

7-1-2009

## Journal Self-Citation II: The Quest for High Impact – Truth and Consequences?

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### Recommended Citation

Holsapple, Clyde W. (2009) "Journal Self-Citation II: The Quest for High Impact – Truth and Consequences?," *Communications of the Association for Information Systems*: Vol. 25 , Article 2.

DOI: 10.17705/1CAIS.02502

Available at: <https://aisel.aisnet.org/cais/vol25/iss1/2>

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# Communications of the Association for Information Systems

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## Journal Self-Citation II: The Quest for High Impact – Truth and Consequences?

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### Abstract:

For the information systems discipline, it is important to have means for assessing the performance exhibited by individual faculty members, groups of researchers, and the journals that publish their work. Such assessments affect the outcomes of university decisions about these individuals, groups, and journals. Various kinds of data can be used in the processes that lead to the decisions about performance. In this paper we consider one type of data that seems to be increasingly adopted, either explicitly or implicitly, as an indicator of performance: the journal impact factor (JIF), which is periodically reported in the Journal Citation Reports (JCR). The allure of JIFs for rating performance is that they come from a third party source (Thomson Reuters), are systematically determined in a largely transparent fashion, and yield a single number for each journal that is covered in the JCR. However, behind this allure several issues give us pause when it comes to interpreting or applying JIFs in the context of deciding on performance ratings. It appears that these issues are rarely understood or pondered by those in the information systems world who adopt JIFs for such decisions – at least not in an overt way. We examine these issues to understand the advisability of employing JIFs to produce performance ratings, the underlying assumptions, and the consequences. We conclude that use of JIFs in university decision making should be undertaken only with great caution, alternative decision inputs should be considered, and that judging the impact of a specific article by the journal in which it appears is questionable.

**Keywords:** journal impact factor, faculty performance rating

Volume 25. Article 2. pp. 11-20. Julv 2009

### I. INTRODUCTION

Some in the information systems community take the position that “impact factors” are useful in making decisions about the performance of individual researchers and/or groups of researchers – such as those comprised of faculty members in a department, university, or nation. An impact factor is a number assigned to a journal by the Institute of Scientific Information (ISI), part of the Science Business Unit of Thomson Reuters. This assignment, reported annually to subscribers of Thomson’s Journal Citation Reports (JCR), is a measure of citation activity related to recent articles published in the journal. Those who regard a journal impact factor (JIF) as useful in university decision making adopt the idea that publishing in a journal with a relatively high impact factor indicates performance that is superior to publishing in journals having lower impact factors. In this paper, we explore the prudence of this idea:

1. Are JIFs truly a good indicator?
2. What are the consequences of adopting them as a key element in evaluating research?

It now seems fairly common for JIFs to be used as quantitative indicators of a researcher’s or organization’s performance [Seglen 1997; Amin and Mabe 2000; Boss and Eckert 2003; Editorial 2005; Williams 2007; Brown 2007; Leydesdorff 2008]. This analysis may be done directly by looking at impact factors of journals in which an individual researcher published. Or, this may be done more indirectly, such as by rating journals based on their JIFs (e.g., into “A” or “B” categories) or ranking journals in a prioritized list, and then examining a researcher’s article placements through the prism of these ratings or ranks. In either case, the use of JIFs for performance evaluation boils down to a matter of rating journals. These commonly used approaches suggest several questions that deserve careful consideration:

1. To what extent do JIF numbers provide a suitable mechanism for rating/ranking journals, and what *exactly* does such a rating/ranking indicate?
2. How does this mechanism compare to alternative methods for rating/ranking journals?
3. What *exactly* is a rating/ranking telling us about journals: is it the degree of their relevance, influence, importance, reputation, rigor, innovation, quality, or something else?
4. Does the rating/ranking of a journal tell us something about the value of a specific article within its pages?

While this paper may not furnish definitive answers to such questions, it does argue that they are important for decision making – both within universities and externally. Moreover, this paper suggests points that can be helpful in grappling with these questions. We also identify other related questions along the way. Pondering possible answers to them may further contribute to clear thinking when grappling with our four focal questions.

University administrators and faculty members face a host of challenging situations that demand thoughtful, effective, and ethical decision making. Those of particular interest here include decisions about promotion and tenure (P&T) for individual researchers, merit review scores for individual faculty members, and how well a particular unit, such as an IS department, is performing. Decisions are also made about resource allocations (e.g., to an IS unit versus other units) and library collections to maintain. Individual researchers decide what journals to monitor and what journals to select as potential publishers for their work.

Externally, but still affecting what happens within a university, decisions are made by journal publishers and journal editors. Their decisions affect the positioning (e.g., marketing), the content (e.g., aims, scope, requirements), and the review processes (e.g., selection of referees, instructions to referees) of forums we peruse and in which we seek to publish. Decisions are made by independent ranking entities (e.g., business reporters for *Business Week*, *U.S. News & World Report*, and the *Financial Times*) that can affect perceptions about faculty members, their disciplinary units, and their colleges or universities. Finally, external agencies decide about which research proposals to fund.

For the field of information systems, what role do (or should) JIFs play in making these various kinds of internal and external decisions – many of which are inter related? Ultimately, when JIFs do play a role, it resolves to using JIFs to rate journals in which IS researchers publish. These include not only journals devoted to IS topics (broad based coverage or focused on a particular specialized aspect of IS), but also multidiscipline journals (covering several

disciplines, one of which is IS) and reference discipline journals (focused on fields that are somehow allied with IS – such as computer science, management, and information science). Although this paper is intended to provoke and stimulate scholars working in the IS field, it draws on and may also well be applicable to other fields. With this orientation in mind, we will not repeatedly refer to “information systems” in the presentation that follows unless there is a juncture where it seems that a point being made is idiosyncratic to the IS field. Similarly, henceforth in this paper, the term “rating” should be understood as also including the idea of “ranking” – whichever is applicable to the reader’s circumstances.

The next section briefly explains what an impact factor is, as well as its stated intent. Section III reviews some concerns that have been raised about its calculation and application. To put a JIF approach to journal ranking into context, Section IV discusses distinct dimensions or criteria that have been ascribed to rankings. Alternative mechanisms for ranking journals, and comments on characteristics of each, are summarized in Section V. We then tackle the question of how relevant a journal ranking (JIF-based or otherwise) is for assessing an individual’s research performance, closing with suggestions for those considering the use of JIFs in particular, and various journal rating mechanisms in general.

## II. THE ISI JOURNAL IMPACT FACTOR

The journal impact factor was devised by Eugene Garfield and Irving Sher during the 1960s [Garfield 2005]. Since the mid 1970s, Garfield’s Institute for Scientific Information (now part of Thomson Reuters) annually publishes a report of the impact factors for selected journals. The calculation used to define a journal’s impact factor has remained basically the same over the years. However, the quantity of journals tracked has grown greatly (from about 150 to over 6,000 in the science domain), as the breadth of fields covered expanded from an initial emphasis on subjects related to medicine and biology to be wide ranging. For example, this range includes a subcategory labeled “information systems” within a larger category called “computer science.” Among the few dozen journals in the IS subcategory, some journals are devoted to information systems research and some are reference discipline journals – most notably computer science and information science journals. We also find IS devoted journals in other categories such as management, library science, and business. Some IS journals appear in multiple categories.

A journal’s impact factor for year X is a ratio: In the numerator there is a count of citations to the journal’s content published in year X (including articles, editorials, notes, etc.) by articles in selected publications (i.e., those tracked by ISI) occurring in years X-1 and X-2. The denominator is comprised of the number of substantial items published in the journal in years X-1 and X-2 (mainly research articles). So, for journal Y we have:

Year-X count of citations to items published in Y during prior two years

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Count of substantial items published in Y during years X-1 and X-2

For the numerator, “items” includes articles, editorials, letters, notes, issue introductions, and so forth. For the denominator, “substantial items” refers to articles, plus any of the other items deemed to be substantial by ISI. In simple terms, a JIF is *roughly* the average frequency with which a journal’s articles of the prior two years were cited by articles in a selected set of publications.

Given the explosive growth of knowledge disseminated by journals and their contents, librarians and researchers are faced with a challenge of determining what forums to focus on as they strive to employ limited resources (budgets, time) to stay current. Garfield [1955] devised the idea of measuring journal impact as an approach for dealing with this challenge. The stated purpose of JIFs is to allow a normalized comparison of journals *within a particular subject category*, such that differences in the numbers of articles that they publish and their citation frequencies do not affect the comparison [Garfield 2005]. For example, a quarterly specialty journal that publishes 16 articles in a year is put on a “level playing field” with a broad journal having 40 articles per year [Garfield 1996].

Garfield gave advice about the interpretation and application of JIFs:

1. They do not allow for meaningful comparisons of journals across different subject fields or JCR categories [Garfield 2003]. Because of differing publishing norms (e.g., publication cycle times, publication mixes, traditional expectations/limitations on reference list sizes) for different fields, the highest JIF in one subject area may well be exceeded by the lowest JIF in another area [Amin and Mabe 2000]. Moreover, the advisability of comparisons within a category should perhaps be considered in light of the ISI defined categories and ISI’s heuristics for mapping specific journals into these categories.

2. A journal's impact factor *does not* measure the impact of the journal itself, but rather the impact of the "average" item that appears in the journal [Garfield 1986].
3. JIFs should not be used as a substitute for peer evaluation of the research performance or contributions made by specific individuals [Garfield 1998, 2003].
4. Garfield [1986] indicates that for some fields a larger window than two years would be appropriate. This approach would also allow for longer term comparisons of the impact exhibited by one journal's average item versus the average item of another in the same ISI defined category. Among what it calls "new functionalities," Thomson Reuters recently introduced a five-year JIF into its Journal Citation Reports, as a complement to the traditional two-year JIF.

### III. SOME CONCERNS

Many concerns have been raised about journal impact factors and their application (or misapplication). A full airing of these concerns is well beyond the scope of this paper. However, it is worthwhile to highlight a few, as such concerns seem to be rarely expressed within the IS world although they are highly pertinent when use of JIFs in the information systems discipline is being contemplated. Greater detail on these and other concerns can be found in papers by Seglen [1997], Amin and Mabe [2000], Jasco [2001], and Russell-Edu [2003], among others.

#### Journal Impact versus Article Impact

As Garfield indicated, a JIF is a measure of the impact of the "average" article published in a journal in a particular year, and is traditionally gauged in terms of citations to the journal's content during the two prior years. Accordingly, there are variations from this average for any journal. The relative contributions that individual articles make to a JIF can be uneven, with a relatively small number of articles responsible for the bulk of citations to the journal and a large number of articles responsible for very little of the impact [Seglen 1997]. For example, an editorial in *Nature* points out that 25 percent of that journal's items published in 2002-2003 are responsible for 89 percent of the 2004 citations to all items published in the two prior years [Editorial 2005]. Seglen [1997] finds a similar result in an illustration involving three biochemistry journals. The half of the items that are most cited contribute 90 percent of the citations received, being cited (on average) 10 times more frequently than the other half of the items. Whether such high-variance phenomena occur in the IS field is unknown. In any event, to the extent that the JIF is regarded as being representative of that journal's content, then the large proportion of a journal's articles that are little cited (or not cited at all) tend to benefit from a halo effect in terms of perception. However, just because an article appears in a journal with a relatively high JIF, we cannot assume that its citations will benefit, or that it will even be cited at all [Seglen 1994; Garfield 2003]. Simply put, while JIF is a function of the citation rate for an article that a journal hosts, that article's citation rate (i.e., "impact") is not a function of its host journal's JIF.

#### The Database

Another concern involves the database of publications from which the number of citing instances is counted. In the case of IS, publications from the fields of information systems, computer science, and information science are of particular relevance, as are several multidisciplinary journals. To the extent that the database thoroughly covers these fields, we can then be assured that large numbers of citations will not be ignored when calculating a JIF's numerator. On the other hand, to the extent that coverage is sparse or is heavily/unduly oriented toward (or away from) some specialty, then the calculated JIF should be viewed with caution. It is beyond this paper's scope to furnish detailed analysis of citing coverage in the case of IS. However, IS users of JIFs may want to investigate this coverage relative to the lists of IS relevant journals identified by Romano [2009] and Lamp [2009]. The first of these, compiled and updated since 2003, provides information on over 200 journals. The second, compiled and updated since 2004, casts a wider net to identify over 500 journals. Large portions of these IS relevant journals, including many IS devoted journals, do not appear to be tracked in the ISI citing database.

On the other side of the issue, most journals devoted to IS are not recognized in Journal Citation Reports. Looking at the 2006 *Science Edition* of JCR, we find about one dozen IS devoted journals appearing among the 6,164 journals for which impact factors are calculated. These IS journals are mapped into two of the 172 subject categories defined in the JCR: the "Information Systems" subcategory (totaling 87 journals) of "Computer Science" and the "Operations Research & Management Science" category (totaling 60 journals). One IS journal appeared in both of these categories. Looking at the 2006 *Social Science Edition* of JCR, we find fewer than 10 IS devoted journals appearing among the 1,768 journals for which impact factors are calculated (most of these IS journals are also found in the Science Edition of JCR). The IS devoted journals are mapped into three of the 54 subject categories defined in this edition of JCR: the "Information Science & Library Science" category (53 journals), the "Management" category (78 journals), and the "Business" category (64 journals). No IS devoted journal appeared in all three categories. Four appeared in two categories. Thus, an attempt to compare IS devoted journals based on JIFs faces two obstacles: (1)

the small number of journals reported, coupled with (2) the admonition from Garfield and others that it is not meaningful to compare JIFs across subject categories.

### Comparisons within a JCR Subject Category

For IS journals, we must also question comparisons *within* a JCR subject category. For instance, in the 87 member “Information Systems” category we find several major IS devoted journals being classified as belonging to a group that includes a similar number of information/library science journals (e.g., *International Journal of Geographical Information Science*), a few medical journals (e.g., *Methods of Information in Medicine*), a chemistry journal (i.e., *Journal of Chemical Information and Modeling*), and others such as *Photonic Network Communications*, *Geoinformatica*, and *Online Information Review*. About three fourths of the “comparable” journals in this category are computer science publications. Of the IS devoted journals, most have a relatively broad editorial scope, but a few are IS specialty journals (e.g., *Journal of Strategic Information Systems*, *Journal of Organizational Computing and Electronic Commerce*). JIF adopters must ask whether included specialty journals and broad journals deal with “comparable” subject matter, and whether any two specialty journals have “comparable” subject matter with each other. At the same time, it is notable that JCR maps the *International Journal of Electronic Commerce* (and no other IS journal) into its “Business” category rather than its “Information Systems” category. This suggests that it would be inappropriate to compare this journal’s impact factor with those of other IS specific journals, but that it is “comparable” with the 63 other journals that inhabit the “Business” category (e.g., *Journal of Business Ethics*, *Journal of the Academy of Marketing Science*, *American Business Law Journal*, *R & D Management*, *Fortune*, *Business History Review*).

### The Two Year Time Frame

The two year time frame may be fine when a subject area’s journals have a rapid publication cycle. This is often not the case for IS research articles. From personal participation as a reviewer of many promotion cases, it seems that citations to an IS article (in cases where it turns out to be substantially cited) tend to begin being notable no earlier than three to four years following publication, and mount in years four to six. Citation growth can continue for many years beyond [Brown 2007]. There are exceptions – where an article’s citations begin to happen in the second year following publication or the article is “discovered” years after publication. While it seems that two year JIFs are not appropriate for IS journals, the five year JIFs more closely match the publishing cycle common within the IS field. Thus, adopters of JIFs in the IS world may want to avoid going with the traditional two year JIFs and focus on the five year window that is reported.

## IV. IMPACT OR QUALITY?

Ostensibly, an impact factor is a measure of impact. However, it is not uncommon to see it called a measure of quality. Hoeffel [1998] asserts that, while imperfect, an impact factor is the best measure of quality currently available, and that its use as such is widespread. The impact factor has come to be accepted as a quantitative standard for gauging a journal’s quality [Amin and Mabe 2000; Garfield 2003]. Beyond this, some have begun to use it for purposes for which it was never intended. Originally conceived as a basis for comparing impact of the “average” article appearing in one journal versus that of another, JIFs have morphed into measurements of “quality” used in evaluating research manuscripts, individual researchers, and research groups [Opthof 1997; Amin and Mabe 2000; Editorial 2005].

We must therefore ask whether impact is really the same as quality. Does high impact guarantee high quality (of a journal, an article, an author, a book, a meal, an action of Congress, and so on)? Conversely, does high quality guarantee high impact (of a journal, an article, a presentation, a book, a dulcimer, audiophile equipment, and so forth)? Impact is an effect – strong, moderate, weak, or non-existent. Depending on an affected entity’s (or observer’s) perception and values, an impact may be positive, negative, or neutral. Quality probably is, more or less, one antecedent of impact (journal circulation is another example). However, the two constructs do not appear to be synonymous. In some contexts they may be strongly linked. In other situations, a linkage (if any) may be feeble. If there is a linkage between the two, the correlation may be positive or negative.

If we accept the proposition (albeit heretical perhaps) that impact and quality are distinct, then equating a JIF with journal quality, article quality, quality of a researcher’s body of work, or quality of research group’s accomplishments involves a giant leap in logic. Seglen [1997 p. 501] points out that “far from being a quality indicator citation impact is primarily a measure of scientific utility rather than of scientific quality, and authors’ selection of references is subject to strong biases unrelated to quality.” Thus, it appears that ratings of journals, articles, researchers, and so forth may be constructed based on different criteria – variants of impact or quality. Note that there may be other rating criteria, examples being visibility, stature, or reputation.



For impact, we have such variants as influence (e.g., essential vs. tangential) and/or usage (overt utility). We should keep in mind that JIFs are but one possible measure of impact. Another is article downloads; there is evidence that downloads can be good predictors of future levels of citations for individual articles [O'Leary 2008].

For quality, we have such variants as clarity, meaningfulness, relevance, innovativeness, importance, accuracy, validity, consistency, and/or confidence [Holsapple and Whinston 1996]. The latter four are likely ingredients of the notion of rigor, which is sometimes advanced as being a basis for ratings. Interestingly, when a rating is said to reflect quality of an endeavor, there typically is no mention of what "quality" means. What combination of the foregoing variants (or or even impact variants) does the evaluator intend to capture? It is plausible that different combinations can yield different ratings. Similarly, when multiple people are asked to rate a journal, article, individual, or organization on the basis of "quality," do they share a common understanding of the term with each other and with the inquirer who will interpret their expressed views? It is not at all uncommon for no explanation of the term to be given.

## V. ALTERNATIVE APPROACHES TO RATING

It is useful to be mindful of alternative approaches to rating journals and articles (and, by extension, researchers and groups): fiat, opinion survey, citation analysis, and behavioral analysis. Impact factors belong to the citation analysis approach. The first two are basically subjective, whereas the latter are more objective. To put JIFs into context, we briefly consider the four approaches with respect to rating journals. Space does not permit elaboration of these.

With the fiat approach, someone advocates a particular journal rating as simply being a fact, or "everyone" agrees with it, or it is "indisputable" and not open to discussion. Evidence or viewpoints to the contrary either are not sought, are ignored if they intrude on the mindset, or are regarded as inconvenient trifles and aberrations. Ideally, the rater has deep knowledge of and experience with the journals being rated and is independent of the journals being rated (so as to avoid perceptions of gaming or conflict of interest).

The opinion survey approach is widely used for the IS field, being relatively straightforward from a data collection standpoint. The individual opinions that survey participants express about each IS journal in some set (prespecified or respondent selected) are aggregated in some manner. Scores resulting for the journals are then organized into a ranking or rating. Use of the result needs to be cognizant of the limitations of such surveys. First, there are the participants. It is unclear whether those who have little first hand knowledge or experience related to IS journals (e.g., many administrators, doctoral students, and even new assistant professors) are able to give responses beyond echoes of what they have heard or read. Even for an experienced IS researcher, it can be difficult to have an opinion that is equally well informed across all members of a sizable journal set, resulting in more echoes or in vague impressions. Aside from journal content, opinions can be strongly shaped, for example, by tradition, the various research specialties of participants (or by those specialties in which they have no interest), views advocated during their academic training or within their academic positions, their social/professional networks, and/or by their preferred research methodologies. In addition, there are instrument issues, the most notable being clarity about the criterion to be used in furnishing opinions. Precisely, what is the criterion (see discussion in the prior section) and is a common understanding of that criterion shared by participants, researcher, and those who opt to apply the results?

Citation based approaches to journal rating involve counting the citations made within some set of citing journals to the content appearing within some set of cited journals, all within some time period. Members in either, or both, of the sets may be constrained. The counts can be analyzed in various ways (e.g., the JIF method discussed above) as a basis for developing a score for each member of the cited set. This score is used to form a ranking or rating of the member journals that portrays relative impacts. In addition to concerns expressed in Section III, it is typical that all citation counts are treated uniformly. That is, huge differences between two references are not captured. One reference may be a lynchpin for the citing paper, or it may be repeatedly referenced within that single paper. The other reference is mentioned just once and in an incidental fashion. Citation analyses also do not take into account the possibility that some citations to an article may be negative, while others are positive. In all, the citation approach to rating avoids many of the problematic aspects of the opinion approach, but, as we have seen, has its own limitations.

The fourth rating approach is based on aggregate data about the actual individual publishing behaviors of *tenured* IS researchers at leading research universities. The idea is that, because they are tenured, their publication records are highly valued by top universities. It is assumed that the universities are representative of those with the most stringent standards for research evaluation, that researchers strive to publish their work in journals perceived to be of very high quality (however they may individually define this construct), that they are successful in doing so, and that the content they provide to these journals contributes substantially to the journals' relative importance in the IS field. The aggregate data can be analyzed in several ways. For example, an intensity score can be developed for each journal, showing the average number of articles published there across the entire set of tenured researchers.

Or, a breadth score can be calculated for each journal as the proportion of the tenured set that has published in the journal. Either way, a ranking or rating is determined based on relative scores. Further details appear in Holsapple and O'Leary [2009].

## VI. IMPACTS OF IMPACT FACTORS

Given the motivation for, nature of, and concerns about using JIFs, what might be the effects of adopting them as ingredients for making decisions about tenure, promotion, and merit review? These decisions are too important to be based on a metric that is neither designed for this purpose nor particularly relevant to it. While it might be argued that the handful of IS journals included in a JCR category are fine places to publish, their JIFs give us no insight into the many IS journals not tracked in JCR, few useful clues as to rating journal "quality" for those included, and practically no information to help in assessing performance of those who publish in them. Yet researchers can find themselves pressured (e.g., by administrators or peers), directly or indirectly, into behaviors based on the ideas that they cannot make substantial research contributions without publishing in "high" JIF outlets and that if they do publish in such an outlet they have indeed made a substantial contribution. Specifying that performance decisions will be made based on the JIF levels of journals in which articles are published is a behavioral incentive that is problematic for the individual researcher, the institution promoting such a policy, development of the IS field as a whole, and for IS devoted journals (i.e., their editors and publishers).

From a dean's perspective, Williams [2007] expresses concern about JIF profiling of researchers impacting decision making about grant support and employability – a practice that he argues is not scientifically defensible. It can lead to contorted priorities on the part of individual researchers, university administration, and funding agencies – away from focusing on equity and valuable contributions to focusing on maximizing a number.

Academic reliance on JIFs for performance evaluation makes such numbers important for a publisher as it seeks to gain a competitive edge for its journal portfolio. Simply put, as the relative magnitude of a JIF rises, academics (who buy into the proposition that JIF is valuable in gauging performance) will perceive that journal as having higher value. This translates into greater prestige for the publisher (and editor), which in turn may well help the bottom line of the publisher's business performance. This is why some publishers tout the JIFs of the journals in their portfolios, leading to wider exposure of the JIF concept and promotion of an uncritical adoption of it to measure things for which it was not designed. Publishers recognize that under circumstances of widespread adoption it is possible to increase a JIF in various ways unrelated to the gist of its content – some subtle, others overt [Brown 2007]. This is not to say that every publisher does this; it is simply a potential impact of giving JIFs a key role in performance decisions that universities make. If such an impact plays out, the basic nature of a journal can be transformed to an undue focus on doing whatever will maximize its impact factor.

Generally, an editor is keen on maintaining or improving the stature of his/her journal. For instance, efforts can be undertaken to make a good journal great (and vice versa). If the culture of a discipline focuses on JIF as the measure of stature or greatness, then the editor needs to ensure that the journal is among those for which an impact factor is reported. Because there are so few IS devoted journals that have a JIF, this alone might be considered as an accomplishment. But beyond that stage, how does an editor maintain or improve the stature of his/her journal?

In a JIF addicted culture, some editors might answer this question (at least in part) by focused effort to hike their journals' impact number. That is, they seek ways to directly increase the numerator in the JIF calculation relative to the denominator. For instance, there may be an editorial stance to have more review articles or a greater review content in published articles, as such articles have a greater tendency to be cited than do other articles. There may be negotiations between an editor/publisher and ISI, where the former strive to minimize the kinds of published items that are counted in the denominator and/or maximize kinds of items counted in the numerator [Brown 2007; Jasco 2001]. There may be an editor/publisher who requires that an accepted article be supplemented with references to recent articles in the journal as a prelude to publication. Garfield speaks of cases where a journal included an item that listed all of its articles that appeared in the past year [Brown 2007]. These and other gaming strategies may increase a journal's JIF (and stature in the eyes of JIF devotees), but do little to enhance its contribution to the discipline.

An alternative strategy for an editor is to maintain or improve the stature or greatness of his/her journal by striving to maximize its contribution to the field (or subfield) it is designed to serve. This may or may not yield a higher JIF, but that is incidental. It is not the objective in a JIF indifferent culture. Rather, the editor's focus is on creating a climate that nurtures and expresses value added research aligned with the journal's stated mission and audience. The depth, extent, and nature of that value will vary from one journal to another. Journal impact factors do not seem to capture such variation.





Applying JIFs explicitly to evaluate researchers is not subscribed to by Garfield, their originator [Brown 2007], and is considered to be highly suspect by others (e.g., [Amin and Mabe 2000]). Applying JIFs implicitly for performance evaluation via JIF based journal ratings is similarly susceptible to difficulties (outlined in Section III). However, applying *any* journal rating (regardless of the approach employed to construct it) to evaluate individual researchers may be ill conceived. In an analysis of finance literature, Smith [2004] finds that a small set of finance journals, widely considered the “best” in their discipline, publish relatively large volumes of articles that prove to have almost no influence on the field, while other finance journals publish articles that prove to be influential. Looking at a “favorite” wrapping material does not say much about the value of the article that it covers.

In closing, caution must be used in interpreting and applying JIFs in the context of university decision making. It is important to be aware of the JIF calculation, to understand concerns about its use, and to be clear about the assumptions being made to justify a particular application. Otherwise, the ultimate impacts may be useless at best, and very possibly destructive to the development of individual researchers, research groups, and journal excellence. As a community of *researchers*, it seems only proper that we should not be using a measure without clearly understanding its basis, purpose, and impacts. If this paper provokes some thinking about this point in the case of JIFs, then it fulfills its mission.

## REFERENCES

*Editor’s Note:* The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web can gain direct access to these linked references. Readers are warned, however, that:

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