Signs of epistemic disruption: Transformations in the knowledge system of the academic journal

William W. Cope, Mary Kalantzis

Abstract

This article is an overview of the current state of scholarly journals, not (just) as an activity to be described in terms if its changing processes, but more fundamentally as a pivotal point in a broader knowledge system. After locating journals in what we term the process of knowledge design, the article goes on to discuss some of the deeply disruptive aspects of the contemporary moment, which not only portend potential transformations in the form of the journal, but possibly also the knowledge systems that the journal in its heritage forms has supported. These disruptive forces are represented by changing technological, economic, distributional, geographic, interdisciplinary and social relations to knowledge. The article goes on to examine three specific breaking points. The first breaking point is in business models—the unsustainable costs and inefficiencies of traditional commercial publishing, the rise of open access and the challenge of developing sustainable publishing models. The second potential breaking point is the credibility of the peer review system: its accountability, its textual practices, the validity of its measures and its exclusionary network effects. The third breaking point is post-publication evaluation, centred primarily around citation or impact analysis. We argue that the prevailing system of impact analysis is deeply flawed. Its validity as a measure of knowledge is questionable, in which citation counts are conflated with the contribution made to knowledge, quantity is valued over quality, popularity is taken as a proxy for intellectual quality, impact is mostly measured on a short timeframe, 'impact factors' are aggregated for journals or departments in a way that lessens their validity further, there is a bias for and against certain article types, there are exclusionary network effects and there are accessibility distortions. Add to this reliability defects—the types of citation counted as well as counting failures and distortions—and clearly the citation analysis system is in urgent need of renewal. The article ends with suggestions towards the transformation of the academic journal and the creation of new knowledge systems: sustainable publishing models, frameworks for guardianship of intellectual property, criterion-referenced peer review, greater reflexivity in the review process, incremental knowledge refinement, more widely distributed sites of knowledge production and inclusive knowledge cultures, new types of scholarly text and more reliable use metrics.