Measuring editorial skill and error.

Academics produce and consume information. Refereed journal articles categorize information by topic, screen it for reliability, and sort it into a reputational hierarchy, which aims to differentiate information of greater or lesser value. Journal rankings are set mainly by citations, measured as impact factors (IF) or H indices (Callaway, 2016). Many academic reviews include only high-ranked journals. Rankings have powerful effects on university funding and individual careers (Buckley, 2019). Academics submit articles preferentially to higher-ranked journals, despite extra effort in reformatting, revisions, resubmissions and rejections, because higher-ranked publications yield higher rewards. Higher-ranked journals can charge higher subscriptions and publication fees. Journal editors preferentially accept articles that they assess as more original (Sanchez et al., 2019), but they cannot describe this judgement objectively (Sanchez et al., 2019).

Here I propose a simple conceptual approach to evaluate editorial skill, derived by comparing post-publication citations for articles accepted, *cf.* articles rejected and published elsewhere. Citations may be influenced by multiple factors, such as language (Buckley, Pegas & Zhong, 2013) and lazy citers (Wang et al., 2016). They do, however, quantify use of information by peers, an objective measure of merit. Ideally, such a measure should differentiate citations in journals of higher, equal or lower rank than the one where an article was published. Current statistics use only gross citation counts.

The approach proposed compares acceptances and rejections with actual subsequent citations, relative to journal IFs. For rejected articles, citations will be to a different journal, where the article was later accepted; or zero, if the article was never published. A_H and R_L outcomes (Table 1) boost journal IF, whereas A_L and R_H do not. We could evaluate editorial skill as $(A_H + R_L) / (A_L + R_H)$. Currently, individual authors cannot measure R_L or R_H , since they know only the fate of their own articles. Author syndicates could compile joint information. Publishers and analytics corporations, such as Google® Scholar® or Clarivate® Analytics®, could share such information systematically, ranking journals by editorial skill as well as impact factor. Some publishers already ask rejected authors where they plan to submit subsequently. Systematic analysis is the next step.

Table 1. Fate of Individual Articles.

	Citations < IF*	Citations $\geq$ IF
Articles accepted	A_L	A_H
Articles rejected	R_L	R_H

*Over same timescale. Citations for individual articles. IF = journal impact factor. H = higher, L = lower.

Citation distributions are highly skewed. Editorial decisions with R_H outcomes therefore have greater consequences for IF, than those with A_L outcomes. Journals can accept many less-cited articles (A_L), and still achieve a high IF if they also accept a few very highly-cited articles (A_H), e.g. with citation rates $>100\times$ journal IF. Editors can use *a priori* indicators of high citation, such as large team-authored studies (Valderas et al., 2007). Skewness is less significant where journals are ranked by H index rather than IF.

Editorial decisions are also subject to logistic constraints. The number of articles submitted, $A_L + A_H + R_L + R_H$, depends on authors; and the number accepted, $A_L + A_H$, on the size of the journal. Submissions are considered as they are received, and editors must balance acceptances and rejections dynamically, with incomplete information.

For A_H and A_L , authors and editors agree; for R_H and R_L , they disagree. Editors' judgements prove accurate for R_L , erroneous for R_H . Causes of editorial misjudgements include: inappropriate assignments of associate editors or reviewers (Silbiger & Stubler, 2019); failure of editorial judgements on poor reviews or associate-editor recommendations; failure of editors to allow author responses to new reviewers appointed after revisions; and absence or inadequacy of appeal processes (Tribe, 2018). Author syndicates could quantify these by assembling large-scale ethnographic datasets of reviews and editorial decisions (Tribe, 2018).

Journal hierarchies sort knowledge by importance, as well as topic and reliability. Editorial skill and error affect which ideas contribute to future growth of human knowledge. Objective data exist for systematic post-publication assessment. Authors choose journals, as well as *vice versa*. They gain if journal IFs improve, but lose when journals decline or collapse. Authors thus have a stake in editorial skill, and discuss and evaluate editors' interests and idiosyncracies, qualifications and reputations. This proposal adds a quantitative component.

The editors of *Annals of Tourism Research* encourage courageous articles: either ignored completely, or adopted heavily (Dolnicar & McCabe, 2020). In my terminology, these avoid R_H by risking A_L . Our approaches differ, but our conclusions match. Dolnicar & McCabe (2020) describe pre-publication editorial evaluation of authors, for this one journal; I describe post-publication author evaluation of editors, for any journal. Authors and editors come and go, and so do academic journals, institutions, ranking systems, and even disciplines. All of them contribute to the tree of knowledge. Courageous articles become either sturdy branches, or fallen leaves. Cowardly articles merely become twigs. In academic publishing as elsewhere, "without courage, all other virtues are useless." (Abbey, 1968).

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