the early 1960s by Eugene Garfield and Irving Sher.⁴ In subsequent decades, Garfield has gained prominence by writing frequently on the JIF, as well as founding the Institute for Scientific Information (ISI), a bibliometric database within which the journals the JIF scores are located.⁵ Since 1975, the JIF has been provided by Journal Citation Reports (JCR), which is composed of several citation indexes in which roughly 9,000 international journals are included.⁶ However, the ISI database's inclusivity has been the subject of criticism, due to the fact that it allegedly covers only 2.5 percent of the world's scientific journals.⁷ Regardless, the JIF has become the gauge whereupon a researcher's performance may be measured. In fact, many researchers are asked not only to provide lists of their publications to tenure and promotion boards, but also the JIF score for those journals.⁸

The JIF score is essentially calculated by counting the number of times an article in a journal is cited by other scholars.⁹ Its impact is gleaned from its "measure of the frequency with which recent articles in [a] journal have been cited,"¹⁰ with recent being the crucial term; the score is calculated using citation data from a window of only the previous two years before that journal issue was published.¹¹ The impact score assigned a journal is heeded much attention by scholars because of the influence it wields in academia; it is generally accepted that the journals with the highest impact factors are the ones that are the most influential, thereby bolstering a scholar's marketability by publishing in that journal.¹² Be-

4 Nicola De Bellis, *Bibliometrics and Citation Analysis: From the Science Citation Index to Cybermetrics* (Lanham, MD: Rowman & Littlefield, 2009), 185.

5 De Bellis, *Bibliometrics and Citation Analysis*, 185.

6 De Bellis, *Bibliometrics and Citation Analysis*, 185.

7 Cameron, "Trends in the Usage of ISI Bibliometric Data," 110.

8 Balandin and Stancliffe. "Impact Factors and the H-Index," 1. Incidentally, the metric is not only used in traditional assessment of a researcher's performance, but also to influence digital algorithms: Journals with high impact factors will percolate to the top of search results of academic search engines. Michael Felczak, Richard Smith, and Rowland Lorimer, "Online Publishing, Technical Representation, and the Politics of Code: The Case of *CJC Online*," *Canadian Journal of Communication* 33 (2008), 280.

9 Tom Grimes, "From the Editor," *Southwestern Mass Communication Journal* (Fall 2009): ii.

10 Susan Balandin and Roger J. Stancliffe, "Impact Factors and the H-Index: What Researchers and Readers Need to Know," *Augmentative and Alternative Communication* 25, no. 1 (2009): 1.

11 Cameron, "Trends in the Usage of ISI Bibliometric Data," 109.

12 Grimes, "From the Editor," ii.

cause of its longevity, tradition, and influence, JCR (and the JIF metric) remains the “the only usable tool to rank thousands of scholarly and professional journals within their discipline or subdiscipline.”¹³

Strengths and Weaknesses

The metric’s popularity appears to be its biggest strength. As far as scholarly metrics go, it is used widely and referenced frequently. Some critics, however, have argued that the metric’s limitations largely outnumber its strengths, placing it squarely in the category of being an ineffective measure.¹⁴ Some of what have been perceived to be limitations of the JIF were created, in part, to curb the skewing effect of heavily cited (and outdated) research.¹⁵ As Garfield, the co-creator argued, articles are typically cited the most within two years after their publication.¹⁶ It has also incorporated additional metrics, like the immediacy index and the cited half-life to try to account for inconsistent scores between disciplines, thus attempting to correct issues that have been criticized in the past.¹⁷ Finally, another important strength is its accuracy with generally predicting which journals will produce heavily-cited articles, though the opposite has been argued as well; often regional journals and journals in some disciplines will be cited more than those indexed by the JCR.¹⁸

As mentioned, the limitations of the JIF have been well-documented in the extant literature. A limitation of its utility as a tool of measurement may be how it is frequently used. The counterpoint of a tenure committee depending heavily on the metric can lead to a misdirected focus on a researcher’s acumen; these committees may (carelessly) put too much stock in the metric of the journal in which the scholar published, associating the impact of the journal with the indi-

13 Peter Jacso, quoted on Thomson Reuters’ web site. Accessed from http://thomsonreuters.com/products_services/science/science_products/a-z/journal_citation_reports (June 2010).

14 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 108-109.

15 Lokman I. Meho, “The Rise and Rise of Citation Analysis” *Physics World* (January 2007): 35; De Bellis, *Bibliometrics and Citation Analysis*, 186.

16 De Bellis, *Bibliometrics and Citation Analysis*, 186.

17 De Bellis, *Bibliometrics and Citation Analysis*, 186.

18 De Bellis, *Bibliometrics and Citation Analysis*: “It can be argued that highly cited articles are also published in journals with a low or no impact factor, and that impact is about paradigm shifts in the field rather than numbers” (191). Balandin and Stancliffe, “Impact Factors and the H-Index,” 2; Feeley, “Bibliometric Analysis,” 516.

vidual merit of the author.¹⁹

There are some structural limitations of the JIF as well, namely the ambiguity of how citable items are classified, the types of cited references, and the journal format and article type.²⁰ First, there are ambiguities in which items may be counted as citable and which may not. It has been held that citable items do not include letters, editorials, and conference abstracts; however, sometimes noncitable materials still get cited, thereby inflating the impact factor for that journal.²¹ There may also be measurement inaccuracies that the citation analysis in general fails to distinguish, such as homographs (the failure to separate the citations of unrelated researchers with the same name), cronyism (the act of persistently citing one's friend or colleague), ceremonial citations (citing seminal articles though they may not be directly relevant), and negative citations (citing other works in order to refute them).²² Self-citations may also inflate the impact factor.²³ Second, the journal format and article type are also illustrative of the structural limitations of the JIF. If the scope of an article or journal is more time-sensitive or more general than other journals or articles, for example, it will be rewarded with a higher score.²⁴ Journals that publish a high quantity of review articles will also be favored by the JIF, with as many as 60 percent of the top 25 journals being review journals.²⁵

An important limitation of the metric is that it is not uniform when being measured across disciplines.²⁶ For example, the JIF appears to disadvantage journals with long lags between publication, failing to take into account that some disciplines have ideas and concepts that take longer to develop than others.²⁷ Faster publication, then, will result in a higher impact factor; this fact discriminates against certain fields like taxonomy, which may take a year before its articles are

19 Cameron, "Trends in the Usage of ISI Bibliometric Data," 112; De Bellis, *Bibliometrics and Citation Analysis*, 187.

20 De Bellis, *Bibliometrics and Citation Analysis*, 191-193.

21 De Bellis, *Bibliometrics and Citation Analysis*, 191.

22 Meho, "The Rise of Citation Analysis," 32.

23 Meho, "The Rise of Citation Analysis," 32; Feeley, "A Bibliometric Analysis," 518; De Bellis, *Bibliometrics and Citation Analysis*, 192.

24 De Bellis, *Bibliometrics and Citation Analysis*, 193.

25 Cameron, "Trends in the Usage of ISI Bibliometric Data," 111; Meho, "The Rise and Rise of Citation Analysis," 35.

26 Balandin and Stancliffe, "Impact Factors and the H-Index."

27 Cameron, "Trends in the Usage of ISI Bibliometric Data," 109.

routinely cited.²⁸ Moreover, the two-year window of the JIF is agnostic to long-term values of many journals.²⁹ The JIF disadvantages some disciplines due to the size of their field and the amount of journals they publish.³⁰ The same can also be said by the nature, or urgency, of the articles published in that discipline. For example, some fields of biology are cited 500 percent more than articles in pharmacy fields.³¹ Importantly, some fields may have a few highly cited articles and many uncited articles, but this can skew the distribution of the citations in those fields.³² The JIF does not take these factors into account in its metric. There has also been some evidence that there is a language bias in the JIF measurement process, favoring journals published in English over foreign language journals.³³

The ability for the JIF to be manipulated by editors and publishers is another limitation. To receive a higher JIF score, Garfield states that an editor should invite “authors who publish innovative research, an international editorial board and a high standard of articles.”³⁴ However, framing the same practice less honorably, critics have argued that editors may inflate scores by including “vibrant correspondence section[s]” in their journals,³⁵ increasing the amount of review articles or the number of articles in total, or exclusively inviting authors who have good citation histories to submit.³⁶ For-profit publishers may even sell advertising space in journals with higher impact factor scores to increase their profit margins.³⁷

Judgment

Given the strengths and weaknesses of the JIF, a judgment regarding its effectiveness in measuring what it purports to measure—the scholarly impact of a journal—is warranted. Given the flaws in the measurement process, the metric should be used with caution by committees who intend to use it to make

28 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 109.

29 Meho, “The Rise of Citation Analysis,” 35.

30 Feeley, “Bibliometric Analysis”; Cameron, “Trends in the Usage of ISI Bibliometric Data,” 109.

31 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 109.

32 Feeley, “Bibliometric Analysis,” 507; Meho, “The Rise of Citation Analysis,” 35.

33 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 110.

34 Quoted in Balandin and Stancliffe, “Impact Factors and the H-Index,” 2.

35 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 109.

36 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 117.

37 Cameron, “Trends in the Usage of ISI Bibliometric Data,” 117.

important decisions regarding tenure and promotion. I argue that the JIF score does, indeed, measure the influence of a scholarly journal, though its findings may be misleading. As has been noted, the size or type of the discipline in which the journal is published may have a large influence on the score, thus the score can certainly not be a standardized metric across disciplines. If the limitations of the JIF are to be remedied, one or all of the following suggestions need to be addressed: Widen the two-year time window of citations; improve the metric; abandon the metric all together by focusing instead on other alternatives like the journal's acceptance rate, space allotment, quantity of submissions, or quality of submissions; or "use the data more critically and cautiously."³⁸ Incidentally, a possible alternative to using the JIF to assess the impact of scholarly work is the Web site SCImago, which ranks journals according to a variety of factors.³⁹ Critical to the site's salience to our discussion is the fact that it draws from Scopus®, a repository of journals much more comprehensive than that of the ISI. By drawing from Scopus®—the largest database of research literature containing roughly 18,000 journal titles⁴⁰—SCImago is positioned to improve on the JIF by compensating for one of the metric's frequently-cited limitations. It also accounts for the JIF limitation of addressing self-citation—thus decreasing rank inflation—as well as providing an alternative metric, the H-Index.⁴¹

Another important factor yet to be addressed is academe's common consideration of JIF as the status quo of a print-based world. Though the metric has a long history, it does not account for some of the exigencies that we have already discussed, as well as other emerging issues like Open Access (OA) publishing. The JIF does not directly address the fact that open access articles on the Internet "usually receive more citations than articles accessible only by purchase or subscription."⁴² With the increasing popularity of OA journals and online publishing, a new focus should be placed on downloads as a consequence of academic publishing in the age of Web 2.0. The download count is emerging as a quantifiable measurement of an article's popularity, even demonstrating a positive correlation between it and citation counts and impact factors.⁴³ Another possible

38 De Bellis, *Bibliometrics and Citation Analysis*, 194; Feeley, "Bibliometric Analysis," 517; Cameron, "Trends in the Usage of ISI Bibliometric Data," 112.

39 Accessed from the SCImago Web site, <http://www.scimagojr.com/> (July 2010).

40 Accessed from the SCImago Web site, <http://www.scopus.com/home.url> (July 2010).

41 Accessed from the SCImago Web site, <http://www.scimagojr.com/> (July 2010).

42 Joran Beel, Bela Gipp, and Erik Eilde, "Academic Search Engine Optimization (ASEO)," *Journal of Scholarly Publishing* 41 (2010), 185.

43 Meho, "The Rise and Rise of Citation Analysis," 35.

direction that the metric may take is focusing exclusively on the article, rather than the journal; if this practice becomes more widespread as it has in some OA online databases, citation rates will likely rise.⁴⁴ Though I am not advocating the elimination of the JIF in favor of a new digital metric alternative, I believe that this issue will continue to grow more salient in the coming years.

Field Relevance

Finally, we will address the appropriateness of the Journal Impact Factor for evaluating scholarship in the field of Communication. Synthesizing the above limitations, we can infer that the JIF favors scientists and those in the fields of the physical sciences and medical research. This claim is substantiated by evidence that those in the fields of the social sciences and humanities often write books rather than articles; books are not covered by the ISI database, and thus are not eligible to receive a JIF score.⁴⁵ Further, as argued by a scholar on the National Communication Association's listserv network, the Communication discipline functions as a microcosm of the aforementioned divide between the physical sciences and the social sciences.⁴⁶ Even within the discipline, there is a cultural divide between social scientists, media theorists, and rhetoricians; each of these subdisciplines has its own citation patterns and will often exclude the others from citation.⁴⁷ Moreover, Communication research is represented in journals from two associations—the National Communication Association and the International Communication Associations—and certain subdisciplines favor one outlet for publishing over the other. His final argument is that the quality of the article is agnostic to its impact rating because of the aforementioned limitations of the metric.⁴⁸ This argument indicates that the same issues that academia writ large is encountering with the JIF is also echoed in the field of Communication. The alternative metric mentioned earlier, SCImago, attempts to ameliorate some of these limitations by using the larger database Scopus®, which does include

44 Juliet Walker, "Richard Smith: The Beginning of the End for Impact Factors and Journals." (November 2009): n.p.

45 Rong Tang, "Citation Characteristics and Intellectual Acceptance of Scholarly Monographs," *College & Research Libraries* (July 2008): 357; Cameron, "Trends in the Usage of ISI Bibliometric Data," 110.

46 John Caughlin, "What's Wrong With Journal Citation Statistics?" On CRTNET: Announcements, Queries and Discussions #11040 (October 20, 2009).

47 Caughlin, "What's Wrong With Journal Citation Statistics?"

48 Caughlin, "What's Wrong With Journal Citation Statistics?"

book series in its database and not journals exclusively.⁴⁹ SCImago also includes in its metric a portal that rewards collaboration among authors.⁵⁰

Ultimately, though the JIF may, indeed, provide ostensibly “objective data” for tenure and promotion committees,⁵¹ given the complex composition and complicated needs of the many disciplines in the scholarly sphere, the JIF is too potentially misleading to accept wholesale as a legitimate scholarly metric. Though one could try to account for the limitations of the metric’s bias toward one discipline over another by only using it to measure journals within one discipline, there still remain other limitations that need to be addressed. As it now stands, it appears that the best way to interpret the metric is critically, only after a careful consideration of its limitations.

49 Accessed from the Scopus® Web site: <http://info.scopus.com/scopus-in-detail/facts/> (July 2010).

50 Accessed from the SCImago Web site, <http://www.scimagojr.com/help.php> (July 2010).

51 Feeley, “Bibliometric Analysis,” 506.

II

H-Index

Travis Bartosh

The h-index is a metric that uses both the number of an author's publications along with the number of times those publications have been cited by other authors in an attempt to gauge an author's perceived academic authority in their given fields of research. Balandin and Stancliffe explain how the h-index functionally operates: "If all of a researcher's total of N publications are listed in order of the number of times they have been cited – from most to least – then that researcher's h-index is the number of papers (h) that have been cited h or more times."¹ For example, an author with eight publications and those papers have been cited 10, 10, 9, 8, 8, 3, 2, 0 the author's h-index would be five because they have five papers that are cited five or more times.

The h-index was originally developed by a Jorge Hirsch, a physicist at University of California at San Diego. He developed the index, which is sometimes called the Hirsch index or the Hirsch number, in order to determine a physicist's academic impact on the field.² Due to the simplicity of the single digit number the index is able to produce, scientific journal editors have been a main audience that have taken notice of it; *Nature* and *Science* use the index to measure

1 Susan Balandin & Roger J. Stancliffe, "Impact Factors and the H-Index: What Researcher and Readers Need to Know," *Augmentative and Alternative Communication* 25, no. 1 (2009): 1-3.

2 Jorge E. Hirsch, "An Index to Quantify an Individual's Scientific Research Output," *Proceedings of the National Academy of Sciences of the United States of America* 102, no. 46 (2005): 16569-72.

research performance.³ Although the index was originally intended to measure the academic authority of an individual within physics, many departments and researchers outside of the sciences also use the h-index in the promotion and tenure processes.

Strengths & Weaknesses

Let us now shift to a deep look at both the strengths and weaknesses the index provides as a metric to measure academic authority. One of the primary strengths of the index is its ability to measure two dimensions of scholarly impact in one metric. Although I am against harming animals the appropriate phrase to use for this is 'Killing two birds with one stone'. Due to how the h-index measures the overall impact of an author's contribution to a given field by not only taking into account the number of publications an author has, but also how the rest of the field accepts the author's writing through citations the metric purports it is able to measure both breadth and depth in one number.

Bornmann, Wallon and Ledin note, "The h index is a valid indicator for research performance at the micro and meso levels, and a promising rough measurement of the quality of a young scientist's work as judged by internationally renowned scientists."⁴ Bornmann and company further point out three key advantages for using the h-index as a measurement tool: 1) It provides a sense of the robustness of the author's overall impact on the academic community as a whole and it also is able to present a comprehensive picture of an academic's research career; 2) Hirsch's 2007 follow-up study on the h-index shows not only did the metric provide a sense of an author's past productivity, but it also represents a prediction of future productivity; 3) The data used to calculate a researcher's h-index is easy to access. Both the Thomson Reuters Web of Science database and SCImago which uses the Scopus database are able to provide information without any off-line data processing.

In Philippe Baveye's article, "Sticker Shock and Looming Tsunami: The High Cost of Academic Serials in Perspective," he outlines three key weaknesses of the h-index developed by Hirsch.⁵ The first weakness identified by Baveye is the is-

3 Lutz Bornmann, Gerlind Wallon & Anna Ledin, "Is the H Index Related to (Standard) Bibliometric Measures and to the Assessments by Peers? An Investigation of the H Index by Using Molecular Life Sciences Data," *Research Evaluation* 17, no. 2 (2008): 149-56.

4 Bornmann, Wallon & Ledin, "Is the H Index Related," 155.

5 Philippe C. Baveye, "Sticker Shock and Looming Tsunami: The High Cost of Academic Serials in

sue of time. With how the index works it may take a long time for three key actions to occur before your personal h-index is reflective of your contribution. First, you must write an article or paper worthy of being published—this is a process that can take several years. Secondly, another scholar needs to search for your writing and use it in a project they are working on themselves. Lastly, the individual who seeks out your original publication must then themselves be published with your citation in their paper. Thinking of an extreme example of this situation happening over a long period of time I am reminded of an article I recently read published in 1962. If I was to cite content from that author's article and have a paper published there would have been a forty-eight year lag time on the original author's h-index!

The second weakness laid out by Baveye concerns the metric's indifference regarding whether a target article was used in a positive or negative fashion, as "the h-index does not distinguish between positive citations and references made to an article to point out that it is fundamentally flawed or erroneous."⁶ This is a major concern that could consequently reward people who have developed a false authority in scholarship. For instance, an author could potentially have an article published where many of the other academics in their field do not agree with its findings. Consequently, those other academics write negative responses to the original article, citing it to argue it is not going in the right direction or flat out wrong. However, the h-index does not factor in this seemingly major difference. Without recognizing the difference the h-index rewards and gives more academic credibility to the original author who 'got it wrong' and/or did not add to the discipline.

A third weakness of the h-index is its constructed bias towards quantity over quality. According to Balandin and Stancliffe, "The h-index represents an imperfect attempt to consider both the number of publication and their 'quality.'"⁷ This is a significant distinction to make as it has the potential to, in a way, discredit an author's overall contribution to a given field. Essentially the h-index penalizes authors who have few articles, even though those articles are widely cited by others. Imagine an author who spent ten years researching a topic and then released a ground-breaking publication on their research, and consequently that one study impacted an entire direction of a given field and was cited heavily by other authors. Although this person shifted an entire thought pattern within

Perspective," *Journal of Scholarly Publishing* 41, no. 2 (2010): 191-216.

6 Baveye, "Sticker Shock."

7 Balandin & Stancliffe, "Impact Factors and the H-Index," 1-3.

their discipline due in part to the time they put into the project, they would not be rewarded in the h-index. The author would be awarded a h-index of one even though they were cited numerous times and their contribution to society was much larger than others at the same level. Consequently, another author who published a flurry of less impactful articles could potentially have a very high h-index.

Results & Conclusion

At this point in the writing I am inclined to offer my own judgment on the h-index as an academic authority metric. Although the metric is able to measure two dimensions involved in the academic writing process (publication and citation by others) it overlooks one of the main reasons why we research and why many schools and universities are (publicly) funded in the first place—to disseminate information to the general public. Unfortunately the h-index ignores the potential impact an article can have as a teaching tool. For instance, I am reminded of one instructor in the field of Communication Studies who uses Peggy McIntosh's groundbreaking essay "White Privilege: Unpacking the Invisible Knapsack" to teach the topic of identity to a classroom of mostly white young adults at a large midwestern university. One of the main quotations taken away from the article by the students is where McIntosh writes, "I was taught to see racism only in individual acts of meanness, not in invisible systems conferring dominance on my group."⁸ After that quote McIntosh then enters into a list of fifty points where she experiences white privilege in everyday life. Needless to say this is very impactful on the students in the classroom, many of whom have never thought about their own white privilege or institutionalized racism. Due to the impact of Peggy McIntosh's article on the students they begin to look at life with a more critical lens and will hopefully engage in praxis with their new found education.

Unfortunately, like many of the metrics and indices that measure academic authority, the h-index appears to ignore the impact of a researcher's publication on students and the general public at large, and consequently comes off as an elitist measurement tool that only takes into account what other academics within the institution deem is worthy. Although academics' citation of their peers' writings act as a type of peer-review process in order to develop the strongest ideas pos-

8 This excerpt is taken from Peggy McIntosh's essay, "White Privilege: Unpacking the Invisible Knapsack." It is part of her larger collection of writings, "White Privilege and Male Privilege: A Personal Account of Coming to See Correspondences Through Work in Women's Studies."

sible, we need to look to how we can factor in what students experience as impactful in their own lives. One direction that may prove beneficial to think about for the future of academic authority metrics is the idea of the multiple stakeholder model developed by the organizational communication theorist Stanley Deetz.⁹ The multiple stakeholder model is an organizational tool that attempts to take into account the voices of all of those who are vested in the organization. For instance, if a lumber company in a given city made a business decision the multiple stakeholder model would have the management of the company acting as liaisons between all of those who have an interest in what the company does (lumber supplies, employees, citizens of the city, land conservationists, etc.) to come to a solution that is beneficial or at least agreed upon by all. However, I digress, as this writing does not offer a new academic authority measurement tool, but I do think these are important aspects to be cognizant of when developing or improving new indices and metrics.

As I write this as a member of the field of Communication Studies I am also inclined to provide a thought on the appropriateness of the h-index in the field. Overall I am troubled by the weaknesses the index provides, but specifically I am concerned it will not benefit the field of Communication Studies. The h-index was originally developed in the field of physics and designed to be used by others in the sciences. Consequently, authors' publication patterns in the hard sciences are different as opposed to those in the social sciences and humanities. A researcher in Communication Studies may find their h-index number to be much lower than their counterparts in the sciences due to the amount of articles they publish contrasted to those in Communication Studies. Another possible negative side effect of researchers within Communication Studies using the h-index is the inconsistency of self-harvesting data in attempt to gain a higher h-index by including publications that may be questionable in particular departments or universities. As other forms of publication are being recognized for the tenure and promotion process the h-index will show to be an inconsistent tool in measuring academic authority.

9 Stanley Deetz, *Transforming Communication Transforming Business* (Cresskill, NJ: Hampton Press, 1995).

III

SCImago

Getachew Dinku Godana

The degree to which a scholar's work is cited by others has been regarded as an indicator of its scientific impact relative to other researchers in the web of scholarly communications.¹ Likewise, various metrics based on citation counts have been developed to evaluate the impact of scholarly journals.² Recently there has emerged a new research trend aimed at developing impact metrics that consider not only "the raw number of citations received by a scientific agent, but also the importance or influence of the actors who issue those citations."³ These new metrics represent scientific impact as a function not of just the quality of citations received but of a combination of the quality and the quantity. For example, the SCImago Journal Rank (SJR) indicator, which has been developed by the SCImago Research Group headed by Professor Felix de Moya,⁴ and launched in December 2007, is a size-independent, web-based metric aimed at measuring the current "average prestige per paper" of journals.⁵ This indicator shows the

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- 1 Borja González-Pereira, Vicente P. Guerrero-Bote and Félix Moya-Anegón, "The SJR Indicator: A New Indicator of Journals' Scientific Prestige," *Computer Science Digital Library*, (December 2009), <http://arxiv.org/abs/0912.4141v1>.
 - 2 González-Pereia, et al., "SJR Indicator."
 - 3 González-Pereia, et al., "SJR Indicator."
 - 4 SCImago Research Group, "SCImago Institutions Rankings," PowerPoint presentation, <http://www.webometrics.info/Webometrics%20library/morning%20session/Vicente%20Guerrero.pdf>
 - 5 González-Pereia, et al., "SJR Indicator."

visibility of the journals contained in the Scopus database.⁶

SCImago Journal Rank

The SJR indicator of a specific journal for a three calendar year period is calculated through an iterative process that computes the “prestige” gained by the journal through the transfer of prestige from all the other journals included in the network of journals, by their citations during the past 3 years, to all articles of the specific journal published in the past 3 years, divided by the total number of articles of the specific journal during the 3 year period under consideration.

The SJR index is derived from analysis of the citation links between journals in a series of iterative cycles, similar to the Google PageRank algorithm, assigning more weight to citations coming from journals with higher SJRs. The assumption is that a journal has a particular prestige in a particular field and it transfers prestige if cited by another journal. The amount of prestige of each journal transferred to another journal in the network is computed by considering the percentage of citations of the former journal that are directed to articles of the latter journal.⁷ If one is cited by a journal with a high prestige or a high SCImago index value, the citation is valued highly. On the contrary, if one is cited by a journal with a low prestige, then the citation is worth less.⁸ A journal is believed to have a fixed amount of prestige and this prestige has to be shared among all of its citations.

In fields such as those in the life sciences, there are very abundant citations. This means that life science journals generally tend to have very high impact. Fields such as those in the arts and humanities tend to have fewer citations. In making the SJR calculation for these fields, one citation will have a higher value. This caveat is important to note because it is reported to have the effect of normalizing the differences on the citation behavior between subject fields.⁹

6 SCImago Group, “SJR — SCImago Journal & Country Rank, (2007),” <http://www.scimagojr.com>.

7 Matthew E. Falagas, Vasilios D. Kouranos, Ricardo Arencibia-Jorge and Drosos E. Karageorgopoulos, “Comparison of SCImago Journal Rank Indicator with Journal Impact Factor,” *The FASEB Journal Life Sciences Forum*, 22 (2008): 2623-2628.

8 SCImago Research Group, “SCImago Institutions Rankings,” PowerPoint presentation, <http://www.webometrics.info/Webometrics%20library/morning%20session/Vicente%20Guerrero.pdf>

9 SCImago Research Group, “SJR.”

The SJR indicator is computed in two phases. The SJR algorithm begins by assigning an identical amount of prestige to each journal. Next, this prestige is redistributed in an iterative process whereby journals transfer their attained prestige to each other through the previously described connections. The process ends when the differences between journal prestige values in consecutive iterations do not surpass a pre-established threshold.¹⁰

Strengths and weaknesses of SCImago

The main strength of SCImago is that it uses Scopus as the data source for the development of the SJR indicator. Scopus is said to be the world's largest scientific database with current coverage of data from more than 17,000 research publications embracing the full range of scholarly research.¹¹ The SCImago research group believes Scopus covers all the journals included in the Thomson Reuters Web of Science and more.

Multidimensionality is the other merit of SJR. The index's multi-faceted view of research activity enables it to measure the world's 2000 leading research-focused institutions. Production, visibility, impact and collaboration are among the major dimensions SJR considers in cross analyzing citations of scholarly writings by different individuals and institutions including higher education, government research agencies, health research institutions and private research companies. SJR also has a provision of analyses within a subject area.¹²

SCImago metrics also help to prevent excessive journal self-citation by limiting the number of references that a journal may direct to itself to a maximum 33% of its total references so that excessive self-citation will not involve artificially inflating a journal's value, but without eliminating the normal academic practice of self-citation.

Another advantage of SJR is that it introduces international collaboration in a bid to show the institution's output ratio that has been produced in collaboration

10 González-Pereira, et al., "SJR Indicator."

11 SCImago Research Group, "SCImago Institutions Rankings (SIR) 2009 World Report number 003," 2009, http://www.scimagoir.com/pdf/sir_2009_world_report.pdf

12 SCImago Research Group, "SCImago Institutions Rankings."

TABLE 1

Main characteristics of the evaluation of scientific journals by journal citation reports and SCImago journal and country rank

Characteristic	ISI	SCImago
Organization	Thomson Scientific	SCImago research group
Number of journals (as of 2009)	9,000	17,000
Languages of publication of journals	30	50
Countries of publication of journals	71	97
Countries of research origin	Not available	229
Update	Weekly	Daily
Main indicator of quality of journals	Journal Impact Factor	SCImago Journal Rank
Reference period	1 calendar year	3 calendar years
Citation window	2 preceding years	3 past years
Journals providing citations	Source journals	All other journals
Weight of citations	Equal	Shifts with “prestige” of citing journal
Journal self citations	Included	Not included
Articles considered to receive citations	“Citable” (research and review articles)	All types
Access	Restricted (paid subscription required)	Open

Source: Table adapted from Falagas, et al., “Comparison of SCImago.”

with foreign institutions. The values are computed by analyzing the institution's output whose affiliation includes more than one country address over the whole period.¹³

SJR provides not only a resource, but also a user-centered tool designed to help individuals construct the information they need in the way they need it.

¹³ SCImago Research Group, “SCImago Institutions Rankings (SIR) 2009 World Report,” 2

Both the data and the tool are open access materials.

Weaknesses

SCImago metrics consider only peer reviewed journals, proceedings, reviews and book series with peer reviewed content. That SJR does not consider trade journals and other non-peer reviewed articles to generate metric can be seen as a major limitation. The second limitation is that articles are considered if they are received by articles reviews and conference papers.

A further limitation is that a citation is counted only if it is made to an item which is published in the three previous years. However, the SCImago Group argues that a three-year citation window is “long enough to cover the citation peak of a significant number of journals, and short enough to be able to reflect the dynamics of the scholarly communication process.”¹⁴

Judgment

Recent years have witnessed a growing criticism on the traditional Thomson Scientific Impact Factor, the metrics extensively used for more than 40 years to measure prestige. Some of the major criticisms of Thomson include the lack of assessment of the quality of citations, the inclusion of self-citations, the poor comparability between different scientific fields, and the analysis of mainly English-language publications.¹⁵

As we have seen from its strengths listed above, I would argue, SJR best reflects the citation relationships among scientific sources. SJR has responded to the dissatisfactions of the scientific community with former metrics like Thompson Scientific’s Impact Factor. The fact that it has a late comer advantage makes it not only learn from the limitations of former metrics but also exploit the benefit of the current developments in the communications technology.

The SCImago Research Group reports that SJR has already been studied as a tool for evaluating the journals in the Scopus database compared with the Thomson Scientific Impact Factor and shown to constitute a good alternative for

¹⁴ González-Pereira, et al., “SJR Indicator,” 18.

¹⁵ Falagas, et al., “Comparison of SCImago.”

journal evaluation.¹⁶ The comparison made between SJR and the journal impact factor (IF) suggests that: 1) the SJR indicator is an open-access resource, while the journal IF requires paid subscription; 2) The SJR indicator lists considerably more journal titles published in a wider variety of countries and languages, than the journal IF; and 3) contrary to the journal IF, the SJR indicator attributes different weight to citations depending on the “prestige” of the citing journal without big influence of journal self-citations.

Appropriateness of SCImago for the Field of Communication

I would argue some features of the SCImago citation index analysis fit the interests of Communication Studies. In the first place, the idea of measuring collaboration in the SJR sits well with the move in Communication Studies to develop non-othering ways of engaging differences. The payoff from a core collaborative approach, according to Deetz, is not only in better corporate goal achievement, as “learning to participate in collaborative decision making is also a value in itself, and increasingly important in our pluralistic social context.”¹⁷ This idea of collaboration might be a way of increasing citizen participation in knowledge formation and the democratic process in general.

If dialogic communication is effectively introduced to practices of measuring intellectual impact, it can serve as a site of struggle and collective meaning production. Dialogue has a transformative potential as it helps to overcome the adversarial thinking that damages creativity.¹⁸

SJR not only ranks, analyzes and compares but also has a feature that generates visuals. So I also got the impression that the diagrammatic comparison of results might add a dimension of visual rhetoric to presenting quality of an academic impact as images present information and evidence that is relevant to an argument more accurately and concisely. Cognizant of the fact that contemporary society is filled with a variety of visual images designed to influence opinions, “rhetoricians working from a variety of disciplinary perspectives are beginning to pay a substantial amount of attention to issues of visual rhetoric.”¹⁹

16 González-Pereira, et al., “SJR Indicator.”

17 Stanley Deetz & J. Simpson, “Critical Organizational Dialogue: Open Formation and the Demand of ‘Otherness,’” in R. Anderson, L.A. Baxter, & K. Cissna (Eds.), *Dialogue: Theorizing Difference in Communication Studies* (pp. 141-158) (Thousand Oaks: Sage, 2006), 49.

18 Deetz & Simpson, “Critical Organizational Dialogue.”

19 C.A. Hill & M. Helmers, *Defining Visual Rhetorics* (Mahwah: Lawrence Erlbaum Associates, Pub-

Communication Studies scholars have increasingly recognized the rhetorical advantage of images. In *No Caption Needed*, Hariman and Lucaites assert images have a huge potential of communicating social knowledge, shaping collective memory, modeling citizenship, and providing visual resources for public action.²⁰

Compared to science journals, Communication Studies journals might generally have low citations and hence impact. However, the in-built mechanism of normalizing with SJR makes it possible that scholars can still salvage respectable SJR scores for publications that receive fewer citations in relatively less dense citation fields such as in the humanities. If mere citation numbers were to be considered to decide the impact of a journal, communication journals would be rated lower.

lishers, 2004), 2.

20 Robert Hariman & John Lucaites, *No Caption Needed* (Chicago: The University of Chicago Press), 2007.

IV

Web of Science Citation Data

Rachel Stohr

The unprecedented challenges of “information overload” in the digital age have prompted academic institutions to develop new approaches to gauge scholarly authority and productivity, and disseminate research. The goal of this chapter is to consider the strengths and weaknesses of one such metric, and to speculate on the implications of its continued use for the academy, the communication studies discipline, and society. Specifically, I explore Web of Science citation patterns, a contemporary metric of scholarly authority that measures scholarly impact and influence via number of author and/or article citations over time. This report is comprised of four sections: (1) a history of the metric, (2) the major strengths and weaknesses of the metric, (3) a judgment regarding the degree to which the metric measures what it purports to measure, and (4) a position on whether or not the metric is an appropriate tool with which to evaluate scholarship in the communication studies discipline.

History

In 1960, Eugene Garfield founded the Institute for Scientific Information (ISI), the first citation index for articles published in scholarly journals.¹ The ISI featured citation databases for thousands of scholarly journals, and print-based indexing

¹ Eugene Garfield Webpage, <http://www.garfield.library.upenn.edu/>

services Science Citation Index (SCI) and Social Sciences Citation Index (SSCI).² Today, the digitized version of these widely-used tools for generating citation data is known as the “Web of Science.” The Web of Science is an online academic search portal that provides access to ISI citation databases; it is part of the Web of Knowledge, a broad collection of databases first acquired by Thomson Scientific, and currently owned by Thomson Reuters, the product of a 2008 merger of the Thomson Corporation, a publishing agency, and Reuters, a news corporation.³ These databases can be accessed through most university libraries for a fee.⁴

Web of Science citation patterns comprise a metric of scholarly “authority 2.0”⁵ that enable researchers to calculate how many times and by whom their work has been cited. These patterns may be used to determine both the Journal Impact Factor (JIF) and an author’s h-index. The JIF for a given year “reflects the number of citations of a journal’s material in the preceding two-year period divided by the number of citable materials published by that same journal”⁶ and the h-index calculates an author’s citation distribution, measuring both the number of an author’s publications and citations per publication. Web of Science citation patterns can thus be conceptualized as a criterion by which other scholarly metrics measure scholarly authority.

Strengths and Weaknesses

The major strengths of the Web of Science include access to approximately 10,000 journals that feature multidisciplinary and both regional and global journal articles, journal backfiles to 1900, “cover-to-cover” indexing, author identification tools, analysis capabilities, and the ability to see where top researchers are publishing and presenting their findings.⁷ Weaknesses of the Web of Science include the fact that it does not count citations from books nor does it control for self-citation or instances in which articles are cited for reporting erroneous data, its comparatively low number of journals (Web of Science com-

2 Web of Knowledge Fact Sheet, <http://www.thomsonreuters.com/webofknowledgefactsheet.pdf>

3 Web of Knowledge Fact Sheet.

4 Thomas Hugh Feeley, A Bibliometric Analysis of Communication Journals from 2002-2005, “*Human Communication Research*

5 Michael Jensen, “The New Metrics of Scholarly Authority,” *The Chronicle Review* (June 15, 2007)

6 Kurmis 2003

7 Web of Science Fact Sheet.

petitor Scopus has nearly double the number of journals), citing errors, and the possibility of promoting “cronyism” among researchers as a means by which to boost citation counts.⁸ Additional limitations of the metric include the fact that raw citation numbers place far too much emphasis on quantity, and fail to address the quality, value, and disciplinary significance of an author’s work.

Judgment

Academic institutions tend to rely on citation patterns for making decisions about hiring, tenure, and promotion, and thus operate under the assumption that this metric effectively measures scholarly impact, influence, and disciplinary contributions. Because Web of Science citation patterns inform other scholarly metrics that purport to measure journal impact or circulation for example, the metric does not claim to measure one particular element of research quality. Rather, Web of Science citation patterns are hailed by proponents as a way of accurately reporting validity and reliability in citation counts. Such a mindset, however, prizes quantity of publications over quality of work, perpetuates the flawed “publish or perish” logic, and exacerbates the oncoming publishing “tsunami.” Specifically, Baveye contended that, if this publishing trend continues, “there will continue to be significant serial price hikes, constantly exceeding inflation and steadily worsening the plight of academic libraries.”⁹

Field Relevance

Protagoras’ “human measure” fragment asserts that human beings themselves can measure things and thus weigh the better of two or more arguments. People are therefore capable of debating and evaluating ideas in nuanced and meaningful ways. The “human measure” fragment can inform current discussions about the proliferation of scholarly metrics, and change the ways in which academic institutions and society at large evaluate scholarly authority, influence, and impact. Specifically, the communication studies discipline must embrace a transformative understanding of scholarly authority in the digital age by incorporating metrics that move beyond quantity to measure quality of scholarship. Current metrics of scholarly authority alone, including Web of Science citation

8 Lokman I. Meho, “The Rise and Rise of Citation Analysis,” *Physics World* (January 2007).

9 Phillipe C. Baveye, “Sticker Shock and Looming Tsunami: The High Cost of Academic Serials in Perspective,” *Journal of Scholarly Publishing* 41 (2010): 191-215.

patterns are not appropriate tools with which to evaluate scholarship in the communication studies discipline because they tend to value individualism over collaboration and breed competition rather than community-building.

The communication studies discipline must mimic ideas put forward by the Howard Hughes School of Medicine, for example, thereby enacting Isocrates' "philosophia" to use one's work, not promote one's self and/or career, but to unify and extend a scholarly community that actively contributes to the betterment of society. To do so requires that communication studies scholars reconceptualize the "value" of their work to include, not number of citations in a given journal, or acceptance in and among a small group of their peers, but rather relevancy to and impact on the larger public. Communication studies scholars (and all academics) must rid themselves of the tendency to adopt an elitist attitude that what is popular among the masses is inherently unworthy of serving as a metric of scholarly authority.

Scholars can incorporate the popularity of an article or topic among "everyday" members of society as a measure of importance/relevance to the public. By doing so, scholars will incorporate academic expertise in popular culture, as well as utilize new technologies to share information outside of the academy with people for whom quality of life will improve with access to such knowledge. In sum, Protagoras' "human measure" fragment can, and I suggest must, serve as a guide for the creation of new metrics of scholarly authority that promote community, collaboration, and information-sharing over competition and individualistic attitudes of impact that rely solely on the quantity of increasingly shallow, often inconsequential scholarship.

Challenges posed by an increasingly interconnected, changing world to conventional notions of scholarly authority, productivity, and research dissemination present universities with an unprecedented opportunity to develop and implement new approaches to scholarly research and information-sharing. Any new approaches will be unsuccessful, however, unless and until they incorporate the human measure fragment to promote quality of work over quantity of author and/or article citations.

V

Scholarly Books

Sarah Jones

History

As an academic's career progresses, there are many landmarks: teaching that first class, completing the dissertation, publishing the first article, getting a tenure-track position, publishing that first book, and receiving the first promotion, among others. Tracking a scholar's progress often appears to be linear and cumulative. Charles Bazerman and his colleagues point out that "publication of a scholarly book is frequently a central part of the evidence offered in support of tenure and promotion cases."¹ In fact, a brief review of tenure and promotion requirements for three prominent communication studies departments—University of Iowa,² the University of Nebraska-Lincoln,³ and the University of Pittsburgh⁴—reflects that a peer-reviewed, published work is expected to be in the candidate's

1 Charles Bazerman, David Blakesley, Mike Palmquist, and David Russell, "Open Access Book Publishing in Writing Studies: A Case Study," *First Monday* 13, no 1 (2008). <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2088/1920>.

2 "Operations Manual, Department of Communication Studies," University of Iowa, January 2000, http://www.clas.uiowa.edu/_includes/documents/faculty/criteria_communication.pdf

3 "The College of Arts and Sciences Handbook," University of Nebraska-Lincoln, January 2008, <http://ascweb.unl.edu/adminresources/bylaws.pdf>

4 "Criteria and Procedures for Appointment, Reappointment, Promotion, and Conferral of Tenure," School of Arts and Sciences, University of Pittsburgh, April 16, 2003, <http://www.as.pitt.edu/faculty/governance/tenure.html#A>

research dossier. At Iowa and Nebraska, scholarly books are specifically mentioned. As metrics of scholarly authority, university-press books are supposed to reflect prestige, rigor, and accomplishment. What makes the scholarly book a hotbed of discussion about authority in academe is the recent increase in the digital publication of books. As the costs of print publication continue to rise and the numbers of books acquired by libraries and individual users have decreased, the expectation of having your own book when the tenure and promotion committee is waiting, persists.⁵ This tension has made the digital publication of a scholarly book tempting to many researchers.

In addressing the Sixth Scholarly Communication Symposium at Georgetown University Library, Professor Stephen Nichols of Johns Hopkins University, explains that many in the academic community believe that peer-review processes are only possible for print publications, so digital scholarship is belittled and younger scholars are discouraged from pursuing such avenues.⁶ This perception of digitally published scholarship—including books—reduces the legitimacy of an online book as a metric of scholarly authority according to members of the academic community. This point is important to remember as we consider books as metrics of authority. The digitization of information is happening; it is now a question of the extent to which academic information will go digital and the correlation of that shift to academic perceptions of print and digital books as scholarly metrics. While many scholarly authority metrics such as the h-index, the journal impact factor, and Web of Science citation patterns seek to quantify objectively the research output of academics, it is my contention that scholarly books as metrics of authority may tell us more about the individuals applying that metric than the scholar being considered. As Michael Jensen points out, “technology doesn’t drive change as much as our cultural response to technology does.”⁷

Strengths and Weaknesses of Books as Metrics of Scholarly Authority

With print publication of books, Jensen explains that publishers use peer re-

5 Bazerman, Blakesley, Palmquist, and Russell, “Open Access.”

6 Joan Cheverie, Jennifer Boettcher, and John Buschman, “Digital Scholarship in the University Tenure and Promotion Process: A Report on the Sixth Scholarly Communication Symposium at Georgetown University Library,” *Journal of Scholarly Publishing* (2009): 220.

7 Michael Jensen, “The New Metrics of Scholarly Authority,” *The Chronicle of Higher Education*, June 15, 2007, <http://chronicle.com/article/The-New-Metrics-of-Scholarly/5449>.

viewers to validate research and conduct studies to determine the marketability of a book.⁸ If the financial bottom-line for a book does not cover publication costs and it has not gained support through subvention, then the project is scrapped. Rather than eliminating a scholarly project from the publication queue based on the innovativeness of the scholarship, this decision is made based on what is essentially a popular vote. Thus, the final variable being measured by the print version of this metric may not be authority (although, we hope that passing peer-review would indicate that), but instead popularity. This determination points to marketability as a measure of perceived relevance to an audience. The analyses of a scholarly book's marketability and potential popularity are not always on point however. In his discussion of the University of Nebraska-Lincoln's institutional repository, Dr Paul Royster describes such a situation. Royster explains that Drs Scott Gardner and Armand Maggenti spent ten years researching and writing *The Dictionary of Invertebrate Zoology*.⁹ This 970-page volume with over 13,000 entries had been accepted for publication by the University of California press, but when the final draft was to be submitted in 2004, the publisher cancelled a number of its life-sciences contracts, including this one. A year later when Royster introduced Gardner to the digital commons, they agreed to post the volume in the repository. Within a year of digitization, this book had more than 12,000 downloads and continues to be one of the repository's most popular works.¹⁰ While this book had been cancelled by the publishing company—most likely because the publisher did not expect it to meet that financial bottom line—the persistent high volume of downloads points toward a clear exigence for the text.

Admittedly, the institutional repository is not the same publishing medium as the university press and given that most institutions expect book publication through a "respected publisher,"¹¹ print publications may offer academics seeking promotion a safe alternative to its maligned cousin: digital publication. There are a number of digital publication options that do not have any means of reviewing the material produced and have an 'anything-goes' attitude—contributing to the perception of digital publications as subordinate to print publication. However, not all digital publication outlets are so laissez-faire. Bazerman and his colleagues describe their work with the Writing Across the Curriculum Clearinghouse—a website dedicated to providing free, digital access to scholar-

8 Jensen, "New Metrics."

9 Paul Royster, "The Institutional Repository at the University of Nebraska-Lincoln: Its First Year of Operations," *Faculty Publications*, UNL Libraries (2006): 2.

10 Royster, "The Institutional Repository," 3.

11 Jensen, "New Metrics."

ship. Through this site, the authors published a digital anthology that underwent peer-review, was edited by prominent scholars, contained unique essays, and reflected professional copy-editing.¹² Their case study provides the following insights about digital publishing: many researchers are ready and willing to publish digitally; the digital format can support the peer-review process and stringent editing criteria; digital publication leads to faster and wider distribution; digital books are cited sooner and more often than their print cousins; and “free electronic distribution is an attractive method of supporting a free and open exchange of scholarly information.”¹³ This site demonstrates that while there are digital publishers who eschew peer-review, this does not mean that all digital scholarship follow the “open gate” model.

As with print publications, digital publications using similar evaluative methods for publishing material rely on peer-review. This peer-review process is intended to provide authors with insightful pertinent feedback to extend their work and readers with ideas that have been viewed through a number of academic minds. What marks digital publication apart is the elimination of market research concerned with covering publication costs. For online publication, relevance can be derived post-publication on an individual level. The production of digital scholarship is not entirely free, however. There are editors and reviewers who may offer their services for free, but digital books also need copy-editors that require financing.¹⁴ As there are a number of organizations that provide research grants and the content would be free to all, libraries may be persuaded to invest in supporting digital publications instead of commercial publications.

Judgment of Books as Scholarly Metrics

Thus far, this essay has addressed the shifting landscape in the publication of scholarly books from purely print to digital format. Through peer-review, both formats rely on the presumption that that process is determinative of research as valid and respectable. The print publication process also makes its decision to publish based on potential popularity and revenue. As pointed out in the previous section, digital publication of scholarly books has the potential for almost identical use of the peer-review process and with open-access offers unique benefits for dissemination. What makes the case of digital versus print publication

12 Bazerman, Blakesley, Palmquist, and Russell, “Open Access.”

13 Bazerman, Blakesley, Palmquist, and Russell, “Open Access.”

14 Bazerman, Blakesley, Palmquist, and Russell, “Open Access.”

of books unique, I argue, is that these texts act not simply (or even primarily) as metrics of authority, but as metrics of the academic community's interpretation of this technological development. Contrasting the two means of distribution, we can see that "in general commercial academic publishing industry defined readers as potential consumers and academic content as a commodity that could be sold, ideally on a steadily increasing subscription basis."¹⁵

As a metric, print book publications may address validity through the peer review process, but the perceptions of those applying the metric may also reflect a conceptualization of knowledge as a commodity and readers as consumers. Conversely, digital publications can be argued not only to increase the agency of the author who can now be more involved in that publication process, but also to shift the emphasis back to knowledge dissemination and development. For tenure and promotion committees, this means that if scholarly books are to be a metric of academic contribution and authority, then the committee should recognize that it is the content of the book that matters, rather than emphasizing where it was produced. Thus, as a metric of authority, books are in a position in which after surviving peer review, the receiving public (from tenure committee to first-year undergraduate student) can move beyond concerns over publisher and instead turn to considerations of creativity, the improvement of the human condition, and more nuanced understandings of ideas.¹⁶

Relevance for Communication Studies

Recognizing typical interpretations of print scholarly books as more valid and digital publications as inherently being the products of a *laissez faire* attitude—despite comparable review processes and a number of advantages—we can see that the scholarly book gets its status as a metric not necessarily from any strategic calculations, but from the community's perceptions. This relationship becomes particularly striking when we turn to sections of the mission statements

15 Michael Felczak, Richard Smith, and Roland Lorimer, "Online Publishing, Technical Representation, and the Politics of Code: The Case of CJC Online," *Canadian Journal of Communication* 33, no 2 (2008): 273.

16 Felczak, Smith, and Lorimer, "Online Publishing," 277.

of the Universities of Iowa,¹⁷ Pittsburgh,¹⁸ and Nebraska-Lincoln.¹⁹ In their own ways, each mission statement elucidates the study of communication as related to the ways in which communication and interaction shape and are shaped by the institutions, experiences, and relationships we have. For individuals with a more traditional background and positive experiences with print publishers, that metric may be perceived as appropriate and valid. For others who perceive print publication as a commoditization of information that diminishes reader and author agency and produces an over-centralization of knowledge, digital publication may be perceived as more valid and appropriate. As a discipline, communication studies attends to the different factors and relationships that influence human action and interpretation. The different interpretations ascribed to print or digital publications become salient when we recognize the communicative interdependence of who is attempting to use the metric and the metric itself. Thus, the relationship between this discipline and book publication is not so much that books will provide a measure of scholarly authority for us, but that communication studies will illuminate the ways in which the scholarly book metric measures and reflects the assumptions of its user.

17 "Mission Statement," Department of Communication University of Iowa, <http://www.uiowa.edu/commstud/graduate/mission.shtml>.

18 "Mission Statement," Department of Communication University of Pittsburgh, <http://www.comm.pitt.edu/about/index.html>.

19 "Mission Statement," Department of Communication University of Nebraska-Lincoln, <http://www.unl.edu/cs/>.

VI

Internet Usage Data

Adam Knowlton

History of Internet Usage Statistics

Interest in quantifying the the amount of traffic directed to specific websites grew soon after the rise of the internet in the early-to-mid 1990s. Drawing from scholarly metrics such as citation analysis, Larry Page and Sergey Brin developed a ranking system for the internet that would apply numerical value to a website based on the number of hyperlinks contained within, and linked to, that same website. This measurement tool opened the door for academic scholars to learn more about how their work circulates online. However, personal websites are not the only way that scholars have been able to make public their work on the open web. Corresponding with the rise of internet, institutional repositories have begun to slowly grow in popularity. The first ever online repository arXiv was launched in 1991 and is associated with the Los Alamos National Laboratories.¹ The success of arXiv, has resulted in the launch of many other institutional and subject-based repositories around the world (see Table 1).

Finally, as the internet has continued to evolve, numerous additional sources

¹ Joan Cheverie, Jennifer Boettcher, & John Buschman. "Digital Scholarship in the University Tenure and Promotion Process: A Report on the Sixth Scholarly Communication Symposium and Georgetown University Library," *Journal of Scholarly Publishing* (2009). 199-230.

TABLE 1
Prominent Digital Repositories

Repository	Host	Location
DSpace	MIT	dspace.mit.edu
Eprints.org	University of Southampton, UK	eprints.org
Digital Access to Scholarship at Harvard (DASH)	Harvard	dash.harvard.edu
Focus on Access to Institutional Resources	Joint Information Systems Committee, UK	jisc.ac.uk
Caltech Collection of Digital Archives (CODA)	Caltech	library.caltech.edu/digital
CARL Institutional Repository Project	Canadian Association of Research Libraries	carl-abrc.ca

have arisen giving scholars additional avenues for online publishing. In December of 2003 Google launched “Google Print” (predecessor of Google Books), and in October of 2004, Google launched “Google Scholar” which sought to provide “a free service for searching scholarly literature such as peer-reviewed papers, theses, books, preprints, abstracts and technical reports.”²

Strengths and Weaknesses

Joan Cheverie, Jennifer Boettcher, and John Buschman argue that with the meteoric rise of the internet in becoming a viable publishing option for scholars, we are often left with more questions than answers about the viability of internet usage statistics within academic review processes.³ They cite the 2006 Modern Language Association who states that we have reached a “threshold moment in digital scholarship and the promotion and tenure process,” but has left the change itself up to individual departments and institutions. This section seeks to identify first the strengths of the internet usage metrics, before moving on to consider the weaknesses.

3 Cheverie, Boettcher & Buschman, “Digital Scholarship.”

The strength of internet usage lies in the fact that despite being 90% text, the ability to incorporate design elements, imagery, and color allows scholars the unique opportunity to better explain their work.⁴ Kevin Lomangino argues that it is this advantage of internet usage data that translates into higher citation rates than comparable material published in subscription-only journals. Additionally, these higher citation rates play a significant role within Google Scholar's ranking algorithm, allowing materials with both a high number of citations by other sources and a large number of citations within the article itself to be ranked highly. Outside of citation ranks, scholars may also use download rates to quantify the popularity of their work. Kevin Lomangino notes that as repositories grow in popularity they may become a serious rival for traditional publishing outlets. Lomangino points to the subject-based repository arXiv which on average has 23% more downloads than corresponding traditional publishing websites.

Despite these strengths internet usage metrics do have significant weaknesses. Cheverie, Bottcher, & Buschman argue that the usage and download statistics digital repositories offer are merely popularity of content statistics.⁵ It is nearly impossible for evaluators of these statistics to determine whether or not an individual visiting the site found the information valuable and read through the entire article, or simply read the abstract or introduction and moved on.

Additionally, the complex issue of search terms points to a significant gap within usage statistic metrics. According to Beel, Gipp, and Eilde, "none of the major academic search engines currently consider synonyms."⁶ The impact of this claim illustrates that if one were searching for "scholarly internet usage metrics," all articles discussing "academic evaluation of web-based content" would be ignored. This could significantly alter the number of total visits, and in turn future citations, a piece of scholarly work could enjoy. Additionally, in these search engines such as Google Scholar focus on length of titles and number of times that key-word terms are used in the title, abstract, and full-text⁴. This means that despite being a leader in the field, by using a variety of synonyms within their writing and not including the key-word term in the document title, an author can

4 Google Milestones: Corporate Information, <http://www.google.com/corporate/history.html> (Accessed June 13, 2010).

5 Cheverie, Boettcher & Buschman, "Digital Scholarship."

6 Jordan Beel, Bela Gipp, & Erik Eilde. "Academic Search Engine Optimization (ASEO): Optimizing Scholarly Literature For Google Scholar & Co.," *Journal of Scholarly Publishing* (2010): 177-190.

be ranked less relevant than an author who constantly repeats key-terms.

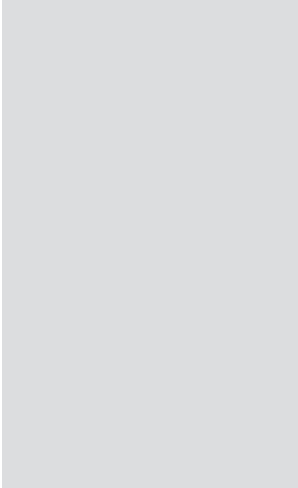
Judgment

Despite their ability to make academic work considerably more available to the public, and other scholars, than traditional publishing; internet usage statistics still fail to paint an accurate picture of relevance, impact, and popularity. While statistics such as the 23% higher download rate enjoyed by arXiv as opposed to traditional publishing outlets are significant; it is impossible to properly evaluate whether or not the material was found to be impactful and relevant to the reader. Additionally, the inability of complicated algorithms used by numerous academic search engines, Google's page-rank, and Google scholar to find what Michael Jensen, director of strategic Web communication for the National Academies calls the "nuanced perspective."⁷ This nuanced perspective is currently impossible for modern search engines to accomplish since their design and intent is find facts and specific information, not to evaluate the countless factors that contribute to an author's ethos.

Field Relevance

In light of this judgment, I believe that Internet usage metrics should not be wholly avoided as a method of evaluating scholarship within the field of communication. However, it would be incredibly unwise to use Internet usage metrics as the sole determinant of an author's relevance and authority. Internet usage metrics should be used in conjunction with numerous other metrics that will allow evaluators to properly address the complexity of every author's work, and will allow them to reach the "nuanced perspective" advocated by Jensen. Therefore, I believe that the utilization of digital scholarship in the open web will bring countless advantages to readers, authors, and institutions alike; but this form of scholarship will require further evaluation and promotion before it can be considered a stand-alone form of academic evaluation.

7 Michael Jensen. "The New Metrics of Scholarly Authority," *The Chronicle of Higher Education*, June 15, 2007.



Appendix

Seminar Syllabus

COMM 998 **GRADUATE SEMINAR IN RHETORIC**

Electric Metrics: Rhetorical Foundations
of Scholarly Authority
in Classical and Digital Eras

Gordon Mitchell
Visiting Professor, University of Pittsburgh

Department of Communication Studies
University of Nebraska-Lincoln
M-Th 3:00-6:10 pm; Oldfather 438; 1st 5 week summer session

OVERVIEW

Severe pressure on financial models for publishing and distributing academic research, systematic erosion of authors' intellectual property rights, and sheer information overload are all factors prompting universities to develop new approaches to dissemination of scholarly research. For instance, UNL's

DigitalCommons Institutional Repository offers new outlets for scholars to share their research with public audiences (as seminar visitor Paul Royster is especially qualified to discuss). Yet unlimited open access threatens to undermine traditional academic publishing systems that rely heavily upon subscriber fees to fund production of print journals and books. This seminar explores how such trends implicate professional knowledge production in the field of rhetoric, and conversely, how conceptual tools from the rhetorical tradition might help elucidate ways in which the onrush of digital scholarship promises to reshape the intellectual landscape in higher education more generally.

This vector of inquiry steers students to consider ways in which the interplay of ancient and contemporary thought animates questions such as: 1) How can the prospect of engaging wider publics through digital scholarship be understood as a contemporary variant of what Isocrates called *logos politikos*? 2) Does Protagoras' "human-measure" fragment speak to how the digital age's new metrics of scholarly authority may soon impact hiring, tenure and promotion processes in higher education? 3) In what ways might the classical notion of embodied rhetoric shed light on the intellectual property issues implicated by the move toward open access digital publishing? The goal of the seminar is to drive discussion on these and similar questions in a fashion that develops students' command of rhetorical theory and illuminates likely transformations in the professional sites where they will be deploying that theory in years to come.

OBJECTIVES

- We will develop understanding of Isocrates' role in the Greek rhetorical tradition, Isocrates' impact in Greek society, and implications of Isocratic thought for later academic movements such as study of the humanities and culture.
- We will gain ability to articulate meaningful connections between "older" Sophists, such as Protagoras, and later Greek thinkers such as Isocrates, Plato, and Aristotle. Also, we will develop facility in articulating controversies regarding whether the "old/young" Sophist distinction itself is useful.
- We will retrieve the rhetorical concepts latent in Protagoras' "human-measure" fragment and test the extent to which they can inform contemporary discussions regarding proliferation of scholarly metrics in a current (and future) digital academy.
- We will complete a collaborative research project that catalogs six

contemporary metrics of scholarly authority (Journal Impact Factor, Web of Science citations, h-index, Scilago, article download usage data, university press book publication) considers their strengths and weaknesses as measurement tools, and speculates on the consequences their widespread utilization of each might mean for the field of Communication, the academy, and society.

REQUIREMENTS

(Grading rubrics and assignment details to be discussed finalized after first seminar meeting discussion)

- **Interactive Reading (50% of total grade).** During our first class meeting, students will form pairs that include one Inquisitor and one Pontificator, with each pair being responsible for preparation and presentation of an interactive reading performance for a given week. 72 hours prior to the scheduled discussion date for assigned materials, the Inquisitor will submit two well-developed, searching and provocative questions to the Pontificator via electronic mail (with a copy of the questions also posted to a class weblog). Although these questions may refer to outside materials, their primary focus should address significant issues raised by the assigned reading. Pontificators will then have 48 hours to prepare a written answer to one question they select. The Pontificator's written answer will be turned in, hard copy, to Gordon on the day of the scheduled oral performance.

During the 15-minute oral performance in class, the Pontificator will begin by presenting orally their answer to the Inquisitor's first question. After three minutes, the audience will vote whether to hear a follow-up question from the Inquisitor or to have the Pontificator continue their answer. Following this six-minute period, general discussion will ensue.

Inquisitor Questions will be evaluated based on the degree to which they: 1) exhibit evidence of engagement with the reading material; and 2) contain challenging and thought-provoking concepts (i.e. stay away from purely descriptive questions). Pontificator Answers will be evaluated based on the degree to which they: 1) exhibit evidence of engagement with the reading material; 2) respond to questions provided; and 3) show creative, original thought. Each student will play the role of Inquisitor once (25% of grade) and Pontificator once (25%), during course meetings dedicated to Ancient Greek rhetorical theory and practice (June 10, 15 and 17).

- **Metric Report (50% of total grade).** During the first class meetings, students will each select one scholarly metric from among the six under

scrutiny to research and report findings. Two students will report on article download usage data and university press book publication metrics (June 14), h-index and Scilimago (June 16), and Journal Impact Factor and Web of Science citations (June 21). These polished, 5-page papers should cover: 1) history of the particular metric under consideration; 2) strengths and weaknesses of the metric's ability to express what it purports to measure; 3) judgment regarding the value of what the metric measures; 4) appropriateness of the metric for the field of Communication. 50% of course grade generated from a rubric discussed on the first day of class. Optional extra-credit for students to revise and extend their metric reports, in light of seminar feedback, for possible publication in collaborative group publication.

LOGISTICS

Office hours Tuesdays and Thursdays 2:00 pm - 3:00 pm in Oldfather Hall and by appointment. Course readings available electronically. Note that these materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials.

SCHEDULE OF MEETINGS, THEMES AND ASSIGNED READINGS

JUNE 7 / Introduction

Topics covered include: impetus for design of the course; overview of syllabus; explanation of course requirements and deadlines.

- Gordon R. Mitchell (Ed.), *Electric Rhetoric: Communication Perspectives on Digital Dissemination of Scholarly Research*, University of Pittsburgh Department of Communication Report (Pittsburgh: University of Pittsburgh, 2010).
- Lokman Meho, "The Rise and Rise of Citation Analysis," *Physics World* (32-36).

JUNE 8 / History May Not Repeat, But Sometimes it Rhymes

Skype visit with David Perlmutter, Director, School of Journalism and Mass Communication, University of Minnesota

Numerous contemporary appropriations of Isocratic thought highlight the salience and durability of his legacy. How do Welch and Perlmutter generate insight from connections they see between Isocrates' work and their respective analyses of new media technologies? Of course dramatic differences between ancient Greek society and the 21st Century world render uncritical comparisons a fool's errand, so how do Welch and Perlmutter attempt to finesse this pitfall? How can their efforts help inform

our own attempts to study similar phenomena?

- Kathleen E. Welch, "An Isocratic Literary Theory: An Alternative Rhetoric of Oral/Aural Articulation" (Chapter 2) in Welch, *Electric Rhetoric: Classical Rhetoric, Oralism, and a New Literacy* (Cambridge: MIT Press, 1999), 29-75.
- David D. Perlmutter, "Beyond the Blog Revolution" (Chapter 1) in Perlmutter, *Blogwars* (Oxford: Oxford University Press, 2008), 3-47.

Optional Bonus Reading

- Susan Jarratt, "Sophistic Pedagogy Then and Now" (Chapter 4), in Jarratt, *Rereading the Sophists: Classical Rhetoric Refigured* (Carbondale: Southern Illinois University Press, 1991): 81-120.
- Robert Hariman, "Civic Education, Classical Imitation, and Democratic Polity" (Chapter 9) in *Isocrates and Civic Education*, ed. Takis Poulakos and David Depew (Austin: University of Texas Press, 2004): 217-234.

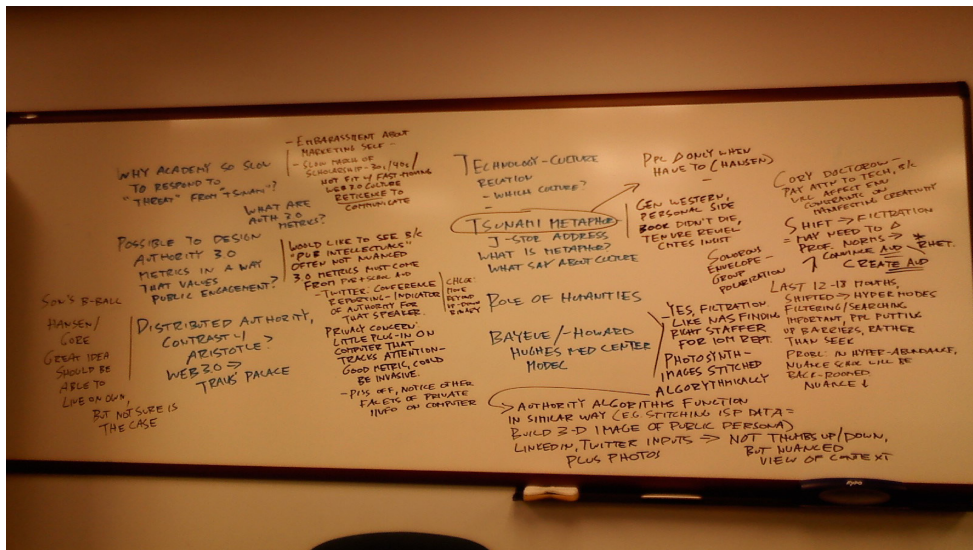
JUNE 9 / Scholarly Authority 3.0

Skype visit with Michael Jensen, Director of Strategic Web Communications, National Academies of Sciences

The advent of digital scholarship and surging popularity of online databases capable of aggregating and analyzing such scholarship have yielded new ways of measuring the impact of individual scholarly publications, and even individual scholars. What are these new metrics and how do they work? Will they affect future hiring, tenure, and promotion decisions? What implicit values do the metrics embrace? Analysis of these questions can serve as points of departure for broader discussions regarding what recent trends portend for young scholars intending to pursue a life of the mind.

- Elias Zerhouni, "NIH Public Access Policy," 306 *Science* (December 10, 2004).
- Lila Guterman, "Celebrations and Tough Questions Follow Harvard's Move to Open Access," *Chronicle of Higher Education* (February 21, 2008).
- Jennifer Howard, "A New Push to Unlock University-Based Research," *Chronicle of Higher Education* (March 6, 2009).
- Scott Jaschik, "Split Over Open Access," *Inside Higher Education* (June 4, 2009), <http://www.insidehighered.com/news/2009/06/04/open>
- John Willinsky, "The Publisher's Pushback against NIH's Public Access and Scholarly Publishing Sustainability," 7 *PLoS Biology* (2009): 20-22.
- Jayne Marks and Rolf A. Janke, "The Future of Academic Publishing: A View From the Top," 49 *Journal of Library Administration* (2009): 439-458.

- Michael Jensen, "The New Metrics of Scholarly Authority," *The Chronicle Review* (June 15, 2007).
- Richard Lanham, "Stuff and Fluff" (Chapter 1) in *The Economics of Attention: Style and Substance in the Age of Information* (Chicago: University of Chicago Press, 2006): 1-41.
- Michael Jensen, "Scholarly Authority in the Age of Abundance: Retaining Relevance within the New Landscape," Keynote Address at the JSTOR annual Participating Publisher's Conference, New York, New York, May 13, 2008, <http://www.nap.edu/staff/mjensen/jstor.htm>.



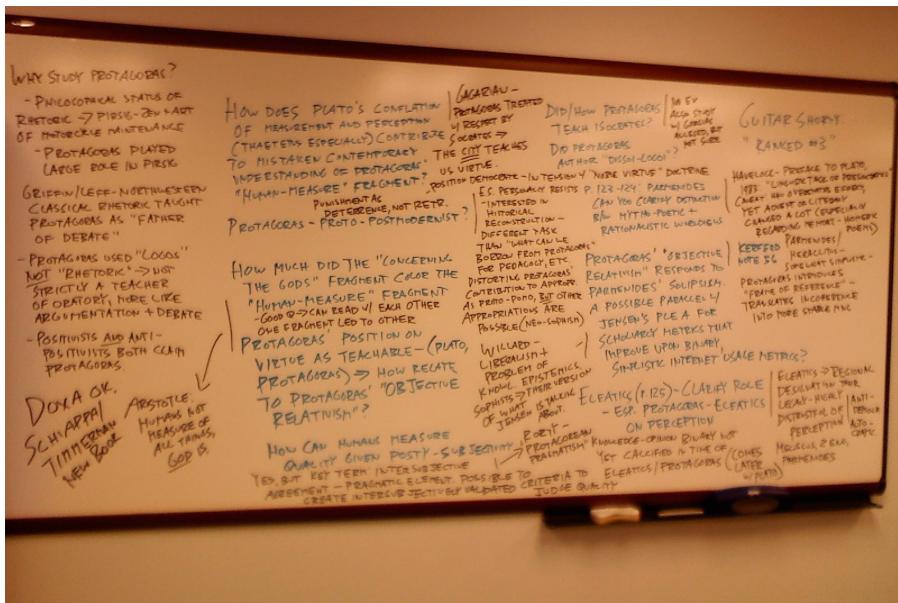
Whiteboard notes of class discussion during Michael Jensen's June 9 Skype visit.

JUNE 10 / Protagoras' "Human-Measure" Fragment

Skype visit with Edward Schiappa, Chair, Department of Communication Studies and Paul W. Frenzel Chair of Liberal Arts, University of Minnesota.

Having lived during a time when the Greek written phonetic alphabet was a relatively new invention, Protagoras left precious few fragments of his thought for future generations so ponder. In one of the surviving fragments, Protagoras says: "Man is the measure of all things: of things which are, that they are, and of things which are not, that they are not." Here, Protagoras bridges mythos and logos, proposing that through disoi logoi, the process of using human pro-con argumentation to generate insight, humans can reach valuable measurements. The relevance of Edward Schiappa's insight on Protagoras is heightened by trends in academia that proliferate metrics for scholarly authority in a digital age of online publishing.

- Plato, *Protagoras*
- Protagoras, Fragments (transl. Michael J. O'Brien), in Rosamond Kent Sprague, ed., *The Older Sophists* (Indianapolis: Hackett Publishing Co., 1972): 3-28.
- Edward Schiappa, "The 'Human-Measure' Fragment" (Chapter 7) in Schiappa, *Protagoras and Logos: A Study in Greek Philosophy and Rhetoric* (Columbia: University of South Carolina Press, 1991): 117-133.
- Laszlo Versenyi, "Protagoras' Man-Measure Fragment," *The American Journal of Philology* 83 (1962): 178-184.



Whiteboard notes of class discussion during Edward Schiappa's June 10 Skype visit.

JUNE 14 / Measuring Scholarly Metrics I: University Press Books and Internet Usage Statistics

Class visit with Paul Royster, Coordinator for Scholarly Communication, University of Nebraska-Lincoln

- Joran Beel, Bela Gipp and Erik Eilde, "Academic Search Engine Optimization (ASEO)," *Journal of Scholarly Publishing* 41 (2010): 176-190.
- Joan F. Cheverie, Jennifer Boettcher and John Buschman, "Digital Scholarship in the University Tenure and Promotion Process: A Report on the Sixth Scholarly Communication Symposium at Georgetown University Library," *Journal of Scholarly Publishing* 40 (2009): 219-230.
- Michael Felczak, Richard Smith and Rowland Lorimer, "Online Publishing, Technical Representation, and the Politics of Code: The Case of CJC Online," *Canadian Journal of Communication* 33 (2008): 271-289.
- Paul Royster, "The Institutional Repository at the University of Nebraska-Lincoln: Its First Year of Operations," Paper deposited at University of Nebraska-Lincoln Digital Commons, 2006, <http://digitalcommons.unl.edu/libraryscience/58>.

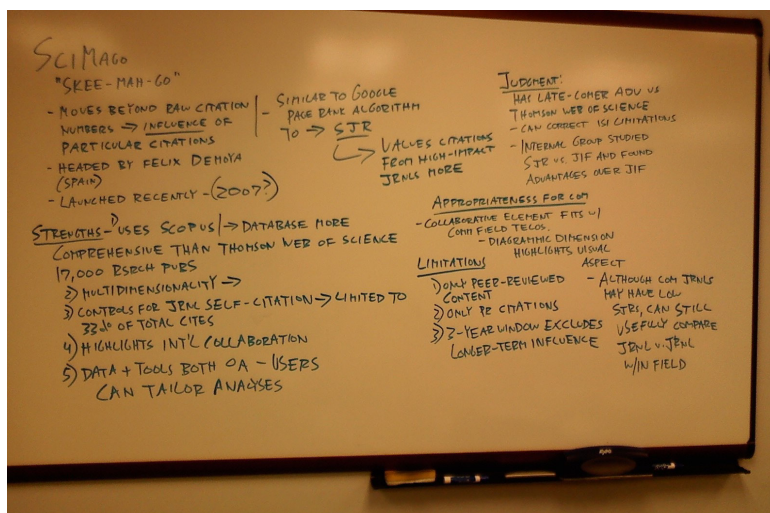
JUNE 15 / Isocrates: "A Parent of Rhetoric and Culture Studies"

Iowa Communication Studies luminary Michael Calvin McGee, in an unpublished 1986 manuscript, called Isocrates "A Parent of Rhetoric and Culture Studies." What do you think of his title?

- George Norlin, "General Introduction," in *Isocrates*, Loeb Classical Library Vol. 1 (London: William Heinemann, 1928), ix-li.
- Michael Calvin McGee, "Isocrates: A Parent of Rhetoric and Culture Studies," unpublished manuscript, 1986.
- Michael Calvin McGee, "Choosing A Poros: Reflections on How to Implicate Isocrates in Liberal Theory," Paper presented at the 1998 University of Iowa Humanities Symposium.
- Takis Poulakos and David Depew, introduction to *Isocrates and Civic Education*, edited by Takis Poulakos and David Depew (Austin: University of Texas Press, 2004): 1-20.
- Werner Jaeger, "The Rhetoric of Isocrates and its Cultural Ideal" (Chapter 2) in Jaeger, *Paideia: The Ideals of Greek Culture*, trans. Gilbert Highet (New York: Oxford University Press, 1944), 46-70.

JUNE 16 Measuring Scholarly Metrics II: SCImago and h-index

- Robert W. Vaagan, "Open Access Scientific, Electronic Publishing and Bakhtinian Dialogism," 4 *Westminster Papers in Communication and Culture* (2007).
- Philippe C. Baye, "Sticker Shock and Looming Tsunami: The High Cost of Academic Serials in Perspective," *Journal of Scholarly Publishing* 41 (2010): 191-215.
- Rong Tang, "Citation Characteristics and Intellectual Acceptance of Scholarly Monographs," *College & Research Libraries* (July 2008): 356-369.
- Susan Balandin and Roger J. Stancliffe, "Impact Factors and the H-Index: What Researchers and Readers Need to Know," *Augmentive and Alternative Communication* 25 (2009): 1-3.

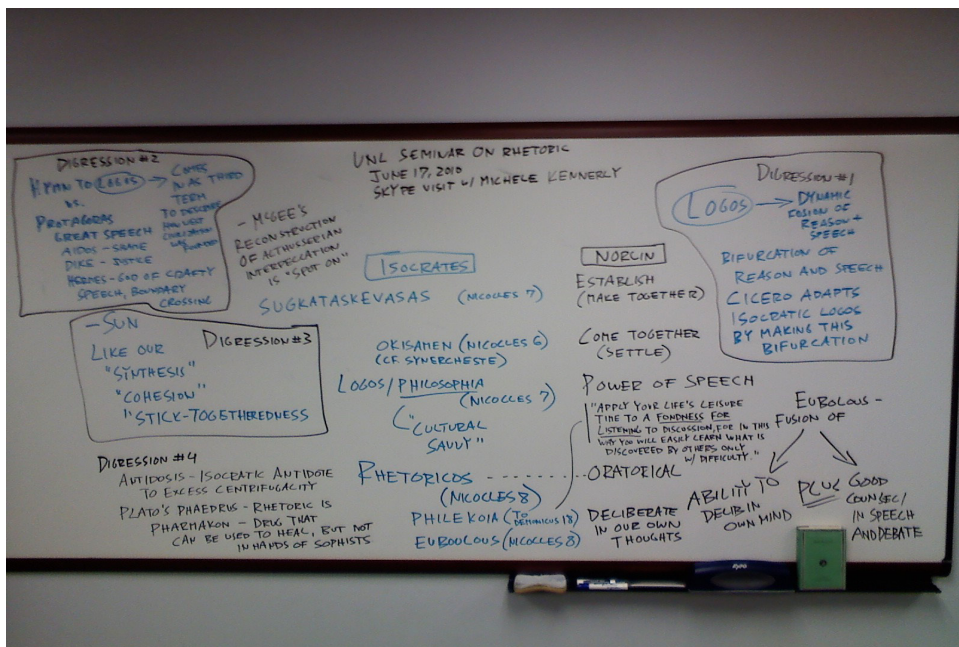


Whiteboard notes of class discussion during Getachew Dinku's June 16 presentation on SCImago.

JUNE 17 / Isocrates' Cyprian Orations and the "Hymn to Logos"

Skype visit with Michele Kennerly, Predoctoral Fellow, Department of Communication, Northeastern University

- Isocrates, *Nicocles*, *To Nicocles*, *Evagoras*
- Takis Poulakos, "Isocrates's Use of Narrative in the *Evagoras*: Epideictic Rhetoric and Moral Action," *Quarterly Journal of Speech* 73 (1987): 317-28.
- Takis Poulakos, "Rhetoric and Social Cohesion" (Chapter 1) and "Speaking Like a Citizen" (Chapter 2) in *Speaking for the Polis*, 9-45.
- Ekaterina Haskins, "Between Social Permanence and Social Change" (Chapter 5) in *Logos and Power*, 108-129.
- John Poulakos, "Rhetoric and Civic Education" (Chapter 3) in *Isocrates and Civic Education*, 69-83.
- M.L.W. Laistner, "The Influence of Isocrates's Political Doctrines on Some Fourth Century Men of Affairs," *The Classical Weekly* 23 (Mar. 10, 1930): 129-131.
- R. Johnson, "A Note on the Number of Isocrates' Pupils," *American Journal of Philology* 78 (1957): 297-300.



Whiteboard notes of class discussion during Michele Kennerly's June 17 Skype visit.

JUNE 21 Measuring Scholarly Metrics III: Journal Impact Factor and Web of Science Citation Patterns

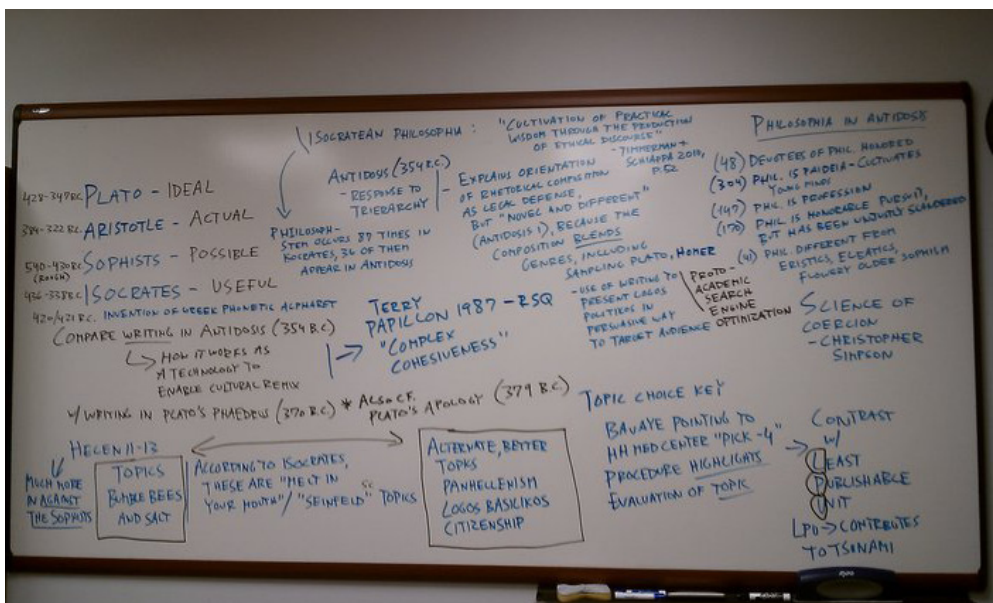
Class visit with Kathleen McTigue, Assistant Professor of Medicine and Epidemiology, Director of Clinical Scholars Training Program, School of Medicine, University of Pittsburgh

- Thomas Hugh Feeley, "A Bibliometric Analysis of Communication Journals from 2002 to 2005," *Human Communication Research* 34 (2008): 505-520.
- Tom Grimes, Editorial note, *Southwestern Mass Communication Journal* (Fall 2009): ii-iii.
- Jon Gertner, "The Rise and Fall of the G.D.P.," *New York Times*, May 10, 2010.
- Juliet Walker, "Richard Smith: The Beginning of the End for Impact Factors and Journals," British Medical Journal Group Blog post, November 2 2009, <http://blogs.bmj.com/bmj/2009/11/02/richard-smith-the-beginning-of-the-end-for-impact-factors-and-journals/>

JUNE 22 / Antidosis: "Isocrates' Monument to Himself"

Skype visit with Philippe Baveye, Associate Professor of Soil Physics/Environmental Geophysics, Cornell University.

- Isocrates, *Antidosis*.
- Yun Lee Too, "Introduction" (Chapter 1) in Too, *A Commentary on Isocrates' Antidosis* (Oxford: Oxford University Press, 2008), 1-32.
- Takis Poulakos, "Educational Program" (Chapter 6) in *Speaking for the Polis*, 93-104.
- Ekaterina Haskins, "Between Poetics and Rhetoric" (Chapter 2) in *Logos and Power*, 31-56.



Whiteboard notes of class discussion of Isocrates' *Antidosis*.

Contact the Authors

Student contributors pictured in Oldfather Hall, their academic home at the University of Nebraska-Lincoln, Department of Communication Studies.



Seated from left to right: Getachew Dinku Godana (getdinku at yahoo.com); Travis Bartosh (travisbartosh at gmail.com); Rachel Stohr (rstohr84 at gmail.com); Adam Knowlton (acknowlton at yahoo.com); Scott Church (scott at huskers.unl.edu); Sarah Jones (sarah.jones at huskers.unl.edu). Photo by editor Gordon Mitchell (gordonm at pitt.edu).