Looking Beyond the Pointing Finger: Ensuring the Success of the Scholarly Capital Model in the Contemporary Academic Environment

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Looking Beyond the Pointing Finger: Ensuring the Success of the Scholarly Capital Model in the Contemporary Academic Environment

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Abstract:
The currently predominant method of counting articles in ranked venues (CARV) to assess one’s academic achievements has had a deleterious impact on the state of the IS field, which points to a need for a paradigm shift. In this rejoinder to Cuellar, Truex, and Takeda’s (2019) article, I extend the scholarly capital model that they propose and comment on its applicability, adoption, and potential misuse. I propose that the model would benefit if it included a new component – practical capital, which comprises three dimensions: knowledge outreach (a scholar’s direct contribution to professional forums), knowledge impact (a scholar’s indirect contribution to professional forums), and community engagement (a scholar’s connections with the non-academic sector). I strongly recommend that the Association for Information Systems accept a formal stewardship role and facilitate further development, testing, and promotion of the scholarly capital model.

Keywords: Scholarly Capital Model, Academic Capital, Practical Capital, Impact, Promotion, Tenure.

This manuscript was solicited by the Department Editor for Debates, Karlheinz Kautz.
1 The Pointing Finger

*It is like a finger pointing a way to the moon. Don’t concentrate on the finger or you will miss all that heavenly glory.* — Bruce Lee (Lee & Little, 2002, p. xxv)

The old Zen Buddhist phrase says that one should not confuse the finger pointing at the moon with the moon itself because the finger is not the moon and, to see the moon in its beauty, one needs to gaze far beyond the finger (Legget, 2011). This expression, popularized by the late Bruce Lee in his iconic movie Enter the Dragon (Clouse, 1973), signifies the importance of not mistaking the tools for the ends—the finger merely represents a tool or a method, and those who focus solely on it may miss their ultimate goal. In a similar vein, a restaurant menu is not the food, the GPS is not the destination, and the PLS software is not the findings. So, why do we still assume that a set of articles published in ranked journals amounts to one’s overall scholarly contribution?

Cuellar, Truex, and Takeda (2019) argue that the presently predominant method of counting articles in ranked venues (CARV) as a form of evaluation has several inherent flaws. First, they state that CARV is a partial measure because it focuses on the attributes of a single article while excluding other criteria. Second, they argue that the concept of article quality is subjective, undertheorized, and cannot be reliably operationalized. Third, they posit that CARV relies on systematically distorted data because it uses the reputation of the journal where an article appears as an automatic endorsement of its quality. Fourth, Cuellar et al. state that CARV has deleterious effects on the information systems (IS) field’s development because it puts pressure on authors to cater to topics and methods that certain journals favor and to blindly follow reviewers’ and editors’ recommendations. Fifth, they believe that CARV inhibits open and democratic discourse because scholars who, for some reason, cannot publish in ranked outlets are denied opportunities to equally contribute to and openly participate in developing their field.

As a solution, Cuellar et al. (2019) propose the scholarly capital model (SCM), which they define as “the collection of capabilities and reputational assets that a scholar brings to an organization” and which “represents the bank of capital that the scholar has to develop and spread…throughout a field” (Cuellar, Vidgen, Takeda, & Truex, 2016, p. 4). According to their model, one’s scholarly capital comprises three components: 1) ideational influence (the uptake of a scholar’s ideas via published research measured through h, hc, and g indices), 2) connectedness (a scholar’s position in the research network measured by social network analysis techniques), and 3) venue representation (a scholar’s representation in the collective knowledge of the scholar’s field measured by affiliation network analysis techniques). They argue that the scholarly capital model is superior to CARV because it 1) focuses on more important attributes of one’s academic achievements instead of an ambiguous notion of “quality”; 2) is theory-based; 3) offers a portfolio of objective metrics; 4) is easy to compute, reproduce, and standardize; and 5) decentralizes journal rankings and lists.

Cuellar et al. (2019) mainly criticize CARV for its over-reliance on journal-ranking lists, and I find their arguments to be solid and grounded in empirical evidence. As a scholar specializing in this domain, I have developed and published nine journal-ranking lists that range from business ethics (Serenko & Bontis, 2009) to knowledge management (Serenko & Bontis, 2017) and e-health (Serenko, Dohan, & Tan, 2017), and, thus, I may be at least partially responsible for the problem Cuellar et al. want to fix. Having said that, I have mixed feelings about the value of my ranking studies. On the one hand, I have received much positive feedback from their users, such as “your list helped me get tenure” or “your list helped our journal improve its position in the ABDC ranking”. On the other hand, I have heard many horror stories about a blind application of ranking lists by those unfamiliar with the intricacy of the field they were trying to evaluate. In one extreme example, faculty members had to publish their research under different affiliations (e.g., professional consulting or visiting professorship) because their home institution penalized them for contributing to journals that the locally created journal list did not include. In another ironical instance, a single “official” list listed the same journal twice in two different ranking categories. One can only imagine the disparity of those who seek promotion and tenure (P&T) in the institutions that fail to see beyond the pointing finger. Needless to say, the finger is occasionally broken and, as a result, points in the wrong direction.

Overall, I applaud Cuellar et al. (2019) for their pioneering and even somewhat daring attempt to challenge the status quo of the existing system of scholarly assessment and to offer a model that may help researchers discover the “true academic glory”. Thus, in this rejoinder, I spearhead their ideas and facilitate a productive dialogue. To do so, I focus on the extension, applicability, adoption, and potential misuse of the scholarly capital model.
2 Extension: Practical Capital

Traditionally, IS scholars have been concerned with not only the theoretical but also the practical impact of their work (Benamati, Serva, Galletta, Harris, & Niederman, 2007; Pearson, Pearson, & Shim, 2005), and the solutions they have proposed range from guidelines for authors, reviewers, and editors (Benbasat & Zmud, 1999) to the use of applied methodologies (Baskerville & Myers, 2004) and even to the development of an IS article-relevance index (Recker, Young, Darroch, & Marshall, McKay, 2009). Cuellar et al. (2019) correctly recognized the importance of practical impact of academic research and added the “impact on policy and practice” construct in the outer part of their model. In fact, many management academics include their professional qualifications and accomplishments as part of their P&T packages. A scholar’s contribution to policy and practice unarguably both results from and influences the scholar’s scholarly capital. However, Cuellar et al.’s (2019) model would benefit from a more formal treatment of a scholar’s contribution to practice. To do so, I extend it by re-defining the concept of scholarly capital as a portfolio of one’s overall contributions to the advancement of management. In this rejoinder, I consider one’s scholarly capital a formative construct and present it as a combination of academic capital (the collection of capabilities and reputational assets that advance management theory) and practical capital (the collection of capabilities and reputational assets that advance management policy and practice) (see Figure 1). As such, practical capital reflects a scholar’s overall impact on the state of management policy and practice, and it is represented by three components: knowledge outreach, knowledge impact, and community engagement.

Figure 1. A Model of Scholarly Capital

Knowledge outreach refers to a scholar’s direct contribution to non-academic forums, such as trade magazines, practitioner journals, publications of professional associations, public policy documents, white papers, government reports, intellectual property artifacts (e.g., patents), and so on. It represents the body of knowledge that the scholar has created in practitioner-oriented literature and that one can view as a professional extension and application of the scholar’s academic expertise. Many successful management scholars also have a strong reputation for their publications in practitioner-oriented literature. For example, the authors of citation classics often maintain close ties with industry, have a desire to improve both theory and practice, produce research that has both academic and practical relevance, get research ideas from practice, and contribute to practitioner journals (Serenko & Dumay, 2017). Knowledge outreach may be measured by analyzing a scholar’s non-peer-reviewed publications.

Knowledge impact pertains to a scholar’s indirect contribution to public knowledge in a non-academic domain when others use the scholar’s works to extend the professional body of knowledge. It refers to
cases when other academics or practitioners use the scholar’s peer-reviewed works in their non-academic publications. Knowledge impact can be measured by analyzing citations from non-peer-reviewed forums (excluding self-citations) and social media mentions. In the knowledge management field, for example, citations from practitioner journals, trade magazines, technical and business reports, online multimedia (news broadcasts, presentations, speeches), government documents, and newspapers represent over six percent of all citations to peer-reviewed journal articles (Serenko, Bontis, & Moshonsky, 2012). Publishers, editors, and individual scholars often share the summaries of interesting articles on social media such as Facebook and Twitter. Therefore, knowledge impact may be operationalized by means of citation counts from non-academic sources and/or by employing altmetrics which have already gained recognition in scientometrics (Mohammadi, Thelwall, Haustein, & Larivière, 2015; Thelwall, Haustein, Larivière, & Sugimoto, 2013). Even though altmetric scores are positively correlated with citations, they reflect a different kind of impact of a cited work (Costas, Zahedi, & Wouters, 2015) and, therefore, may serve as a proxy for a scholar’s indirect impact on policy and practice.

Community engagement refers to the breadth and depth of a scholar’s connections with members of the non-academic sector. It reflects a scholar’s position in and contribution to the professional network where the professional network comprises non-academic organizations and individuals involved in management practice and policy development. Examples of activities include collaborative and contract research, consulting, speaking at non-academic conferences, attending professional events, offering ad hoc advice, commercializing academic findings, contributing to incubators, engaging in technology transfer, running training workshops, and so on (Perkmann et al., 2013). Community engagement may be measured by conducting an academic-practitioner network analysis (Baker-Doyle & Yoon, 2011) and/or categorizing and reviewing the types of engagements. Many management academics already list community engagement activities as part of their performance appraisal, and including it as part of one’s practical capital may further formalize and promote this imperative activity.

3 Applicability

On the one hand, applying the scholarly capital model may potentially improve the validity of academic assessment decisions. On the other, one cannot fully standardize and blindly apply the model due to the differences at the individual and institutional levels. Institutional decisions that involve assessing an individual’s academic portfolio may pertain to faculty review (tenure, promotion, post-tenure, contract renewal), hiring, rewards (merit awards, recognitions), and funding eligibility assessments (Diamond, 2002). Some academics, especially those at the mid-career stage, may want to measure their previous success in order to re-assess their chosen career path and re-strategize their future career (Petter, Richardson, & Randolph, 2018). However, many measures that the scholarly capital model employs reflect one’s long-term scientific achievements, which Cuellar, Vidgen, Takeda, and Truex (2016) clearly acknowledge. For instance, freshly minted PhD graduates who apply for academic appointments and junior scholars who seek contract renewal may not have enough time to demonstrate academic influence and knowledge impact because it takes at least a few years for each article to start attracting citations. Knowledge outreach (publications in practitioner forums) and community engagement constitute the least of their worries since senior scholars generally advise them to focus on their dissertation and resulting journal articles. The model may pertain more to tenure decisions, yet, again, its application requires that one establishes realistic expectations because many P&T applicants may have most of their articles accepted in the year prior to the application deadline, which, again, does not create a sufficient time lag to accumulate citations in both academic and practitioner literatures. At the same time, the model may work well for senior scholars who seek to become full professors. Another fruitful area of application is AACSB accreditation because the measures may be aggregated at the faculty level.

Dramatic differences may also exist among institutions because each may be driven by different traditions, priorities, goals, and strategies. Generally, in many North American universities, the IS field is part of the school/faculty/college of business/management. In some, however, it constitutes its own separate entity. For instance, in Canada, a majority of universities follow the former model, though some have developed a different organizational structure. Notable examples include the University of Toronto where the Rotman School of Management does not have a formal IS department, and most IS faculty are hosted in the stand-alone Faculty of Information (iSchool). The University of Alberta School of Business includes an IS department, but the university also hosts the School of Library and Information Studies where many faculty members focus on the topics traditionally studied in the IS domain, such as information behavior, user behavior, machine learning, data mining, and social media analysis. In the
University of Ontario Institute of Technology, the faculty of business also includes the faculty of IT (i.e., the Faculty of Business and Information Technology) where many faculty members explore hard-centric IT topics published in IEEE and computer science journals. Thus, the one-size-fits-all approach would not likely succeed, and the only way to accommodate such inter-institutional differences is to develop institution-centric, customizable guidelines for various clusters of institutions and departments. For example, each component of the model may be assigned a different weight depending on the nature of the institution, department, type of assessment, etc.

4 Adoption

Cuellar et al. (2019) argue that the scholarly capital model employs objective and reproducible measures which are also very easy to compute and standardize. While I agree with their statement, I believe that the model should also meet other important criteria to ensure its adoption (see Table 1).

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>Reflects the history and nature of the institution.</td>
<td>The measures should be shaped by formal and/or informal institutional traditions and an agreed-on meaning of scholarship and industry impact.</td>
</tr>
<tr>
<td>Is compatible with current institutional goals and objectives.</td>
<td>The measures should be derived from the institution’s, faculty’s, and unit’s strategic plans and be consistent with their mission, vision, and goals.</td>
</tr>
<tr>
<td>Balances well the institution’s academic needs and the individual’s professional interests.</td>
<td>The application of the model should create an alignment between the interest of the institution’s stakeholders and the needs of an individual for intellectual growth and self-development (particularly, academic freedom in research directions).</td>
</tr>
<tr>
<td>Encompasses institutional and departmental expectations.</td>
<td>The measures should embrace administrative, legal, and humane considerations, and stakeholders should develop a shared understanding of their interpretation at all institutional levels.</td>
</tr>
<tr>
<td>Is clearly articulated in formal documents.</td>
<td>The model and its measures should be unambiguously articulated in official institutional documents, such as faculty guidelines, P&amp;T policies, new faculty handbooks, hiring manuals, etc. It should not have “an aura of mystery” or be considered “the black box”.</td>
</tr>
<tr>
<td>Is applied consistently and fairly.</td>
<td>The model should be applied equally to all individuals being assessed. Fairness should be ensured by allowing some degree of freedom for the candidate to adjust the measures to reflect the candidate’s unique case.</td>
</tr>
<tr>
<td>Is manageable.</td>
<td>The calculation of measures should be done in a reasonable amount of time, require minimal effort, and should be ideally automated. The measures should be free of redundancy and excessive detail because it is virtually impossible to predict every eventuality; instead, the measures should pertain to the most typical cases yet allow customization.</td>
</tr>
<tr>
<td>Allows grievance and re-appraisal.</td>
<td>Individuals being assessed should be able to appeal an appraisal decision and challenge the applicability of the model’s measures in their particular case.</td>
</tr>
<tr>
<td>Is legally defensible.</td>
<td>The model should be accompanied by reliable, valid, and legally defensible measurement procedures.</td>
</tr>
<tr>
<td>Has reasonable credibility.</td>
<td>The operationalization of the model should include input from various stakeholders to ensure that everyone supports and favorably perceives the appraisal system.</td>
</tr>
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Further, I recommend that the Association for Information Systems accept a formal stewardship role and facilitate further development, testing, and promotion of the scholarly capital model (see Table 2). The entire process of further model development, operationalization, and adoption may be debated and documented in its forums (e.g., *Communications of the Association for Information Systems*) in the form of an open dialogue involving various stakeholders from the IS field and beyond.
Table 2. Future Development and Adoption of the Scholarly Capital Model

<table>
<thead>
<tr>
<th>Stage</th>
<th>Purpose</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder analysis</td>
<td>Identify all stakeholder groups that are interested in and/or may impact the adoption of the scholarly capital model.</td>
<td>Employ Sidorova, Evangelopoulos, Valacich, and Ramakrishnan’s (2008) and Serenko and Xiao’s (2012) frameworks as a starting point. Organize focus groups and review the existing P&amp;T guidelines.</td>
</tr>
<tr>
<td>Debate and refinement</td>
<td>Further improve the model and propose flexible, customizable guidelines for its application.</td>
<td>Engage the entire community and the stakeholder groups in an open dialogue. Conduct an extensive literature review in the other (e.g., non-IS, non-management) fields. Further theorize the model.</td>
</tr>
<tr>
<td>Operationalization</td>
<td>Select a variety of indicators that measure the constructs of interest.</td>
<td>Based on the output from the previous steps, operationalize the model’s constructs and subject them to extensive face validity assessment. Justify the selection of measures from a theoretical perspective.</td>
</tr>
<tr>
<td>Empirical testing</td>
<td>Validate the model and demonstrate its predictive power.</td>
<td>Conduct extensive pilot testing followed by large-scale testing by using cases of successful scholars.</td>
</tr>
<tr>
<td>Marketing and promotion</td>
<td>Ensure the application and acceptance of the model in the IS community and beyond.</td>
<td>Document the model and the application guidelines in the form of simple-to-comprehend manuals. Organize a formal campaign to promote them in the management field and beyond.</td>
</tr>
</tbody>
</table>

5 Not Another Pointing Finger

Since 427 AD, when Nalanda, the world’s first university, was founded in North East India, academic institutions have witnessed a dramatic transformation. They originally sought to develop a perfect system that allowed scholars to function professorially to the best of their ability by creating and disseminating knowledge. To do so, they invented a number of principles, tools, and traditions to attract and retain the brightest, entrust them with ultimate intellectual freedom, facilitate the knowledge-discovery process, propagate their findings, and reward excellence. Nevertheless, despite their best intentions, history shows that many such initiatives have not been realized to their full potential, and, in some extreme cases, have turned into a pathology (Quan, Chen, & Shu, 2017). For example, Henry Oldenburg, the founding editor of Philosophical Transactions of the Royal Society, the world’s first academic journal (Oldenburg, 1665), could not have envisioned the emergence of predatory journals corrupting the scholarly publishing model (Beall, 2012). Whereas the peer-review system has a theoretically sound rationale, many agree that it actually malfunctions (Starbuck, 2003) and even requires a radical change (Iivari, 2016; Saunders, 2016), and I am sure that many academics have their own horror stories to tell. When Garfield (1964) invented the science citation index, little did he think that it would become the most criticized bibliometric measure (Cole & Cole, 1971). The root of the problem, however, lies not in the imperfection of such academic innovations; instead, such pathologies result from people’s natural biases, their desire to win the competition in the ‘prestige economy’ at all costs (Blackmore & Kandiko, 2011), and their ability to exploit the limitations of an honor system. This is fueled by the unprofessionalism of the administration that establishes unrealistic performance expectations and further misinterprets the very purpose of the academic institution.

As Cuellar et al. (2016) acknowledge, the scholarly capital model has some limitations, and it remains open to both accidental misinterpretation and intentional abuse, which may turn it into another pointing finger. First, every scholar’s case is somewhat unique, and it may be virtually impossible to develop a rigid set of rules and apply it universally across the entire department, faculty, or institution. One option involves allowing appraisees to weigh the model’s components to better match their contribution to the state of theory and practice. Another possible solution includes developing a larger pool of measures and allowing appraisees to select the most relevant ones. Under some circumstances, totally new measures may be proposed to match each individual case. In other words, the scholarly capital model should be accompanied by a set of flexible and continuously evolving measures and guidelines, which are customizable at the institutional, faculty, departmental, and individual levels. Second, appraisers should realize that, to apply the scholarly capital model, they require a mindset different from they might use in CARV. The model does not involve bean counting. Instead, it refers to a holistic approach to analyzing one’s overall scientific worth from multiple perspectives. Third, whereas CAVR requires little expertise, appraisers who employ the scholarly capital model should have at least some knowledge of bibliometrics,
altmetrics, academia-industry collaboration, and knowledge transfer. Only by extending their knowledge and broadening their horizons will appraisers be able to see the “true heavenly glory” of one’s scholarly portfolio.

Similar to other assessment methods, the scholarly capital model may be intentionally abused because it cannot predict every eventuality or eliminate dishonest behavior. For example, some applicants may dramatically inflate their knowledge outreach scores by mass-publishing short articles in low-quality professional magazines and online forums of professional bodies with a questionable reputation. For-profit citation and social media cartels may emerge and offer P&T applicants a way to dramatically boost their knowledge impact indices, which they can easily achieve because, in contrast to citations that come from peer-reviewed articles published in reputable journals, citations in non-academic publications may be mass-produced by automatic article generators. Altmetrics, which extract data from social media, may be compromised by creating hundreds of accounts with thousands of fake followers or by simply buying accounts and/or followers. For instance, ViralAccounts.com, referred to as an “influence exchange platform,” offers ready-to-employ accounts starting as low as US$50. Over time, however, most forms of abuses will eventually be discovered and prevented.

6 Conclusion

In this rejoinder, I extend the scholarly capital model that Cuellar et al. (2019) propose in order to ensure its future success. Undoubtedly, the currently predominant method of counting articles in ranked venues has had a deleterious impact on the state of the IS field. It will probably take years for academic institutions to change the underlying principles of scholarly assessment, but it is time for us to start looking beyond the pointing finger.
References


About the Authors

Alexander Serenko is a Visiting Professor in the Faculty of Information at the University of Toronto. He holds a PhD in Management Information Systems from McMaster University. His research interests pertain to scientometrics, knowledge management, and technology addiction. He has published 80 articles in refereed journals, including MIS Quarterly, European Journal of Information Systems, Information & Management, Communications of the ACM, and Journal of Knowledge Management. He has also won six Best Paper awards at Canadian and international conferences.