Rejoinder to Ivari's (2016) Paper: "How to Improve the Quality of Peer Reviews? Three Suggestions for System-level Changes"

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Essay

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Abstract:

This short paper is a rejoinder to Ivari's (2016). It describes the Ivari's arguments, corrective actions, and contributions on the peer-based review system problem in the information systems field. It manifests that, while Ivari's posited solutions are worthy, they are also insufficient for achieving a behavioral change in the current peer-based review system. However, based on Ivari's solutions, this short paper presents radical extensions as alternative solutions. Their implementation, however, will rely on the willingness of editorial teams of top and secondary-level journals to promote structural rather than superficial changes to the peer-based review system.

Keywords: Peer Review Status Quo, Scholarly Reviews, Peer Reviews, Peer Review System Problems, Systems Approach, Radical System Changes.

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1   Introduction

Ivari's (2016) presents a well-informed report on the current peer-based review process problem experienced in the information systems field. He elaborates a logical and well-built discourse supported by specific references from different fields: natural sciences (McCook, 2005; Benos et al.; 2007), natural and social sciences (Hayashi & Fujigaki, 1999), economics (Blank, 1991), and information systems (Gray et al., 2006; Lyytinen, Baskerville, Iivari, & Te'eni, 2007). He structures his paper in three parts: 1) introduction, 2) personal experiences as a reviewer and author, 3) three corrective actions to make to the peer review process, and 4) conclusions.

His discourse is both scientific (presenting a logical chain of statements with references from scientific literature on specific statements) in some sections and free-form (presenting personal experiences as reviewer and author with personal judgments on these academic life events) in others. Thus, he describes his paper as an essay. An essay is "a short literary composition on a particular theme or subject, usually in prose and generally analytic, speculative, or interpretative" ("Essay", 2015). One could argue that essays are not scientific documents that use a scientific research method for exploring, producing, or confirming relevant findings for a particular field. However, one can also argue that essays written by scientists on scientific problems with scientific discourse based on evidence and where personal interpretations are also supported by research literature provide value to a research community and even advance fields. Essays published in scientific journals are usually written by emeritus and retired academics after a highly productive research career. Thus, they are highly qualified and respected academics on scientific topics, and their gained and accumulated knowledge and expertise is implicitly useful. We can compare essays from scientists on scientific topics to keynote lectures presented in top scientific conferences. Thus, these type of essays have a well-gained right for publication (like the invitation for being a keynote speaker) from respected and recognized authors with high-quality research productivity. On these assumptions and essay's definition, authors' essays can include personal experiences and personal value judgments on specific events or situations that are treated in the essay. Hence, Ivari's (2016) essay achieves these conditions (status of emeritus professor, a high-quality research productivity, and the paper's containing scientific sections and personal free-form sections) and deserves being published. In this rejoinder, however, this short paper provides constructive feedback (akin to peer review for a research paper) with three specific goals: 1) to assess the overall relevance of the essay's ideas for an active research community in the IS field, 2) to assess the overall logical validity of the essay's ideas based on cited references and argued statements (which includes identifying an author's involuntary mistakes or unclear statements), and 3) to provide plausible insights (optionally to be accepted by the author) for presenting an improved camera-ready version of the manuscript.

This short rejoinder proceeds as follows: in Section 2, I review and comment on the authors' introduction and personal experiences sections. In Section 3, I review the main section of the essay (i.e. the three recommended corrective actions for the peer review process). In Section 4, I discuss Iivari's (2016) position. Finally, in Section 5, I summarize this rejoinder.

2   Reviewing Iivari's (2016) Introduction and Personal Experiences Sections

In Section 1, Iivari (2016) succinctly describes why we need to improve the peer review process. In this section, he defines the ideal peer review process as "the evaluation of research findings for competence, significance and originality, by qualified experts who do research in the same field" (Iivari, 2016, p. 264. For Iivari, an ideal peer review process is also "constructive in all its critique, friendly expressed, supportive, detailed enough, includes concrete suggestions, and overall is helpful when improving the paper" (p. 264). Iivari supports the notion that an ideal review must be valued not only by journal's editor but also by the author(s) to improve the submission's overall quality.

Iivari also states that this peer-based review process is critical for creating and growing a scientific field. With this process, a research paper is legitimized to have the right to belong to scientific knowledge, and other researchers can consult it and use its findings. This process, thus, constitutes the critical gate for releasing scientific knowledge contained in research journals to a scientific community. At this point, Iivari identifies a high-quality peer-based review process in the IS field but as a process in which several

complaints have been reported: biased reviews, type I[1] errors (accepting a low-quality paper), type II errors (rejecting a high-quality paper), offensive reviews, non-constructive reviews, and long review periods.

Iivari (2016) correctly identifies previous and plausible solutions reported in the literature for at least partially alleviating the deficiencies he mentions, which include: 1) reviewer guidelines written by highly qualified scientists, and 2) the use of contemporary information technology (IT) tools (i.e. structured conversational tools, group-based decision making tools, and in general web 2.0 social tools). However, while researchers have reported the first solution for two decades, the author indicates that they do not need to mandatory use them and, thus, their effect is diluted. Additionally, the availability of these guidelines does not imply that reviewers are ready to understand and apply them correctly. As for the second solution, the most up-to-date research (Mandaviwalla et al., 2008) has found that, while a surveyed sample of authors rated the IT-supported peer review system better than the traditional one (i.e., the review conducted without IT support), the sample of reviewers did not find overall improvements.

Hence, such Iivari's arguments (2016) are sufficient for supporting his claim that IS has a strong need to improve its current peer-based review process.

In Section 2, Iivari (2016) shares his personal experiences as an author and reviewer. First, he correctly identifies the strong power that reviewers from high-quality and secondary-level journals have in contemporary academia, which is ruled by the "publish or perish" slogan. Iivari indicates that reviewers' recommendations on submitted papers in these types of journals have short-term and long-term consequences. Short-term consequences refer to the effects on the overall academic annual evaluation of authors conducted in their academic working institutions influenced by the journal acceptance or rejection decisions. Long-term consequences refers to the ranking academic reputation gained by authors based on their acceptance record of papers in relevant journals, which determine the higher education institutions interested in hiring them. A further, more relevant long-term consequence on paper's rejection decisions is the personality that the journal will be forming based on the types of research approaches, research problems, and research styles in its accepted and rejected papers. For the first case on acceptance, an excessive number of accepted papers on a single topic can bias a field's development. For the latter case on rejection, an excessive number of rejected papers on a topic can block and hinder their development.

Iivari (2016) also implicitly suggests that, due to the community service policy on peer-based review (e.g., no paid work), high-quality and secondary-level journals' EICs must totally accept the recommendations from them. This situation forms an organizational inverted pyramid where reviewers in the bottom level have more power and influence than editors in the top level in the short and long term to define the future of the authors' academic paths and fields' development. Iivari does not report specific experience as reviewer. However, he legitimizes their arguments by his editorial experience gained by managing a few hundred reviews for high-quality journals.

Iivari (2016) notes that, as an author, he has seen a normal distribution of reviews' quality across the papers he has submitted. He notes that he considers most of them as moderate (i.e., neither exceptional nor poor), which implies reviewers' decisions as conditioned acceptance to minor changes status, which is the normal expected result for a high-quality paper. Iivari also reports that he has received some excellent reviews (most likely with an acceptance status) and some extremely bad (most likely with a rejection status). He characterizes a bad review as one that: 1) shows a strong bias in some specific review point or points, 2) uses a non-constructive and non-developmental review style, and 3) includes offensive comments.

Iivari (2016), based on his research paper authorship and editorial experience, considers that bad reviews are caused mainly by a wrong paper-to-reviewer assignation than a reviewer's personal non-constructive attitude. In both cases (i.e. a wrong assignation or a non-constructive reviewer), however, bad reviews will often result in a rejection status and additional offensive comments that, for the case of junior faculty or PhD students, can lead them to lose self-esteem and distrust their PhD program. Such reviews (for rejected papers) also indirectly damage the author's academic reputation and the author's main PhD

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[1] Type I and II errors are based on the definitions from Straub (2008). Other more radical and opposite interpretation is as follows: error type I occurs when a high-quality paper is rejected because it does not fit the status quo defined by the journal; and type II error occurs when a low-quality paper is accepted because it fits very-well the status quo defined by the journal but its real contribution is marginal.

advisors and their affiliated institutions. As Iivari (2005, p. 266) reports, "they may weaken their chances to be promoted, destroy their academic careers, and even ruin their lives".

Hence, Iivari clearly presents reviewers' necessity in peer review and the academic community's need to identify their real power for shaping academic fields.

3   Reviewing Iivari's (2016) Posited Solutions

Iivari (2016) posits three concrete corrective actions for the current peer-based review system: 1) provide systematic feedback to reviewers, 2) reward active and good reviewers, and 3) make reviewers more accountable by revealing their identities to authors in certain conditions.

Iivari (2016) reports that his first corrective action is missing in most journals (including the highest-ranked journals). He posits that journals could collect a succinct evaluation on reviewers from authors' feedback through, for example, a survey. He indicates, however, that some journals have already implemented the editorial procedure to deliver to each one of the paper's reviewers the whole set of reviews (i.e., from each reviewer and from the assigned editor). Thus, with this editorial procedure, one gains two benefits: 1), reviewers can self-determine how well their reviews match up with other reviews and 2) editors would have metrics on the consistent quality or consistent lack of quality on reviews from any particular reviewer.

Discussing his second action, Iivari (2016) highlights the paradox of reviewers: their work strongly shapes the course and advance on a scientific field as gatekeeper, but academic tenure and promotions barely (if it all) account for it. Peer reviewing is a high-cost human resource and voluntarily done as a community service. Thus, Iivari (2016, p. 267) indicates that, "as a whole, reviewing is invisible work, conducted largely for altruistic reasons".   Furthermore, most reviewers themselves need to publish their own research. Thus, reviewers are pushed to spend limited time on reviews and/or complete them after several months. In such a context that does not value reviewers' review activity, a rare positive event occurs when a reviewer in an editorial review board of a high-ranked journal is promoted to a high editorial position. In this case, a reviewer has more academic influence than an author in their research community. Iivari posits that we should award high-quality reviewers with publication space reserved for them. To keep the practice academically ethical, Iivari indicates that journals could publish these papers in an explicitly named section such as "reviewer forum".

Discussing his third action, Iivari (2016) reports interesting studies that have found evidence on the association between anonymous reviews and low-quality reviews. The studies note that, while anonymous reviews often include offensive comments, non-anonymous reviews are more constructive and carefully reported. However, Iivari also argues in favor of the double-blind review process based on its objectivity and lack of bias. In particular, he defends the single-blind reversed review in which authors can know reviewers' identity but the reviewers cannot know the authors'. He considers that, while junior reviewers might reject this proposal due to perceived negative consequences on their careers, senior reviewers should accept it naturally as evidence of their self-trusting their assessments. Iivari, however, reports that, according to several studies (Regehr & Bordage, 2006; Benos et al., 2007), reviewers are not willing to reveal their identities.

4   Discussion

Overall, Iivari (2016) discusses the degradation of objective metrics for the blind-based peer review process (e.g., duration cycles on the range of 12 to 24 months, lack of constructive and developmental reviews, offensive comments, and lack of quality-control procedures for reviewers) and subjective-level trends (e.g., bias on particular issues, reviewers and authors widely differing on particular topics, and bias on particular research approaches or research schools of thought).

One of Iivari's (2016) core contributions is his elaborating the case for improving peer-based review. He localizes relevant research highly related with the addressed problem from a diversified literature. I highlight the following problems with his findings and include my personal arguments:

1. **Peer-based review process regulates the advance and paths of scientific fields in the contemporary world.** This process is responsible for legitimizing the accepted scientific knowledge for a scientific community.

2. **IS top and secondary-level journals are now totally linked to a research school of thought based on U.S. Ph.D. programs.** While we can expect that scientific journals will delimit their

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scope and research approaches, many concentrate on specific schools of thought. Iivari (2016) cites Lyytinen et al.'s (2007) study, which revealed that, on average, the five top journals in IS field published 80 percent of papers from authors affiliated at North American or Canadian institutions and only 20 percent from authors affiliated to European institutions in the period from 2000 to 2005. Lyytinen et al. (2007) found several reasons for this high discrepancy. Three of them support a conjecture posited in this short paper that top-level IS journals are biased toward an U.S.-based research school of thought characterized by: 1) a writing style that emphasizes efficiency but with a rigid format compared with the interpretive richness and flexibility of other languages such as French or Spanish; 2) a strong theory-linked research even for applied research rather than research on designing and implementing solutions in real settings, which might lead to new theoretical knowledge; and 3) a PhD program training with a two-year period that includes courses on research methods and a two- or three-year period that includes gaining skills on writing research (which is linked to journals' ranking mindset) versus Europe's flexible and non-controlled Ph.D. programs that feature few research methodological courses and no focus on journal rankings at most cases. This PhD-approach discrepancy, which would be totally pre-accepted like the normal status quo between PhD programs located in the US and less-developed regions (e.g., Latin American or Asia-Pacific regions), is not assumed for the European region that contains four of the top-10 worldwide economies (e.g., Germany, UK, France, and Italy) (World Bank, 2014). Thus, while researchers located in less-developed regions must pre-accept the editorial policies of the top-ranked journals derived from the U.S. PhD training model, European researchers are not obligated to follow such policies. A simple but strong argument is that the European model of PhD training has held a competitive scientific, industrial, and economic progress similar to the U.S. economy, which legitimizes the European PhD training model's permanence.

3. **No better substitute system for peer review has appeared.** Several deficiencies co-exist currently in the peer review process, and the scientific community's top management (e.g., journals' editors) considers particular actions for improving it to be risky. Many journals still favor blind reviewing because they assume that reviewers might be influenced by authors' status. However, we can rebut this argument at least with senior-level authors because they usually submit to top journals, which usually feature only senior-level reviewers (with similar ranking status on publications). In contrast, blind reviews lead to offensive, non-developmental, and short reviews. A more essential critique is the lack of agreed-on scientific instruments for measuring a research paper's quality. EiCs and associate editors are often surprised by opposite reviews from their editorial review members with similar seniority and expertise level for the same submitted paper, which shows the process's high subjectivity.

4. **Different fields weigh different issues in the peer-based review process.** Natural science journals accept short papers, while social science journals demand longer ones. In particular, natural science papers focus on the correctness of the scientific (objective) procedures used and the clarity of the reported results, and they assume that any methodological research is worth pursuing without distinguishing between socio-economic research settings or researchers' nationality. In contrast, researchers in business and management science (which includes information systems) implicitly assume that papers handle such issues adequately, and, thus, reviewers focus on the paper's problem's worldwide or socio-political relevance, its writing style, and its adherence to a particular research school of thought privileged by the journal editorial team and review board (Hayashi & Fujigaka, 1999). For instance, the number one IS journal (i.e. MIS Quarterly) rejected qualitative research (Lee, 1999) during its two initial decades. At present, it still does not privilege simulation-based research evidenced by the almost null percentage of such papers published in this it (Mora et al., 2012).

5. **Researchers have proposed recurrent solutions to improve the current peer review system (in particular, Iivari (2016) proposes three that focus on reviewers).** Iivari proposes that we should: 1) provide systematic feedback to reviewers, 2) reward active and good reviewers, and 3) make reviewers more accountable by revealing their identities to authors in certain conditions. While these solutions are worthy individually, they do not change the system's behavior because they do not modify the underlying peer-based review systems' structures. According to the systems approach literature, system's behavior changes only can occur when their underlying structures are re-designed (Ackoff, 1981; Gelman & Garcia, 1989; Mora et al., 2007). Thus, the

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final impact of Iivari (2016) recommendations would maintain only the peer review system's status quo.

First, journals' editorial review boards comprise members of the scientific community based on their expertise and level of seniority. Junior reviewers are not part of a top journal's editorial review board (ERB). Thus, the first solution implies that ERBs comprise a diverse range of reviewers where novice reviewers can learn from senior ones, but it is not their usual arrangement. As such, top journals and others following their editorial practices might include a balanced ERB with different levels of seniority (senior, mid-range, and junior). In this way, a paper would receive a balanced review from three levels of seniority (and possibly expertise in the particular paper's topic), and, accordingly, Iivari's recommendation on sharing reviews among the review team before rather than after an EIC makes an editorial decision could be useful.

Second, Iivari (2016) proposes assigning publication space to good reviewers. While this practice might incentive reviewers to write developmental reviews, if journals also peer reviewed these papers as Iivari suggests might be necessary, they will fall victim to the same quality issues as other papers. Nevertheless, I also endorse the posture that scientific community must promote academic acknowledge for reviewing. At present, this situation is a paradox: academic institutions value the research productivity of their faculty, but they do not value in similar level the review tasks ignoring their critical importance as judges reporting acceptance or rejection recommendations of research papers published in journals.

Third, Iivari (2016) proposes steps toward a more transparent review process: revealing reviewers' identity to authors. However, Iivari notes that such a practice offers benefits only sometimes. He is cautious in proposing full transparency in the peer review process. A counterargument for this partial disclosure of reviewers' data is the following: scientific knowledge concerns the truth on findings and correctness of used procedures and tools—knowledge that must be available to the scientific community. We must make this knowledge's transparency as our highest possible goal. However, the review process lacks such transparency. In particular, a proposal for full transparency must eliminate blind reviews and must publish the names of accepted papers' reviewers. In this way, information on accept papers' authors and reviewers will be available for analyzing associations, trends, and causal patterns on accept papers' authors and reviewers.

5   Conclusions

Iivari (2016) addresses a critical problem in the IS scientific community: poor-quality reviews. He identifies relevant studies which address this problem in other fields. He has proposes three particular actions for improving the peer-based review system: 1) provide systematic feedback to reviewers, 2) reward active and good reviewers, and 3) make reviewers more accountable by revealing their identities to authors in certain conditions. These three solutions are positive efforts to improve the current peer review system. In this paper it is argued, however, that from a system-level view, single and isolated solutions cannot modify a system's core behavior, and, thus, they are insufficient. This paper also argues that more extensive variations on the same three posited solutions can produce more benefit impacts than those posited in their current mode. These extended solutions can modify underling rather than superficial structures in the peer review system to effectively change its behavior. Their implementation viability, however, depends on high-quality journals' willingness (i.e., their top management editorial boards) to establish a new paradigm in the scientific community based on the transparency and openness of scientific practice.

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