

Editorial: Re-viewing the Journal Peer Review Process

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Since becoming actively involved in the work of the Centre for Education in the Built Environment, I have become increasingly interested in how the ideas of research-informed teaching and teaching scholarship are themselves disseminated, debated and delimited. This interest has led me to turn a critical eye on the 'business' of journal publishing and to consider how the quality of education research is maintained and sustained in the built environment. In an editorial I wrote for *CEBE Transactions* in 2006 I explored the role of the editor in this process and reflected on some of the practical and ethical challenges associated with the editorial function (Peel, 2006). In particular, I pointed to the power and influence that may be wielded by an editorial team, since editors are clearly in a position to shape and to structure the frames of reference of what constitutes quality research. On the one hand, editors, may, for example, be seen in certain quarters as upholding established traditions and maintaining defined standards. On the other hand, editors may be viewed as safe-guarding and prolonging a particular discourse, or potentially resisting and excluding new and challenging voices. It follows that editors need to be sound reflective practitioners and active listeners.

In my first editorial for the *Journal for Education in the Built Environment (JEBE)* I examined the theme of electronic journals and their role in the dissemination of research and teaching scholarship. The growing interest in internet publishing is, for example, raising questions about the peer review process. I drew particular attention to some of the perceived concerns about the legitimacy and validity of on-line publications, and highlighted some of the emerging tensions around the use of e-journals over p-journals (Peel, 2008). The argument made was that the acknowledged benefits of electronic publishing offer a sound basis for a commitment to *JEBE* being on-line and openly accessible.

Here, however, I wish to return to my remarks in that editorial about the importance of reviewers in the life of a journal, and the peer review process which I value as "a critical guarantor of the quality and rigour of scholarly dissemination in whatever form" (Peel, 2008, p. 2). My interest in examining this theme in more detail is that the peer review system is both "a very important part of the quality control system for academic knowledge" (Wood *et al.*, 2004, p. 2) and a highly contested part of the business of academic journal publishing (Cicchetti, 1998). In part, this stems from the fact that peer review is acknowledged to be an imprecise term and one that is often misunderstood by those with particular expectations from the process (Mulligan, 2005). It is helpful then to develop a shared understanding of *JEBE's* approach.

Over the past decades, peer review as a mode of quality assurance has received considerable critical attention, due, in part, to a relatively small number of publicised cases in prestigious periodicals of fraudulent research involving fabrication, falsification, plagiarism, failure to disclose conflicts of interest, and other forms of scientific misconduct (Parliamentary

Office of Science and Technology, 2002). Moreover, the Cochrane Review examined the editorial peer review of original research submitted for publication in biomedical journals and concluded that “little empirical evidence is available to support the use of editorial peer review as a mechanism to ensure quality of biomedical research” (Jefferson *et al.*, 2007, p. 2). This, they suggested, was, to a certain extent, because of the methodological problems associated with disentangling the complexities of the peer review process and identifying the direct impact on the quality of published research arising from reviewers’ inputs. Indeed, attention can be drawn to the improvements that are often made during the technical editing phase rather than the peer review process *per se*.

These debates around peer review are relevant for the built environment academy, not least because “peer reviewed science is playing an increasingly influential role in the formulation of UK policy and decision making” (Parliamentary Office of Science and Technology, 2002, p. 1). In the UK, for example, the built environment has been placed centre-stage to perform a critical role in furthering the sustainability agenda (Government Office for Science, 2008), and the importance of the construction industry to economic wealth and the delivery of quality public services has also been reiterated (House of Commons Business and Enterprise Committee, 2008). This inevitably places the scholarship of teaching and learning under the spotlight, as professionals step up to meet these new challenges.

Processes of quality assurance and performance measurement are a prominent feature of academic life, whether this relates to individual promotion and career advancement, or institutional funding streams and perceived international competitive advantage through externally assessed (peer reviewed) research status. Indeed, the evolution from the Research Assessment Exercise (RAE) to an emerging Research Excellence Framework in the UK is indicative of the hold such arrangements have on localised and individualised research practices and constructions of research. Importantly, then, Wellington and Nixon (2005) have argued that the enterprise of academic publishing has expanded significantly since the inception of the RAE, with very rewarding benefits for the business houses concerned which exist to service this academic industry. Indeed, in Wellington and Nixon’s (2005, p. 644) examination of the underlying motivations for engaging in what might be considered the “collective game” of scholarly publication, they use the metaphor of an ecosystem to describe the inter-dependencies of all those involved in this activity. This raises concerns about the extent to which the sustainability of such a mode of research dissemination and ‘kite-marking’ leans towards conservation or creative evolution in the cultural reproduction of research. It prompts questions for all those already involved, and those who wish (or who are required) to become actively engaged.

Unpacking Peer Review

In preparing this editorial, I first undertook a multi-disciplinary literature search of the peer review process. The preliminary scoping identified a number of important UK reports concerning peer review in relation to allocation of research funding and the UK’s RAE process (Research Councils UK, 2006; Parliamentary Office of Science and Technology, 2002; The Wellcome Trust, 1997; The Royal Society, 1995). The general conclusions to be

drawn suggest that, despite certain acknowledged weaknesses, such as the potential leakage of ideas; risk of conservatism in relation to the type of projects funded; imperfect neutrality; and fraud, peer review is held to play an important role in the allocation of research funding and “retains the confidence of the great majority of the agencies funding research in the United Kingdom” (The Royal Society, 1995, p. 2). Indeed, this wide-ranging support led The Royal Society (1995) in its report to focus on attempting to improve the rigour and effectiveness of the process by attending to the need for greater efficiency so as to reduce the costs of peer review to the scientific community, and to society as a whole.

Whilst these wider debates raise a number of related concerns, notably around anonymity versus transparency, and the burden placed on peer reviewers in such processes, my specific focus here is the use of peer review in journal publications. The literature search honed in on the perceived benefits of peer review, concerns about the process, and sought to identify suggestions about how the rigour and helpfulness of the *JEBE* peer review system might be improved. These findings informed the design of a short questionnaire which was then sent by email to those academic colleagues in the built environment who have kindly served as referees for *JEBE*. This editorial reflects on the insights from the literature reviewed, draws on some of the feedback from the peer community, and comments on the implications for *JEBE*. In so doing, this editorial hopefully highlights the range of perspectives involved and makes the case for retaining peer review.

Peer Review

To the uninitiated, the peer review system may appear an intricate and potentially mysterious process (Bauer, 1998). Yet, some form of peer review has provided a method of independent evaluation of scientific research since Ancient Greece (Mulligan, 2005). It is generally held, however, that it was the Royal Society of England in its journal *Philosophical Transactions* that in 1665 sought the opinions of the Society’s members to assess suitability for publication (Gupta, 1996). Since then, systems of peer review have increasingly become a familiar component of the international publishing landscape, although refereeing can take different forms across disciplines (Mulligan, 2005). Bauer (1998), for example, differentiates between *open review* where a paper is circulated to a number of peers who prepare comments to which authors may then respond (see, for example, the discussions and response on the internationalisation of planning education – Peel and Frank *et al.*, 2008); *anonymous review*, where the author does not know the identity of the reviewer; *single-blind review* where the author’s identity is not known to the reviewer; and *double-blind review* where anonymity for author and reviewer is maintained.

Each of these processes is held to offer different advantages and disadvantages in terms of reliability, and quality. Yet, there remain concerns that a number of biases may nevertheless occur, such as the favouring of positive results, predisposition to papers written in English or towards authors from certain prestigious institutions, and that those who act as referees may form “self-serving cliques” (Parliamentary Office of Science and Technology, 2002, p. 3). To date, *JEBE* has used the double-blind review process. Nonetheless, discussion of research through conference or working papers, research methodologies that are high profile and to

which reviewers may themselves have contributed, and self-citation, for example, can often result in the process of anonymous review being partially sighted. The *JEBE* editorial team strives to ensure that papers submitted for review are anonymised prior to them being circulated to reviewers by, for example, removing direct references to institutions and location within the body of the text, in addition to removing all author details. As a team, we are committed to extending the pool of international reviewers; but even this cannot always ensure full anonymity. As a relatively new community of built environment education scholars, we are, in many instances, pioneers in the field, and likely to be known to each other as such. Fundamentally, however, journal editors rely heavily on and respect the input and contributions that emanate from the reviewing process.

Peer Reviewers

Peer reviewers are heralded as the “bedrock” (Turpin, 2007, p. 134) or “backbone” of the research publishing business, “donat[ing] their time for this altruistic activity and receiv[ing] little acknowledgment” (Cronenwett *et al.*, 2007, p. 181). Reviewers for *JEBE* are selected on the basis of their knowledge in an area. Where new specialisms are sought, invitations to review a paper are sent in advance in the form of the abstract. This can help to confirm the referee’s relevant expertise and also establish whether a peer reviewer is able to dedicate the effort involved and respond in a timely manner. Indeed, it is for these reasons that many editors see part of the editorial function as filtering initial papers (Wellington and Nixon, 2005) for their relevance to a specific journal and its stated mission, and ensuring that manuscripts conform to the established editorial guidelines and journal focus (Turpin, 2007). Indeed, Mulligan (2005) notes that the recruitment and retention of good referees depends, in part, on ensuring that only relevant papers of at least a minimum standard are sent out for review.

Reviewers are clearly in a privileged position in many respects since they have sight of emerging ideas and research evidence. In practical terms, reviewing for academic journals enables individuals to find out more about what is happening in the sector (Holland, 2002), but it also brings a number of responsibilities. These responsibilities include, for example, not using findings for one’s own research without first seeking the author’s permission, not using delaying tactics to hinder publication of the findings, and not delegating a review to a colleague (Cronenwett *et al.*, 2007, p. 181). In their critical commentary of the peer review process, Clark and Wright (2007) identify three principal criticisms of the peer review system: (i) bias due to the process not being anonymous in practice since social networks and scholarly practices make identity hard to conceal; (ii) reviewers being “overly harsh in their judgements”, in part as a consequence of the shielded position of comments being anonymous (p. 614); and (iii) low – or indeed a lack of – inter-referee agreement. Two points are relevant to the *JEBE* approach in terms of the perspective of those being reviewed.

On the Receiving End

First, and no doubt reflecting personal experience, colleagues reading this will know directly how rejection feels. Indeed, rejection or major revisions of an article in which one has invested research effort and intellectual energy can potentially be very damaging in terms of self confidence and motivation. Harsh criticism, especially for the new academic, perhaps,

will likely be dispiriting. Indeed, ultimately, this may be highly counter-productive for the sharing of scholarship and the wider goal of enhancing learning and teaching. Furthermore, in Cicchetti's (1998) discussion of the validity of the peer review process he explains how data exist to show that no fewer than eight articles which contained research discoveries that later resulted in Nobel Prize awards had initially been rejected by prestigious journals. This does not necessarily mean that the peer review process was poor; it may even suggest that authors need to be clear about their selection of dissemination outlets.

Second, reviewer dissensus can leave authors confused about how to improve a paper. Importantly, then, *JEBE* seeks three reviewers for each paper and emphasises developmental feedback and constructive criticism in its approach. Moreover, as Editor, I try to mediate and provide a steer as to how the author(s) might best proceed so as to meet the reviewers' comments. Differences, however, are a feature of this very human process. Indeed, whilst the intentions of the peer review system may be both "lofty and mundane" (Anonymous, 2003, p. 297), the underlying objectives are worthy ones: to identify the best research and to promote good scholarship. Furthermore, Cicchetti (1998, pp. 430-431) puts the golden rule of reviewer obligations succinctly when he concludes: "...we all owe it to each other to be as objective, scholarly, and fair-minded to those we evaluate as we would expect them to be in their evaluation of us".

This is not, however, to advocate a soft model of peer review. Academic discipline is of paramount importance, and the integrity of the reviewing system is designed to enhance overall quality; the corollary is that poor papers are rejected and that submitted papers are enhanced through the reviewing process. Moreover, as Wood *et al.* (2004, p. 2), for example, assert: "the fact that papers are reviewed might be expected to give authors an incentive to ensure that their work is of a high standard before submission". This is a core aspect of the wider, and hopefully shared, ambition of the built environment academy to strive for research excellence. Yet, interestingly, little is also known about how authors perceive peer review. Indeed, Weber *et al.* (2002) suggest that author satisfaction with the process has more to do with acceptance than review quality.

Reviewer Perceptions

An equally quiet voice in the peer review system is that of the reviewers, since, as Snell and Spencer (2005), for example, have observed, much of the critical commentary on peer reviewing is from the editor's perspective. Indeed, their study sought to better understand the capacity, motivations and time commitments involved in peer review and referees' perceptions of the benefits of, and framework for, the reviewing process. Drawing on the work of Snell and Spencer (2005) and qualitative research undertaken by Elsevier into the peer review process (Mulligan, 2005), a short questionnaire was designed and sent to *JEBE* reviewers, as part of the Journal's annual self-evaluation process.

Feedback indicates support for the current approach and, in particular, retention of double-blind review. Perceived benefits of acting as a reviewer indicate the extent to which referees value keeping abreast of theoretical, methodological and practice developments and being "made to think" by the articles they review. The comments volunteered suggest that the

system could involve a stronger feedback loop to reviewers on what happens to an article once a review has been written, and steps to ensure this happens are being put in place. In the case of major revisions, peer reviewers are generally invited to re-review the paper, but an unfortunate aspect of requiring major revisions is that authors often do not resubmit. There is a gap in our knowledge about whether this is because authors choose to publish elsewhere, or whether the research remains unpublished. This clearly merits further empirical research.

This Issue

It is evident that the papers published in this issue have successfully navigated the peer review process and I am grateful to everyone involved for their diligence in what may sometimes seem a protracted journey from research conceptualisation to research publication. Margaret Kumar and Susan Ang's paper makes a useful contribution to a growing body of literature around the internationalised context in which learning and teaching in the built environment take place. They provide a thorough examination of an educational programme that sought to better integrate international architecture students at Deakin University, Australia, where they are based. The paper offers useful contextualising insights into the implications for educational practices and clearly points to directions for further empirical work. Moreover, the authors present an innovative collaboration between an academic school and a student support services unit sharing a common goal to help orient international students to study architecture. This illustrates how responsibilities towards students are becoming increasingly inter-twined.

In a different collaborative context, David Heesom, Paul Olomolaiye, Anthony Felton, Richard Franklin and Amal Oraifige from the University of Wolverhampton, in the UK, respond to the challenge of improving knowledge exchange and working relations between higher education institutions and industry. Their paper compares and contrasts two UK initiatives: Accelerating Change in Built Environment Education and the Construction Knowledge Exchange. Through a detailed case study approach, the authors elaborate a strategic model to illustrate how stronger and mutually beneficial partnerships might be secured in order to support relatively more industry-aware graduates and enhance the research and development capacities of a regional construction industry. Also writing in a construction context, Terence Lam examines theory and practice relating to group-based problem-solving assessment. Through a reflexive evaluation of experiences at Anglia Ruskin University, in the UK, Lam proposes a Full Multiple Assessment Framework, suggesting that colleagues in other built environment disciplines might be able to draw on this approach. Motivating students to engage constructively with group work and ensuring that assessment is fair is acknowledged as challenging, so this is a welcome example of an attempt to enhance practice.

Helena Webster, from Oxford Brookes University, in the UK, offers a thought-provoking and challenging paper in relation to reflective practice. Enticingly entitled, 'Architectural Education after Schön: Cracks, Blurs, Boundaries and Beyond', Webster identifies what she sees as a number of weaknesses in the Schönian notion of reflective learning and offers up alternative

theories of knowledge and learning. The paper seeks to provide a richer and more complete picture of contemporary learning and teaching practice in architecture and actively invites further scholarly debate. Finally, Geraint Ellis, Sue Morison and Joanna Purdy from Queen's University, Belfast, UK report on an innovative approach to putting a model of interprofessional education into practice through a Healthy Urban Planning Project involving students from planning and medicine. Their discussion not only raises important educational questions about how to teach such projects, but also highlights practical challenges for curriculum designers around the management of specific knowledge domains and the design and time-tabling of inter-professional group assessment. It raises another set of questions about peer learning across disciplines and neatly complements Lam's paper. Each of the articles in this issue benefited from the peer review system.

In Celebration of Peer Review

This editorial has sought to shed light on the peer review process deployed by *JEBE*. I would argue that a wider conversation about the peer review system remains important for the credibility and validity of this established approach to facilitating and assuring scholarship of teaching and learning in the built environment. The literature reviewed showed that such critical reflexivity is debated in other disciplines, as the range of journals referenced below indicates. Despite the concerns and criticisms of the peer review system, it is salutary to note that trust and respect in this process are critical for it to work. As Peter Lachmann (2002, p. 11), President of the Academy of Medical Sciences, in a progress report relating to the Research Integrity Initiative, observed: "Peer review is to science what democracy is to politics. It's not the most efficient mechanism, but it's the least corruptible". Finally, I concur with Emden's (1996, p. 198) observation that "[t]he expertise, judgement and time commitment involved in manuscript reviewing all point to the activity as an act of scholarship". Two closing observations arise from this. First, it follows that it behoves an editor to make the peer review system transparent and robust. Second, there is a need for more explicit celebration of the often 'invisibilised' scholarship of the peer reviewer. Hopefully, this editorial has begun to do just that.

Deborah Peel
Editor

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