EDITOR'S COMMENTS

The MISQ Review System: Operational Perspectives[1]

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Very often the editor-in-chief's job in a journal like *MIS Quarterly* is described through the three-hat analogy. It encompasses the role of ambassador, strategist, and chief operations officer for the journal. In MISQ, these roles are intertwined. When I play the ambassador role visiting universities, meeting with researchers all over the world, participating in panels, and presenting at conferences, I try to listen to the IS community to detect general trends, opportunities for the field, as well as what the community perceives as gaps and opportunities for the journal to improve. These will inform the general strategy for the journal and affect strategic decisions such as editorial appointments and conceptualization of special issues. I also try to explain the general strategic approach that we are following to continue to have MISQ be the broad and inclusive platform that publishes the best IS work.

I have used some of my editorials to highlight strategic directions. With this editorial, I convey a few general thoughts about the operational aspects of the journal's review system.

After 22 months of overseeing the review system, I can't help drawing parallels between the review system of the journal, and two general areas of research that I have worked on over the years. They have provided some background for my understanding of the MISQ review system: platforms of collective intelligence and classification/diagnostic systems.

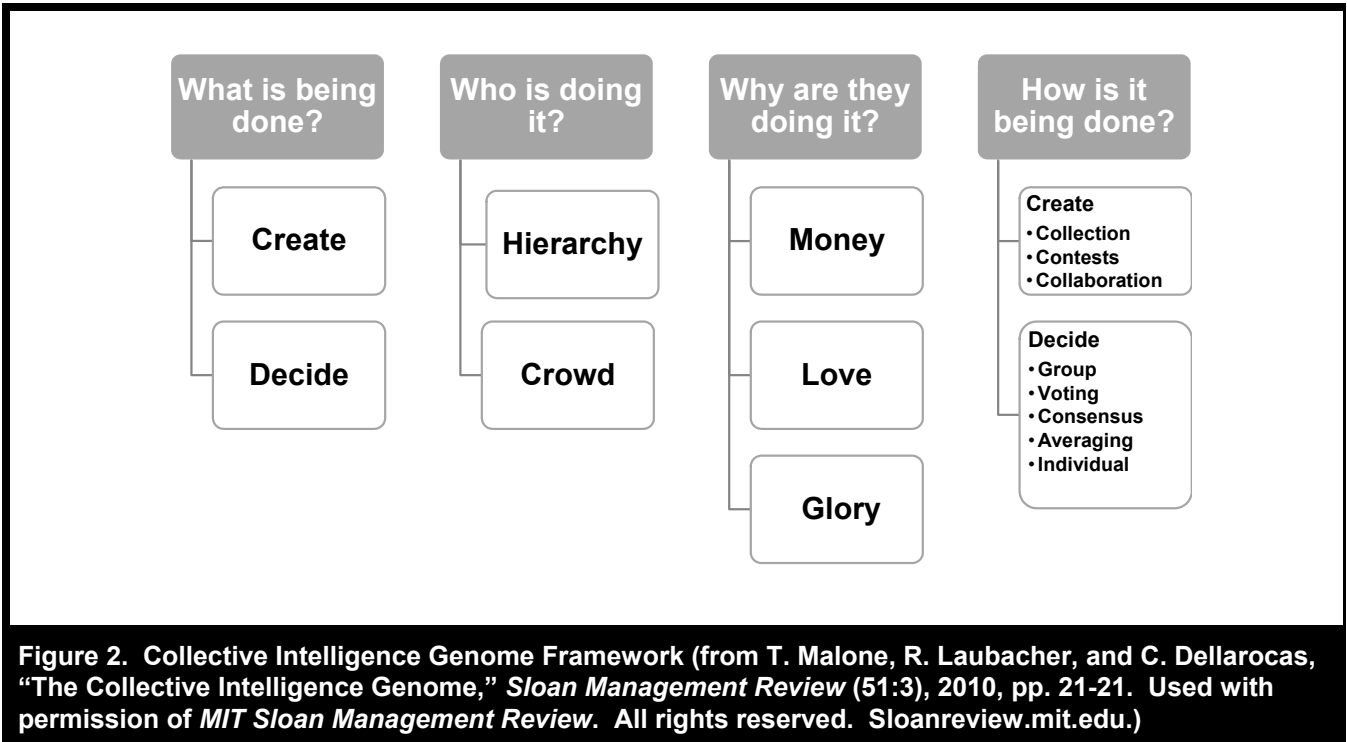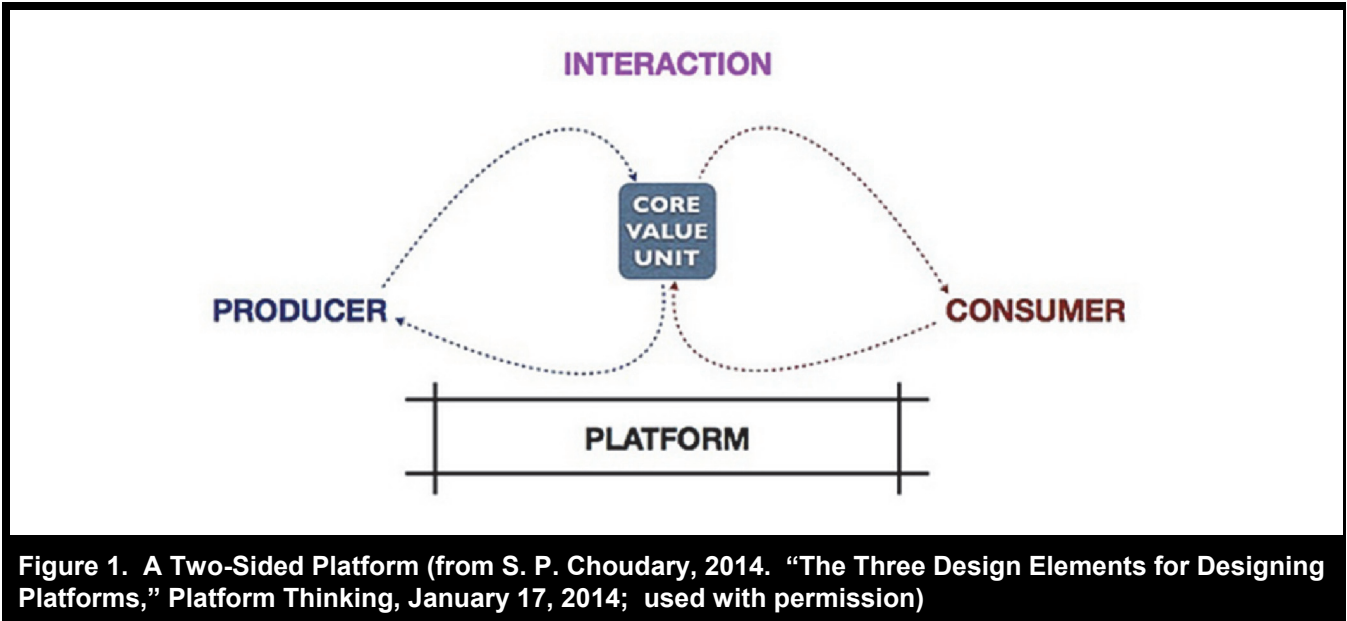### The Review System as a Collective Intelligence Component of a Multisided Platform

Multisided platforms (MSPs) are technologies, products, or services that create value primarily by enabling direct interactions between two or more customer or participant groups (Boudreau and Hagiu 2010; Hagiu 2014). Information technology enables the operations and provides the infrastructure for prominent platforms such as AirBnB, Facebook, eBay, AliBaba, Uber, and a myriad of other exciting examples. As illustrated in Figure 1, a two-sided platform connects supply and demand populations, provides the rules for the interactions, and eventually creates and delivers values. As a journal, MISQ acts as a three-sided platform, where authors contribute knowledge (supply), and readers consume the knowledge (demand), the platform provides the review system (third party), governed by rules and procedures. Most importantly, the platform creates and delivers value by capitalizing on the network effects in the research ecosystem. An article is read and cited and then cited again, and provides feedback into the creation of new knowledge and articles, etc.

The MISQ platform provides review services through its review system consisting of reviewers, editors, and rules associated with the processes. The review component can also be seen as a collective intelligence platform, where reviewers and editors contribute knowledge in the form of reviews and opinions. In a sense, such a system is similar to platforms such as epinions or tripadvisor. However, there are differences in the way the crowd participates and contributes.

Malone et al. (2010) present the collective intelligence genome framework, depicted above, intended to characterize these platforms along the dimensions what, who, why, and how.

Figure 1. A Two-Sided Platform (from S. P. Choudary, 2014. "The Three Design Elements for Designing Platforms," Platform Thinking, January 17, 2014; used with permission)

Figure 2. Collective Intelligence Genome Framework (from T. Malone, R. Laubacher, and C. Dellarocas, "The Collective Intelligence Genome," *Sloan Management Review* (51:3), 2010, pp. 21-21. Used with permission of *MIT Sloan Management Review*. All rights reserved. Sloanreview.mit.edu.)

Applying this framework to the MISQ collective intelligence review system, we obtain:

• *What is being done*? **Decide**. The objective of the review system is to determine if a submission is to be accepted for publication or not. The review system should provide guidance to authors and developmental reviews are encouraged for enhancing the quality of the submissions, but the main purpose of the review system is a decision.

- *Who is doing it*? **Hierarchy**. MISQ has a three-tier, hierarchical system of appointed editors and selected reviewers. The review system is a collective intelligence platform, in which the crowd (IS community) submits manuscripts, but the evaluation (review) is performed by an hierarchy.

- *Why are participants doing it*? Definitely not money, since unlike some journals in Finance and Economics, MISQ does not provide financial incentives for reviewers or editors. The motivation for participation in the editorial process relies on a combination of **Love** and **Glory**. The system is completely voluntary and relies on the fact that members of our research community see contributing their knowledge as a duty that they enjoy performing. The three-tier review system also provides a hierarchy of professional recognition (reviewers – associate editors – senior editors) that is associated with the "glory" motivation. Members of the community enjoy being recognized by editorial appointments.

- *How are they deciding*? While there is an effort to achieve consensus among the reviewers and editors of a submission, as I will justify below, MISQ relies, for the final decision, on the judgment of the senior editor who uses as input the group assessment of the review team (associate editor and reviewers).

The MISQ collective intelligence platform has been in existence since the beginning of the journal, preceding any notion of Internet-based platforms. Information technology (such as ScholarOne's Manuscript Central) has helped with the automation of the processes of manuscript submission, assignment to editors and reviewers, communication among the parties, storing the knowledge created, tracking the stages, etc. But the basics of the review system have remained unchanged. The natural question that arises and one that I am often asked is, is it time to rethink the review system and incorporate the "crowd" collective intelligence platform features that are common in many of today's knowledge contribution platforms?

There are many such features that may be applicable to a review system, starting from how reviewers are matched to manuscripts. There are examples of information markets that are crowd based that could facilitate this process through some kind of bidding for papers marketplace. The reviews themselves could be the subject of promoting clicks (likes and dislikes) or be open to further comments. A social component of followers of reviewers could be established.

There are some issues with these crowd environments that from my experience based on my own research on these crowdsourcing platforms (Chen et al. 2009; Goes, Guo, and Lin 2014; Goes, Lin, and Yeung 2014), make them inadequate to replace the current hierarchical peer review system. At the core of collective intelligence platforms is the notion of how to establish and guide the participation of the members and align it to value creation.

First, there is the sustainability issue. How do we continuously attract the appropriate reviewers for taking up the review tasks? All crowdsourcing sites suffer from this issue. They have been explored in the TopCoder HBS case (Lakhani et al. 2012) and are well documented. From all registered users, just a small fraction of them routinely participate. Crowdsourcing sites that need continuous input in the knowledge contribution have to actively establish a community engagement layer to address the sustainability issue.

Second, it is not easy to manage the community of open contributors. One needs to design the array of incentives that will align with the different crowd participants. These typically relate to the way people work with their intrinsic and extrinsic motivations. The key issue is to align the incentives and motivations with the value we want to generate—in this case, fair, value-added reviews that lead to decisions to accept high quality work and also help authors further develop their ideas.

Another issue that frequently develops in open knowledge contribution platforms is that a few contributors tend to contribute a lot, motivated by glory. These are the opinion leaders. In a manuscript review system, we need to achieve a good balance of reviews that represent the various thought streams of the IS field.

Review System as a Classification/Diagnostic System

A simple but informative view of the review process is that of a classification/diagnostics model. After the application of the process, no matter how many rounds it may take, a submission is to be classified into one of two buckets: accept or reject. There are therefore two sources of errors with such models: Type I error (accept what should be rejected), also known as a false positive

error in a diagnostic system, and the Type II error (reject what should be accepted), equivalent to the false negative error of a diagnostic system.

The key for implementation of reliable and effective classification systems is to understand the risks and costs associated with making these errors. The systems are then calibrated based on the inherent tolerances for making each type of error. In a medical environment, for example, it is extremely costly to make a false negative error, in which a patient would be told he/she doesn't carry a condition when in reality the condition exists. On the other hand, a false positive error in the medical environment may be emotionally taxing at first, but when the patient finds out he doesn't have a disease after all, it can be a relief. Similar inter-pretations and evaluations of costs of errors are prevalent in a number of business decisions associated with classification: alerting consumers about a credit card fraud that doesn't exist or not alerting about a real fraud; or deciding to target a consumer with a high-level advertising effort when that consumer is not likely to purchase at all. In data mining and business intelligence classes, we teach many such situations to have students understand that (1) classification systems have inherent errors, and (2) decision makers need to understand the tradeoffs between making decisions in the presence of these errors.

In a journal such as MISQ, the actors involved in deciding the fate of a submission need to be aware of the risks and costs of making errors. By emphasizing the avoidance of Type I errors, reviewers may be inherently incurring Type II errors. Focusing on avoiding Type I errors may create an environment that is averse to groundbreaking research and conducive to incremental research. The role of the senior editor is essential to provide the knowledge, experience, and guidance to the process when evaluating the risks and costs of each type of error.

The mission of the review system of MISQ is to accept and publish work that contributes to the advancement of the knowledge in the field of information systems. Obviously, in accomplishing this mission, the review system will reject submissions that don't meet the contribution criteria, as deemed by the several actors of the system. There are two crucial considerations here: (1) the criteria that is to be applied in the determination of the accept /reject decision, and (2) how the review system deals with the Type I/Type II inherent errors.

Unlike typical diagnostics and classification systems, the review system of a journal such as MISQ is not a one-shot evaluation process. The application of the acceptance criteria is an evolving process for each submission. It actively allows for *enhancement* of the work through multiple (typically two or three) rounds of revision and evaluation. While the overall disposition options are reject and accept, there are additional intermediary options that allow revisions of the work that should follow the premise of enhancing the contribution.

The review system at MISQ is a hierarchical three-tier system designed to serve as a diagnostic/classification system and a contribution enhancement system. To achieve both objectives and meet the overarching goal of publishing the work that will advance the knowledge in the field, in my opinion the three-tier system is absolutely necessary. In it, the role of the senior editor is of paramount importance.

The SE is ultimately responsible for the final disposition of the submission. In MISQ, the editor-in-chief assigns the submission to an SE based on the knowledge and experience that is required for the specific research work. From that initial assignment on, the SE is fully responsible for the entire review process, including the final decision. In very rare circumstances, authors appeal the final decision by the SE and the EIC gets to handle the appeal. Invariably, unless there is a flagrant flaw with the process (extremely rare event), the SE's decision will stand.

SEs are carefully selected from a distinguished set of experienced, successful researchers. They come from a layer of senior scholars in the field who are in a unique position to evaluate where the research contribution lies in the general context of the field. They have published extensively in top tier journals and have tremendous experience with the editorial process. In the MISQ environment, they are responsible for overseeing and conducting the editorial operations that will accomplish the two crucial tasks mentioned above: (1) applying the criteria to decide the fate of the submission, and (2) exercise the judgment about the risks and costs related to the Type I and Type II errors.

The criteria by which papers are judged are usually a combination of the novelty of the idea, the contribution of the work, the rigor and quality of the research execution, and how well the authors communicate the positioning, execution, and findings of the work. The IS field is wide and diversified; there are various research paradigms and approaches: behavioral, organizational, economics

of IS, design science, qualitative research, quantitative approaches, etc. Each paradigm and subarea has developed its own criteria for evaluation of the contribution of the work, execution quality, etc.

The SE has the responsibility to exercise his/her judgment and make the final call. In earlier rounds, the SE addresses the question: *Does the submission have the potential to contribute to knowledge*? The SE is also responsible for determining the point in time in which the paper receives the final disposition of accept versus reject and reaches the end of the review process.

In MISQ's three-tier hierarchy, reviewers are close to the research. They provide the first level of evaluation of the work and are advisory to the associate editor. The AE consolidates the recommendations of the reviewers and makes his/her own assessment of the work and provides a recommendation to the SE. It is expected that the AE and the SE work together toward a recommendation for the paper. However, in case of divergence of opinion, it is the SE's call. To put it bluntly, the review process must not necessarily be a majority rule. MISQ relies on the vast experience of SEs to apply their learned knowledge of the publication criteria to the submission and, very importantly, evaluate and mitigate the risks and costs of the Type I and Type II errors that are inherent to the review process.

In the three-tier process, as we move from the specificity of the reviewers' knowledge to the broader perspective of an SE, we go from relative high resistance to the possibility of committing a Type II error to a more lenient approach to work with that risk. And this is healthy; it is what SEs should contribute to the process—the ability to identify an exciting idea that is not fully developed yet and give it a chance to blossom—to work with the possibility of breaking away from safe, incremental perspectives and help develop substantial contributions to knowledge.

I would like to end by emphasizing the point that I am very optimistic about the state of IS research. We have grown tremendously as a discipline, which shows in the depth of the pool and the caliber of our senior researchers. Our set of SEs represent our elite thinkers and leaders, who have allowed the field to advance. Editors-in-chief and the IS community should be very grateful of the voluntary work of our peers who come from the IS crowd and voluntarily and coherently work through the editorial hierarchy.

References

Boudreau, K., and Hagiu, A. 2010. "Platform Rules: Multi-Sided Platforms as Regulators," in *Platforms, Markets and Innovation*, A Gawer (ed.), Northampton, MA: Edward Elgar.

Chen, L., Goes, P., Marsden, J., and Zhang, J. 2009. "The Design and Use of Information Preference Markets (I PREFS) for Early Stage Emerging Technology Evaluation," *Journal of Management Information Systems* (26:3), pp. 45-70.

Choudary, S. P. 2014. "The Three Design Elements for Designing Platforms," Platform Thinking, January 17 (http://platformed.info/the-three-design-elements-for-designing-platforms/

Goes, P., Guo, C., and Lin, M. 2014. Incentive Hierarchies Induce User Effort? Evidence from an Online Knowledge Exchange," Working Paper, University of Arizona.

Goes, P., Lin, M., and Yeung, C. A. 2014. "Popularity Effect in User-Generated Contents: Evidence from Online Product Reviews," *Information Systems Research* (25:2), pp. 222-238.

Hagiu, A. 2014. "Strategic Decisions for Multisided Platforms," *MIT Sloan Management Review* (55:2), pp. 71-80.

Lakhani, K., Garvin, D., and Lonstein, E. 2010. "TopCoder (A): Developing Software through Crowdsourcing," Harvard Business School Case Collection, January 2010 (revised May 2012).

Malone, T., Laubacher, R, and Dellarocas, C. 2010. "The Collective Intelligence Genome," *Sloan Management Review* (51:3), pp. 21-21.