EDITOR'S COMMENTS

What Makes a Journal Significant? From the Tyranny of Metrics to True Impact ▪▪▪▪▪

By: **Andrew Burton-Jones, Editor-in-Chief**
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MISQ's most recent editorial (Burton-Jones et al., 2023) discussed the journal's efforts to encourage and enable *authors* to conduct the most significant research possible and to write up their research so that its significance is as compelling as possible. In this editorial, we turn the light on *MISQ*, and ask how *MISQ* should assess and improve its own impact.

If we could construct an assessment approach from scratch, we might assess *MISQ* by how well it performs a scientific journal's traditional functions, such as "registration (i.e., establishing the precedence of an idea for authors), dissemination (i.e., providing access for the intended audience), certification (i.e., ensuring quality control by peer review), and archiving (i.e., maintaining the scientific record)" (Ghasemi et al., 2023, p. 2). Because traditional criteria might not account fully for science's evolving nature, we might also assess how well *MISQ* responds to societal changes (Nowotny et al., 2001) or technology trends (Carpenter, 2023).

Unfortunately, we cannot start from scratch because there are already many influential institutionalized metrics for assessing a journal's significance. When we consider the existing system of metrics, we feel caught in a dilemma framed by the following well-known quotes: "*You can't manage what you don't measure*" (variously attributed to W. Edwards Deming and Peter Drucker) and "*When a measure becomes a target, it ceases to be a good measure*" (Goodhart's law, also known as Campbell's law).

Scholarly life is now overrun by a "tyranny of metrics" (Muller, 2018), with all the predictable negative consequences (Gruber, 2014; Biagioli, 2016; Oravec, 2019; Siler and Lariviere, 2022; Macdonald, 2023). Metrics are increasingly being used to manage the performance of research institutions, such as universities, journals, and granting agencies, but these metrics quickly lose validity (if they ever had it) due to gaming and other issues, which impedes us from achieving our goals, namely, making a true impact.

One might think that a "top journal" such as *MISQ* can simply ignore this tyranny, but that would be naive for several reasons. First, the tyranny affects *MISQ* directly. *MISQ's* standing, such as whether it is a "top journal" after all, is not within the journal's control but instead depends on how it is judged by diverse stakeholders and, increasingly, algorithms. It is therefore in the journal's interest to know how such judgments are made and engage appropriately in the relevant discourse. Second, this tyranny affects the researchers we serve. Research performance regimes often hurt research (Benedictus et al., 2016; Stephan et al., 2017) and this damage could well get worse because of the growth of competition and managerialism in academia and the enticement of quantification (Glanzel et al., 2019; Kruger & Petersohn, 2022). Finally, such tyranny tends to *strengthen* over time by reinforcing itself (Lariviere & Gingras, 2009). For example, even if individual editors *want* to ignore the tyranny, editors are selected by others who may still buy into it.[1] It is therefore uninspiring but unsurprising that many editors "wait with bated breath for the release of the next JIF" (Lariviere & Sugimoto, 2019, p. 13) and define their editorial visions as getting onto an influential journal list (Webb & Kammerlander, 2016). Similar actions are taken by rational university leaders and rational doctoral students. Everyone is just trying to get ahead, or simply survive (McKiernan et al., 2019), and so, in true sociological style, the tyranny reinforces itself.

Fortunately, we can take some comfort in knowing that the problem we face is a classic information systems (IS) problem—a problem of the unintended consequences of data. After all, most research metrics today can be traced back to the emergence of citation databases in the 1950s (Garfield, 1955, 1972). These databases (and their associated analytical techniques and platforms) were once mainly used by librarians, but they have now become powerful assessment tools in an ever-growing, ever-more-competitive academic system (Aksnes et al., 2019). Knowing that this problem is a familiar one should give us some confidence in tackling it, and some enthusiasm and curiosity too.

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[1] For instance, a recent call for the editor-in-chief of a peer journal called for editors who had a "plan for enhancing the reputation and stature of *[journal name]* in a way that … increases the journal's impact, as measured by impact factor, downloads, and other metrics." Notably, and appropriately, *MISQ's* recent call for editor-in-chief did not have such a statement.

We are delighted to see other IS journals discussing this issue (Davison & Lowry, 2023). More of us should be discussing and studying it (and we hope some students reading this editorial might choose it as a dissertation topic). Nevertheless, editors are just one voice in this process. For this reason, this editorial includes perspectives from those who are deeply involved in the larger ecosystem of which our field is just a part:

- Professor Mark Fuller
  Chancellor, University of Massachusetts, Dartmouth

- Andrew Jack
  Global Education Editor, *Financial Times*

- Professor Ramayya Krishnan
  Dean, H. John Heinz III College, Carnegie Mellon University

- Professor Christina Soh
  Dean, Nanyang Business School, Nanyang Technological University

- Professor Kar Yan Tam
  Dean, School of Business and Management, Hong Kong University of Science & Technology

We have not coauthored this editorial with them because we do not want to co-opt them into a consensus message. Rather, we asked them to describe in their own view what it takes for IS research and journals such as *MISQ* to have impact. As examples of senior stakeholders in our ecosystem, their unfiltered views are important for us. You will find their views later. But first, we engage in what we wish was unnecessary, but for the aforementioned reasons remains necessary: to critique the use of the Journal Impact Factor (JIF), and citations in general, for measuring research impact.

The Need to Move Beyond Bibliometrics: Limitations of JIFs and Citation Rates

You do not have to look far to find damning critiques of the JIF. As Lariviere and Sugimoto (2019, p. 6) note, "the JIF has been called a 'pox upon the land,' … 'a cancer that can no longer be ignored,'…and the 'number that's devouring science.'" A quote in Callaway (2016) sums up many scholars" views: "what's essential is to purge the conversation of the impact factor…. We want to make it so tacky that people will be embarrassed just to mention it" (p. 211).

While the JIF has many faults, some of them simply stem from the nature of citations themselves. Bibliometricians have noted the limitations of citation data ever since their field's inception (e.g., Garfield, 1955; Garfield, 1963; Merton, 1979), and this is a message that continues to be told today (Aguinis et al., 2014; D'Ippoliti, 2021; Dougherty & Horne, 2022; Mason & Singh, 2022). Citation counts measure citations. It takes a bold inferential leap to view them as measures of impact, let alone desired impact. Of course, they can *sometimes* reflect impact, but often they do not, and even when they do, they also reflect many other things, as we are sure readers of this editorial know, based on how they cite papers and how they see their own work cited by others.

The limitations of citation data have not prevented scholars and administrators from using it widely (Liebowitz & Palmer, 1984; Podsakoff et al. 2005; Kumar et al., 2017; Card & DellaVigna, 2020). A sad recent example is Ioannidis's (2022) repository of citation indices. Ioannidis (2022) stresses the limitations of citation data, but that has not stopped others from using it without noting its limitations. A Google search for the "world's top 2% scientists," which is one of the most common uses of this repository for promotion, yields a depressing result of over 95M pages! And this sums up the main problem with both citation data and JIFs: they reflect layers upon layers of human behavior and agenda. They reflect research impact poorly but the sociology of science superbly. This layering of agendas goes on and on, reinforcing the tyranny of metrics (Walker et al., 2019; Engwall et al., in press).

Fortunately, research impact discussions have now moved well beyond JIFs and citations. This is due to many science-wide efforts, such as the CoARA Agreement, the Altmetrics Manifesto, the San Francisco Declaration on Research Assessment (DORA), the Leiden Manifesto, and the "Metrics Tide" Report (CoARA, 2022; Priem et al., 2010; Hicks et al., 2015; Wilson et al., 2015; Wouters et al., 2019), as well as efforts closer to home, such as those of the Responsible Research in Business and Management (RRBM) network, the *Financial Times*, and the AACSB (Bryant, 2021; Haley & Jack, 2023). It remains to be seen if these efforts will lead to better metrics, less use of metrics altogether, or some other outcome, but they are signs of progress deserving support.

Nonetheless, it is very likely that some researchers and administrators will continue to use JIFs and citations inappropriately, that the gaming of metrics will continue or even accelerate (Biagioli & Lippman, 2020), and that this will have consequences for our field. We also need to reflect on how these metrics are changing as the digital platforms underpinning science evolve, as Davison and Lowry (2023) note. For this reason, we need to discuss how these issues are playing out at *MISQ*.

JIFs and Citation Rates at MISQ: Some History and an Analysis of Recent Trends

When examining JIFs and citations at *MISQ*, it is helpful to take a historical perspective. In an editorial over 20 years ago, Weber (2002a) referred to JIFs and citations more neutrally than we have here, as reasonable metrics for judging *MISQ's* performance. That position probably made sense at that time, when the tyranny of metrics was not so salient.

Some years later, Straub (2008) and Straub and Anderson (2010) examined JIFs and citations in more detail. They expressed more caution about these metrics and called for more research. Their editorials were also notable for another reason—they reported that *MISQ* had the *highest* 5-yr JIF of all information science and business journals in 2007-2008. As an editorial board member from 2009 onwards, one of us (Burton-Jones) can attest that discussions of *MISQ's* JIFs were noted in editorial board meetings since at least that time. It was never a metric to focus on. We simply noted each year that *MISQ* had the highest JIF of IS journals.

As Davison and Lowry (2023) note, this all changed recently, when two trends became evident. The long-term trend was *MISQ's* leadership on JIFs among IS journals. The next, more recent trend was *MISQ* maintaining a fairly stable JIF in contrast to most other IS journals (particularly Elsevier journals) having rapidly rising JIFs, several of them passing *MISQ's*.

Over the last two years, the two of us conducted several analyses of JIF data to determine what these trends meant and why they were occurring. To cut to the chase: we concluded that they did not reflect meaningfully on the journal's actual impact but nevertheless are a concern from the perspective of how science and the tyranny of metrics are coevolving. It is fair to say that we started our analysis with a rather jaded view of JIFs and our assessment only deteriorated as we got further into it.

As we finalized our analysis for this editorial, we saw the recent editorial of Davison and Lowry (2023). As their analysis is complementary to ours, we refer to both analyses to answer several questions below. Their data and results differ a little from our own because we conducted our analyses independently. They examined 10 years of the 2-year JIF for 13 journals, whereas we examined 5 years of the 5-year JIF for 19 journals. They also examined some questions in more detail than us, and vice versa. However, our two results are complementary. In Table 1, we summarize the answers that our analyses would give to commonly asked questions.

Table 1. Answers to common JIF-related questions regarding IS journals		
Question	**Answer in Davison and Lowry (2023)**	**Answer from our analysis**
What are the main trends of interest in IS journal JIFs?	The last few years have seen steep rises in JIFs for some journals. *MISQ* no longer has the highest JIF. Increases in JIFs tend to stem from small numbers of highly cited papers.	Similar results as Davison and Lowry.
Do JIF results depend on the characteristics of a paper (e.g., topics, methods, genre)?	Initial analysis suggests that certain genres of papers have more citations (theory/review papers, research agendas, frameworks, methods), as do papers on emerging topics.	Initial analysis suggests the same results as Davison and Lowry for papers on emerging topics but did not find strong evidence of a paper-genre effect (e.g., more citations for review or method papers). In different journals, different styles of papers appeared to be well-cited, but we did not see a clear pattern.
Do JIF results depend on the characteristics of the journal/ platform (e.g., open access, acceptance / publication speed, other platform effects)	Not examined in depth but suggest that large professional publishers such as Elsevier have more sophisticated digital platforms that can enhance article citations and that authors and editors should improve speed to publication.	No strong evidence of a benefit of open access but did observe an "Elsevier" boost on citation rates and JIFs. Speed not examined in depth but expect that speed of publication, combined with studying an emerging topic, increases JIF.

Do JIF results depend on the characteristics of the citation community (e.g., the other journals citing the work).	The source of citations has a substantial effect. Influential sources (which vary in their effect on different journals) include self-citations, citations from other highly ranked IS journals, and citations from outside the IS field (e.g., from *Sustainability* and *IEEE Open Access*).	Similar results for the source of citations and for the effect of journals outside the IS field. Recalibrating the JIF for the source of citations changes JIF-ranks considerably. In general, the steeply rising JIFs of some journals (especially Elsevier journals) are driven by citations from lower-quality and non-IS journals.

We do not provide the detailed results of our analysis here, but instead provide it separately,[2] partly because the analysis goes well beyond the space available here, and importantly, because it would take attention away from the discussion of impact. In our view, JIFs and citation data are more *unhelpful* than helpful for assessing impact and are likely to get *even more unhelpful* over time.

Before getting into the main conclusions of our analysis, we briefly acknowledge, as Table 1 shows, that our two analyses provide only initial results for some questions. Deeper studies would be needed to draw firm conclusions. For instance, it is widely known that editors can "game" metrics by publishing citation-friendly papers such as "research agenda" papers on hot topics, or "best practice" papers on methods. Davison and Lowry (2023) find some evidence of these trends in IS journals. We did not find strong evidence, but we only conducted a high-level/brief analysis; a more detailed analysis may well support their conclusions.

Journals can also vary in their JIFs simply because they cater to different genres that reflect the interests of different communities. For example, *MISQ's* historical roots were in behavioral and organizational research, but every EIC over the last 20 years has strived to open up *MISQ* to every genre in the field, including but going far beyond behavioral and organizational research (Weber, 2002a; Saunders, 2006; Straub, 2008; Goes, 2013; Rai, 2018; Burton-Jones, 2021). While good for the field, we wondered if these actions might have reduced *MISQ's* JIF. From our initial analysis of the data, however, we did not find strong evidence of this.

We only conducted initial analyses of these two issues because other issues in the data seemed more consequential. These issues related to the interconnected topics of journal platforms and citation sources. In brief, we realized that we had previously underappreciated the influential "shaping" role played by digital platforms in contemporary science, especially big tech (e.g., Google) and big publishers and distributors (e.g., Elsevier, Clarivate).[3] The cross-cutting digital platforms of these organizations affect citation patterns by changing how we find papers to cite (through both push and pull strategies).

Regarding journal platforms, our analysis (see footnote 2) shows that Elsevier journals have benefited greatly, leading to Elsevier journals occupying half of the top-10 journals on the 5-year JIF. We also found that IS journals on the Elsevier platform were overrepresented (compared to others) in the number of citations that came from journals on their same platform. In other words, highly ranked Elsevier journals (on the JIF) were heavily citing and being cited by other Elsevier journals. In contrast to a citation clique that reflects an academic tribe or epistemic community (Vogel, 2012), this type of citation clique appears to be largely a product of the platform. While such results are associative rather than causal, the pattern makes sense because the Elsevier platform is filled with features to help shepherd users to their platform's papers and increase their citations (Gabriel, 2019).[4]

Once we began to appreciate the role of digital platforms, the role of citation sources became clearer too. Two decades ago, Baskerville and Myers (2002) predicted that an explosion of interest in IS topics would allow IS research to be cited across many fields but that digital platforms would shape its influence. Their views were prescient. In addition to there being an explosion of interest in IS topics across many fields (e.g., "cyber," "digital," "AI,' "data"), there has been relentless growth in the number of journals and papers across the sciences (Bornmann et al., 2021). When these trends are combined with the fact that a large proportion of citations are peripheral or perfunctory rather than substantive (e.g., "AI investments are growing" [perfunctory citation]; "digital disruption is widespread" [perfunctory citation]) (Anderson & Lemken, 2023), it becomes clear that citations on a journal's papers could be coming from any journal in any field and reflect any sort of attribution. None of this would be a concern

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[2] The analysis is available at this permanent online research repository: https://osf.io/qvf7t.

[3] Large professional associations (e.g., AOM, INFORMS, CACM) also invest heavily in digital platforms, but their resources pale compared to those of for-profit publishers. Meanwhile, small university publishers have far fewer resources than large professional associations. Weber (2002b) offered an early reflection on the marketplace for journals in the IS field; a detailed analysis is long overdue.

[4] Teasing out the causal relationships between digital platforms, epistemic communities, and citation structures is an important topic that we hope future research will tackle. Isolating causal effects will be challenging, but this is a problem that is familiar to IS researchers.

to a journal that simply wants a higher JIF, as all citations help, no matter how relevant, and no matter where they come from, but it does matter if a journal wants to know if it is influencing the researchers it wishes to influence.

Motivated by this insight, we conducted several recalibrations of *MISQ's* 5-year JIF (and the JIFs of the other 18 IS journals in our analysis) to see how JIF trends depend on where citations come from. We were particularly interested in distinguishing between citations in IS vs. non-IS journals, and higher- vs. lower-quality journals. To construct these categories, we leveraged the journal lists of the Association for Information Systems (both the Senior Scholars' Premier Journals and AIS Special Interest Group recommended journals), plus well-known international journal lists (FMS, ABS, and ABDC).[5] We then recalibrated the JIF by changing its numerator to control for the source of the citations. That is, rather than count *any* citations, we count citations from journals recommended by the AIS or from those ranked at particular levels in the international lists. The detailed results are available at the OSF link (footnote 2), but in brief, we found that *MISQ's* 5-year JIF is the highest of all IS journals when we consider citations from AIS-recommended journals and when we consider journals ranked highly in international lists (whether IS journals or non-IS journals). *MISQ's* 5-year JIF drops considerably when we consider citations from lower-ranked non-IS journals, and it appears that this is what is driving the overall JIF trend noted earlier.

Going beyond JIFs and Citations

When we saw this result, we were tempted to see it as a "good news story," but that would not make sense. Recalibrated JIFs are interesting, but they only tell a story of citations, and citation data are *not* very meaningful or helpful. A citation to *MISQ* might be perfunctory, misguided, unnecessary, or gratuitous. On its own, a citation does not tell us if *MISQ* is making an impact. Moreover, *even if* recalibrated JIFs were meaningful, they would not have the power of the actual JIF because metrics gain power from institutions. Anyone can come up with a new metric, but it is the metrics used by institutions that are influential.

MISQ would not want authors to submit to the journal because of its JIF ranking or because of its appearance on any journal list nor does it chase any of these rankings or lists. *MISQ* wants authors to submit their work to the journal because they want to publish the finest research in the field and they want to work with an editorial board that is fully committed to that objective.

Of course, we know that some authors *do* submit their work to *MISQ* because it appears on influential lists. For instance, a junior IS researcher in the field might be aiming for *MISQ* because it is on the "UT Dallas list" or the "FT list." Journal lists matter greatly for recruitment, promotion, tenure, and funding at many universities. JIF ratings and citation counts matter at many institutions globally too (McKiernan et al., 2019; Mason & Singh, 2022). Nevertheless, *MISQ* still does not optimize for these metrics.

Some journals will be influenced by metrics, and some might even game them. Some authors might be happy for journals to do so because it helps them (Walker et al., 2019).[6] Some authors and editors are also trying to determine what drives metrics (Wang, 2019; Kossmeier & Heinze, 2019). Accordingly, we can imagine a future in which some algorithms help authors produce research optimized for metrics, other algorithms help editors publish papers optimized for metrics, and yet other algorithms help authors and editors to increase metrics post-publication. In such a future, small acts of resistance would be unlikely to have much effect because the institutional forces would be too strong and because the platforms driving the activity would operate at great scale and lie outside our control (e.g., run by big publishers and big tech) (Farber, 2019; West & Bergstrom, 2020). Fortunately, as noted earlier, many efforts are afoot to avoid such a dystopian future, both science-wide and closer to home (Haley & Jack, 2023). Rather than engage in the losing and soulless game of following the metrics, *MISQ* is much better served by supporting these efforts.

The Main Objective: Research Impact

Rather than being oriented towards metrics, *MISQ* is oriented towards research impact. *MISQ's* conception of impact includes impact both within and beyond academia and includes both short-term and long-term views (Burton-Jones et al., 2023). A journal can assist

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[5] FMS (Federation of Management Societies of China), ABS (Association of Business Schools, UK), ABDC (Australian Business Deans Council). Our analysis was performed in November 2022. We note that the AIS list expanded several months after our analysis.

[6] As predicted by Goodhart's law, the gaming of metrics is not limited to journals but goes right through academia, with regular scandals and ongoing cultural ramifications (Diver, 2022). We see "the folly of rewarding A while hoping for B" (Kerr, 1975) all around us.

with research impact through its editorial operations (e.g., soliciting, improving, and publishing papers) and its publication operations (e.g., enabling submissions and promoting publications). On both sides, *MISQ* is fully committed to impact.

MISQ's approach to achieving research impact is to follow a stakeholder vision (Burton-Jones, 2021):

- **Serving authors:** *MISQ seeks to be the most author-focused journal possible.* It seeks to ensure that all authors studying IS inside and outside the IS field feel they can send *MISQ* their best work and that *MISQ's* review process will respect, empower, and celebrate them.

- **Serving our external stakeholders:** *MISQ seeks to be the most significant journal possible for its external stakeholders.* It works across disciplines to tackle society's grand challenges and offer path-breaking insights for practitioners.

- **Serving science:** *MISQ seeks to help lead the IS field in responsible research.* In all its activities, it maintains, celebrates, and advances the very best scientific ideals.

The key principle is that *MISQ* does not achieve impact directly; it achieves impact through serving its stakeholders. Serving authors helps them understand and create impact. Serving external stakeholders helps them participate in and benefit from impact. Serving science sustains the credibility of our path to impact. Relentlessly serving all three stakeholders is *MISQ's* "scholarly quest" (March 2011). This also involves balancing stakeholders' interests, because they are not always aligned. For example, it is possible, for a given paper, that the best course of action for the author, external stakeholders, and science, could differ. *MISQ* editors seek to achieve the best balance possible.

It is deliberate that the stakeholder vision contains clear objectives but not specific metrics. This allows progress to be judged by members of the community, which is a longstanding approach for assessing journals (Straub & Anderson, 2020), while still resisting simple bibliometrics. We see this as advantageous given Goodhart's law stated earlier. Nevertheless, *MISQ* could still use formative metrics to learn if its efforts are heading in the right direction, in the spirit of Deming and Drucker noted earlier too. For instance, *MISQ* could check its progress on being author-centric by surveying authors for their perceptions of the journal and reviewing cycle times to ensure that it is working for authors in an efficient manner.

MISQ has a proud history of efforts to help all three stakeholder groups (Rai, 2016). In the last two years alone, *MISQ* has engaged in many additional efforts:

- **Serving authors:** In addition to continuing its author-development and reviewer-development workshops, *MISQ* began a Scholarly Development Academy to support authors from under-served communities (Burton-Jones & Stein, 2021). *MISQ* also began knowledge-sharing workshops to help authors understand what our editors are looking for in papers and ran showcase events for all its special issues to help promote authors' work. *MISQ* has also continued to find ways to reduce review processing times, reducing the time taken both for each round and the total time to acceptance/rejection.

- **Serving our external stakeholders**: *MISQ* began partnering with the Responsible Research in Business & Management Network (RRBM) (https://www.rrbm.network/supporters/partners/) and joined forces with *Administrative Science Quarterly* (*ASQ*) to commission a cross-disciplinary curation on the future of technologies and institutions (Barley & Orlikowski, 2023). *MISQ* also created a new Impact Award (https://misq.umn.edu/awards-paper-year) and began requiring "significance statements" in the review process (Burton-Jones et al., 2023). To spread its impact, *MISQ* began a local-language initiative, beginning with Mandarin Chinese (https://misq.umn.edu/local-language-promotion). *MISQ* also commissioned special issues and commentaries on grand challenges such as social justice and the climate crisis.

- **Serving science:** *MISQ* instituted a research transparency policy to increase the credibility and impact of its research (Burton-Jones et al., 2021; https://misq.umn.edu/research-transparency), and instituted a diversity, equity, and inclusion policy to recognize and tackle biases in the review process (Burton-Jones & Sarker, 2021; https://misq.umn.edu/dei-at-misq). We have shared insights with other fields (Burton-Jones & Sarker, 2023) and are testing new review processes to improve our ability to publish the best science (e.g., a special issue on the "registered report" model).

We see two *additional* directions that *MISQ* should pursue to help the field to move beyond the tyranny of metrics to true impact.

First, *MISQ* must support new research on the underlying data platforms and regimes of evaluation that affect science (including the IS field but also other fields). Following a truth-to-power approach, researchers need to reveal the unintended consequences and root causes of the tyranny of metrics and its digital underpinnings and design new paths to positive futures. Given the importance of science in society, this is a vital area of research for the world at large that IS researchers could help lead. We encourage authors to submit such papers to *MISQ* and we encourage proposals for special issues on the topic.

Second, *MISQ* must collaborate with other institutions (i.e., journals, associations, etc.) in interdisciplinary, institutional efforts to question current approaches to research evaluation and determine more suitable approaches. Such efforts should avoid replacing one set of inappropriate metrics with another set of metrics that becomes distorted as soon as it becomes the set target but instead aim towards the most productive science possible. If you, the reader, are involved in such efforts too, reach out and let us know. Community efforts are more productive when they are interconnected.

Views from Our Stakeholders

MISQ's stakeholder vision implies that we should learn from our stakeholders in this process. For this reason, we asked five leaders from different parts of our ecosystem to describe how they view impact and what it takes for IS research (and *MISQ*) to have impact. We did not want to co-opt them into any particular message. Accordingly, their independent, unvarnished views follow.

Professor Mark Fuller
Chancellor, University of Massachusetts, Dartmouth

Having spent my entire academic career at research universities, I've heard the voices that claim we are too expensive, our research isn't relevant, or that we are too focused on research at the expense of educating students. Now, as a university chancellor, one of my key roles is advocacy for the university. Every time I talk with prospective students, alumni, businesses, legislators, or the local community about the university I argue that research universities are the best universities. The core of my argument is that our faculty are not just disseminators of knowledge but also creators of that knowledge and that those faculty, in many cases, involve our undergraduate and graduate students in that research to create future generations of innovators.

But such positioning requires a discussion of the impact of our research. At my university, I talk about our research in coastal sustainability and how we are bridging the complex gap between the fishing industry and offshore wind. I speak about research in new polymer development that has the ability to reduce concussions and brain damage in athletic helmets. I speak about research on new gels that can be used to replace the cartilage in joints. I speak about research that examines social mobility, and what types of early education interventions can make it more likely that first-generation students will go to college. I speak about research examining how social media use has changed the social development of our incoming students, in some instances slowing the experiences that mold our ability to be resilient and navigate challenges. And I talk about research that examines environmental design and how it can mitigate the spread of viruses.

I argue that not only does our research have real impact but that our students are at the forefront of knowledge creation, and that these are the types of innovative minds that the public and private sector needs. I believe that making this argument consistently for the past two years was a key element in our university receiving the single largest investment from the state in our history, having one of the largest philanthropic years in our history, and why we anticipate a five year high in new student recruitment next year. Impact matters. As leaders in the field, we need to ensure that we have processes that acknowledge the impact, because it is that value proposition that drives investment and it is that investment that allows us to remain strong and relevant.

| **Andrew Jack** |
| **Global Education Editor,** *Financial Times* |

In a world of pressing societal problems—from climate change and the threat of future pandemics to rising inequality—more academics and academic journals should focus on relevance in their work. Not all research could or should have immediate application, and theory and rigor must remain central. But the surge in the quantity of research in recent years needs to be tempered by a growing reflection on its value. All credit to *MIS Quarterly* for engaging on the issue. Its own specialism is both relevant and significant in the debate, and its role in reflecting on the development and use of more meaningful scholarly metrics could be instrumental.

We do not need a reductive "tyranny of metrics" that is blindly followed. Appointments, promotions, funding, and other important academic decisions should ultimately be based on expert human judgment in reading and assessing the full content of papers—as well as judging the broader contributions of researchers including through teaching. Nevertheless, there is also a need for additional reflection on benchmarks to provide guidance, explore more meaningful and innovative measures of impact, and hold institutions and authors to account. The current impact factors, citations, and other bibliometrics have important limitations. There should be better ways to track the wider dissemination, influence, and take up of research.

We also need wider reforms to make research more relevant:

- First is more systematic and deeper reflection on the topics to be undertaken, which should often incorporate a broader range of nonacademic as well as academic participants and beneficiaries from the start in identifying, formulating, and conducting research.

- Second, journal editors should give preference to the submissions they agree to publish that advance practice and relevance as well as theory. They should ensure that papers are accompanied by non-paywalled "lay summaries" which highlight the societal value, the innovations in thought, and the practical applications of research where appropriate.

- Third, both authors and journal editors should actively seek to disseminate their research widely and rapidly beyond as well as within academia and to respond swiftly when they receive requests for more information from practitioners, policymakers, or the media alike.

- Finally, they should also comply with consistent efforts to provide additional data publicly, including unique and open source identifiers for authors, faculties, and institutions, to help facilitate better analysis (e.g., ORCID, etc.). Improved, more consistent and transparent data and management information is at least part of the solution.

| **Professor Ramayya Krishnan** |
| **Dean, H. John Heinz III College, Carnegie Mellon University** |

Information technology is fundamentally transforming our society and economy. The sociotechnical system it has created generates opportunity as well as profound challenges. Impact is a multidimensional construct and both investing in the inputs of the research process and amplifying the outputs of the research will help improve the impact of *MISQ*. I will briefly describe two ideas that follow from this framing.

Addressing the right questions: To have an impact, our research will have to address important questions that our stakeholders will care about. For example, the INFORMS journal *MSOM* (*Manufacturing & Service Operations Management*) created challenge problems backed up with industry data sets (Shen et al. 2020). Leveraging this idea, *MISQ* could create a hybrid (digital and in-person) platform that brings practitioners, policy makers/business leaders (at the right level of seniority and proximity to problems), and academics together. This convening will help scholars address relevant and underresearched questions and develop theory/methods motivated by real problems. It will also allow practitioners to become more aware of relevant research and how it might help their decision-making. However, this assumes that the work produced by academics is accessible to practitioners. A potential approach (over and above brief managerial relevance statements) to make the work accessible is to produce, either independently or in partnership, the sort of papers that *Management and Business Review* (https://mbrjournal.com/about-mbr) publishes. This intentional approach to increase relevance at the front end and to increase access by practitioners to results will enable *MISQ* to increase both scholarly and practical impact.

Facilitating high-impact, interdisciplinary science: While the above initiatives will help increase the production of more relevant research by the *MISQ* and IS communities, there are also opportunities to support the seeding and publication of curiosity-driven research that leads to new testable theories as well as new data analytic methods synergistic with the problem-driven research being produced by the community. A fast-track publication channel like that offered by *Proceedings of the National Academy of Science* (*PNAS*) (not the same as the research note currently available at *MISQ*) could be a good addition to *MISQ*. In addition, the inherently interdisciplinary nature of the IS community provides *MISQ* with an opportunity to host cross-disciplinary workshops in partnership with lead journals in a select set of disciplines. For example, INFORMS and ACM have collaborated over the last few years with the Computing Research Association (see Dickerson et al. 2022). A summer school that brings scholars of adjacent disciplines together could intentionally result in cross-fertilization and cross-publication opportunities and citations across disciplines that help move the field forward. With support from a set of schools and leadership from the academic community and the journal, a handful of summer schools could be developed. It is likely that AIS, INFORMS, and the Academy of Management could be partners in this effort and that it could offer important insights for science and society.

Professor Christina Soh
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Research that has impact ultimately influences the real world for good, by helping to address problems or by taking advantage of emerging opportunities through informing and changing the way things are done. This usually requires not just offering approaches and solutions formulated through research, but also changing mindsets so that individuals, teams, organizations, and societies are willing to explore, adapt, and adopt the potential solutions being offered. So, while impact is most visible at the point when a tangible real-world change occurs, there are many steps along the way before such change can occur. Impactful research therefore includes early research that recognizes and articulates the challenge or opportunity as well as descriptive studies, as these help to shift both academic and societal perceptions of the issues and lay the ground for potential solutions and changes. Having said that, if over time, our research is only spawning academic papers within the academic community and does not lead to actual change in the real world, then it can be argued that the research has not been impactful.

In the face of multiple global challenges, there are clear areas of critical need that will benefit from research—for example, improving healthcare quality and access for underserved communities and for aging populations, increasing societal equity as technology disruptions and the pandemic widen the gap between have and have-nots within and across nations, information security, reducing our energy and water consumption and waste. All these have a strong information component, and digital technology poses both challenges and opportunities. Because these problems are complex and wide-ranging, information systems researchers cannot solve them by themselves. IS research will need to partner academics in the relevant disciplines as well as public institutions and private sector organizations.

The collaboration across boundaries is familiar to IS, yet also a little different in today's context. I have often felt that the IS faculty are among the most open to interdisciplinary collaboration, likely because of the cross-disciplinary roots of the field. The IS field started with interdisciplinary roots, from computer science, operations management, and organizational behavior. Today, I find my IS colleagues (and also colleagues in the other business disciplines at the Nanyang Business School) collaborating not only with computer scientists but also earth scientists (to address climate-related sustainability issues), engineers and plant scientists (as we examine food security challenges), and medical researchers (as we work on healthcare integration across providers, and AI augmentation of healthcare professionals).

Further, while in the past decades, our industry collaborations have tended to be with individual organizations, given the scale of today's problems, and the speed at which things are moving, there is an increasing need to engage with institutions that have a wider reach. Some of the recent examples that I have observed include collaborations with consortiums of companies, or with "queen bees" who have the ability to bring together a large number of organizations within their network. This does increase the complexity of conducting research and requires setting up an infrastructure to manage diverse stakeholders. The model of individual research will find it difficult to conduct research of this nature. What we have seen among the most forward-looking and impactful of our IS researchers is that they have been able to build stable teams, with the ability to manage the interface with diverse external partners. Funding agencies play a major role in building and sustaining these teams and helping them move their work into the real world. This of course introduces further tensions and demands, of grant writing, reporting, and deliverables. But it can also contribute to increasing the relevance of the research and building the networks to bring the findings into policy and practice.

MISQ can help encourage these shifts through support for publishing research that addresses pressing real-world problems and opportunities. Such research will often involve partnering with institutions and drawing on the expertise of those in other disciplines. This will likely require our community of reviewers and editors to be open to evolving our norms as we continue to engage in conversations of ensuring an appropriate level of rigor while being able to recognize and help shape work for greater impact through a timely reviewing and publication process.

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As an IS researcher and educator for over three decades, I have the honor of serving on the boards of both AACSB and EFMD. These two bodies act as leading global platforms for discussing the future of business education. In recent years, a recurring theme in these discussions has been that business school research is not living up to the expectations of policymakers, industry leaders, and society. This phenomenon is particularly apparent in the IS discipline, which works at the intersection of technology, organization, and individuals. With the rapid pace of digital transformation as highlighted by headline-grabbing topics like generative AI, blockchain, and Web 3.0, IS could have been a key driving force of business education. Yet IS has been lagging behind other disciplines in seizing this opportunity. Furthermore, in addressing grand challenges facing the world, such as climate change and sustainability, the intellectual contribution of IS has been lackluster. We have yet to see well-framed research questions with practical relevance and societal impacts being widely pursued by IS researchers. If this continues, IS will be at risk of being marginalized as an intellectual discipline.

The notion that IS scholars are the most IT-savvy group among those in business disciplines has also been undermined by the innovative use of IT in research by non-IS colleagues. There are two cases in my home institution to illustrate this. By collecting and analyzing satellite remote sensing data, a finance academic was able to synthesize useful signals of the economic activities of industries or regions in real time, which used to take weeks to collect in the past. In another case, an accounting academic used a pretrained language model based on natural language processing (NLP) to analyze financial documents, not only publishing the model in a major accounting journal but also making the software freely available for industry.

Far from being isolated events, these cases are tell-tale signs of an emerging phenomenon. As the dean of my business school, I have allocated significant investment to enhancing our school's computing resources, e.g., putting in place high-end Nvidia servers equipped with multiple GPU cards, to support research. Interestingly, these resources are used more frequently by non-IS colleagues. The once-unique position of the IS discipline is dissipating as other disciplines integrate technology into their inquiries.

The IS discipline holds enormous promise, but it must embrace research topics that are both intellectually challenging and relevant to societal needs. How can this be achieved?

- ***Engage in interdisciplinary research within and across schools/colleges:*** Many real-world problems need the concerted efforts of experts from diverse disciplines. Successfully reconciling cross-disciplinary views via internal debate is often a step towards addressing the research relevance question. In measuring output, the publication of research papers in *non*-IS journals should also be recognized in performance appraisal and tenure assessment.

- ***Go beyond journal publications:*** Journal publications should be viewed as one of many ways in which impact can be made. Worthy scholarship outputs may also include policy papers referenced by policy makers and regulators, case studies used in classrooms worldwide, and open-source software and inventions used by industries. Performance assessment should be expanded to include such outputs, with sound impact metrics.

- ***Be more forward-looking:*** Given that technologies tend to follow trajectories for at least a short- or medium-term, researchers should supplement the present focus of their work with a more forward-looking perspective on how their findings are likely to evolve along the technology trajectory. Journal editors and reviewers may consider advising authors to provide such a perspective. This can help readers better understand the impacts of the research and by doing so reinforce the uniqueness of the IS discipline.

These five leaders are just a small sample of "influencers." Through further conversations about this topic in the field, we will learn a wider variety of views. Nevertheless, the common emphasis across the five views is encouraging. They are clearly hoping that IS researchers—and *MISQ*—will push ahead ambitiously and creatively and work across disciplines to tackle the major challenges facing business and society. *MISQ* must reflect on how it can facilitate such efforts to make the most positive impact. These five leaders make good suggestions for the journal to consider.

We hope students and researchers in the IS field will feel reassured and inspired that all five of these leaders stress the importance of research impact and that none of them ties research impact to simple metrics—especially not simple bibliometrics. If you are a doctoral student in the process of choosing a dissertation topic, it is encouraging to know that leaders like these want you to choose the topic that matters to society the most, not the one that will hit an arbitrary metric.

These stakeholders' views provide an excellent reminder that the tyranny of metrics is a social construction. While it is deeply embedded in reinforcing digital infrastructures and regimes of evaluation, and we would be foolhardy to ignore it, it is still a social construction and can therefore be changed through deliberate and sustained social effort. If all leaders in the field (going well beyond the five above to include anyone in positions of influence) work towards true impact rather than a tyranny of metrics, great progress can be made. This applies to everyone working for *MISQ*. Every member of our editorial board is in a position of influence, both over the papers they handle and often in their own institution. To support the field, each of us must always look beyond the tyranny of metrics and support research and researchers seeking to make the best impact possible. This applies to decisions on papers but also to decisions in universities (e.g., when an editor is serving on a promotion/recruitment committee or an awards committee and needs to make a difficult decision that goes against the prevailing metrics). It is through such daily words and deeds that regimes can change.

These stakeholders' views also remind us that working towards true impact is difficult. For example, it is easy for *MISQ* to *say* that it supports interdisciplinary research, but it is harder to know how best to do so. After all, *MISQ* primarily serves the IS discipline, just as journals in other fields tend to support their disciplines. Just as it is hard for a researcher to develop a publication strategy for interdisciplinary research, it is hard for *MISQ* to know how best to support such research. At present, the journal encourages—but does not really facilitate—interdisciplinary research. To really facilitate such work, *MISQ* may need to engage in more concrete collaborations with other journals or professional associations. It may need to experiment with different approaches to learn which ones work best. Some of our stakeholders above have offered good suggestions in that regard. The journal will need to think through the best approaches to follow and be open to learning from the community.

Finally, these stakeholders also remind us that we are part of a global community. They come from different backgrounds and locations, and they cross the science-society chasm. In keeping with *MISQ's* support of diversity, equity, and inclusion (Burton-Jones & Sarker, 2023), the journal must always keep in mind that perceptions and judgments of research impact, and the legitimacy of various metrics, can vary greatly across different stakeholders around the world. As a journal that seeks to represent and champion the finest scholarship in the IS field, *MISQ* must continue to learn and appreciate these differences.

Conclusion

For IS research to have the most positive impact possible, we need our authors, journals, and professional associations to work towards that impact rather than being distracted by unhelpful regimes of evaluation. Motivated by increasing pressures to focus on simple publication metrics, we analyzed recent trends in this data. Our analysis revealed interesting patterns that underscore that such metrics should not be used to measure research impact.

We call for IS researchers to examine the scientific and publication infrastructure and its associated regimes of evaluation in more detail. We also call for IS researchers, journals, and professional associations to work across disciplines as part of larger efforts to question current evaluation approaches and devise wiser alternatives. *MISQ* must also reflect on the changes it is willing and able to make to support the impact agenda.

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