

RESPONSE

Economic implications of alternative publishing models: authors' response

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In the last issue of *Prometheus*, the debate put forward a short summary of our recent report to JISC (Houghton *et al.*, 2009) on the economic implications of alternative publishing models as the proposition and invited a range of responses. What follows is our reply.

Stevan Harnad makes some interesting observations and important points. Like Mary Anne Kennan, but in marked contrast to Steven Hall's response on behalf of the publishers, Harnad points out that many of the assumptions and estimates underlying our analysis are 'very reasonable and even conservative', and he argues that we are *overestimating* the asymptotic costs of Gold OA publishing by not taking account of the Green/Gold interaction effect. This is, of course, a consequence of examining the publishing models as alternatives at a given point in time. However, we take heart from being accused of *overestimating* costs by supporters of OA and *underestimating* by critics of OA, as it suggests that we may have it about right.

Harnad's main message from our analysis is that it provides support for the immediate adoption of Green OA self-archiving, and for policies and mandates that encourage the depositing of peer reviewed articles in openly accessible repositories. In this we agree, as self-archiving provides an immediately available means to make the findings of research more widely available, thus maximising the potential returns on public investment in research, at little additional cost and without disrupting established publishing practices.

Martin Hall issues a very interesting challenge for us in the further development of the Scholarly Communication Lifecycle Model and calls for a broadening of the analysis. However, in focusing on the cost modelling, Martin Hall perhaps overlooks our intent in using a modified Solow–Swan model to explore the potential impacts of alternative publishing models on both the private and spillover or social returns to R&D – although there are, of course, still wider impacts. The genesis of the JISC study lay in our dissatisfaction with the debate about the economics of alternative publishing models, because it focused almost entirely on costs (and, very largely, still does). What sets our study apart from others is that the underlying question is not which model costs more and which less, but which is the most cost effective way to

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produce and disseminate research findings. It is not about the cost of publishing, but about the cost effectiveness of alternative models for producing and disseminating knowledge. The work also grew out of an analysis of evolving modes of knowledge production and changing research practices (Houghton *et al.*, 2003). Our analysis in the JISC study included a wider range of elements in the lifecycle model than we could cost to ensure that in re-engineering for cost-effectiveness we maintained all the elements that underpin scholarly communication.

Like Martin Hall, we look towards a future system in which the content is readily and freely available and a range of quality control, production, discovery and other value-adding services are overlaid – in Martin Hall's analogy, providing services on the freeway rather than erecting toll booths on the highway. Any publishing business model that imposes reader access tolls and restrictions on use designed to maintain publisher control over access in order to enable the collection of those tolls is a barrier. There are valuable services and research techniques that are difficult, if not impossible, with proprietary control over access and usage restriction (e.g. text mining). Being based on controlling access and imposing usage limitations, the problem with the toll access or subscription publishing model is not its cost, but its effectiveness as a mechanism for disseminating research findings and enabling others to apply and build on those findings, thereby maximising returns to public investment in research.

In looking at trust, authority and reliability, Christopher May returns to some of the old canards that have been a part of the OA debate for many years. Let us be clear, the business model that defines how the costs of publication are met has nothing whatever to do with quality control, peer review standards and practices, the authenticity and reliability of the published content, copy or other intellectual property rights, the signs and signals that readers can use to sift and select what they read, explicit or implicit research evaluation or the independence of research from political or other interference. Nor can OA be confused with self-publishing, and nor is it in any way more or less commercial than subscription publishing, as there are non-commercial subscription publishers and a number of commercially successful OA publishers – including BioMed, an OA publisher recently taken over by Springer, one of the larger commercial publishers.

In our analysis of alternative publishing models, we were at pains to ensure that all the models we compared included all of the functions necessary for formal scholarly publishing, including peer review and quality control, and that all included commercial management, investment and operating margins. We used a formal process modelling approach, based on the IDEF0 standard often used in business process re-engineering, to identify activities throughout the scholarly communication lifecycle, making no assumptions about which actors might perform the activities, so that we could re-engineer the scholarly communication process along the lines defined by the alternative publishing models while incorporating all of the necessary characteristics and elements of formal scholarly publishing.

Steven Hall simply repeats the same errors and misrepresentations that he and the publishers' lobby have produced before. JISC released a response to the lobbyist's comments in early 2009 (JISC, 2009), and we have already responded to a longer version of Steven Hall's commentary (2009) in the context of the recent Berlin7 Open Access Conference (Houghton and Oppenheim, 2010). Nevertheless, rather than providing any founded critique of the work or independently verifiable evidence that might move the debate forward, Steven Hall and the publishers' lobbyists continue to repeat what has already been refuted. As Steven Hall offers nothing new and space

does not permit us to deal with all of his errors, we refer readers to our detailed response available at http://www.berlin7.org/IMG/pdf/Comments_on_Hall-2.pdf.

Steven Hall's critique rests on the assertion that we should have used different data and assumptions in our report; but the JISC report was simply our best estimates, and we released an online model at the same time to enable others to try their own preferred values. So Steven Hall's critique rather misses the point. If he or anyone else wishes to do so, they can input their own preferred values into the model and publish the results along with sources and a justification for the alternative values used. However, our sensitivity testing of the model suggested that the basic findings are not fundamentally changed across a wide range of plausible values. After 18 months, the publisher lobby has offered no alternative evidence.

Steven Hall claims that 'researchers today have immediate access to the vast majority of the scientific articles that they need for their research'. Whereas, of course, research and professional users confront very real, time consuming and costly access barriers. As the Research Information Network recently concluded: 'access to research information content issues must be addressed if the UK research community is to operate effectively, producing high-quality research that has a wider social and economic impact' (RIN, 2009, p. 23). More progress could be made if, rather than denying their existence, there were greater willingness on the part of publishers to engage constructively, address access problems and, thereby, help to realise the benefits we outlined.

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