



Half a century and more of PhD theses by published papers

Comment on: “Bringing the doctoral thesis by published papers to the Social Sciences and the Humanities: A quantitative easing? A small study of doctoral thesis submission rules and practice in two disciplines in the UK” by John Rigby and Barbara Jones in *Scientometrics* published online 15-May-2020

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Abstract

The recent article by Rigby and Jones in *Scientometrics* (15-May-2020) again draws attention to basing PhD-theses on published works, in their case introducing the system into the Social Sciences and Humanities. In this short communication we endeavour to provide additional information that is essential for this debate.

The 23 page article by Rigby and Jones (2020) is an attempt to argue the case for and against the introduction of doctoral theses by published papers into Social Sciences and Humanities. A few comments may be of interest.

The Swedish system of PhDs by published papers has long celebrated its 50th birthday. The same system is used in Finland and a similar system has long been in use in The Netherlands. Japan also has a published works PhD system (Breimer and Mikhailidis 1991). This information is missing from the Rigby and Jones article.

In 1991 Mikhailidis and Breimer proposed in *Nature* that, as part of the new common structure of the EU, the member nations should take the opportunity to create a common format for PhDs by allowing them to be based on published papers (Breimer and Mikhailidis 1991). To support this departure from the usual tome-based system in the UK (and most EU member-states), we showed that the PhD at our Medical School (the Royal Free

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Hospital School of Medicine, part of the University of London) not only contained published works but that the number of papers per thesis had increased over the years.

We also proposed that, to make doctoral theses generally available, a “Thesis Journal” should be established to publish the theses. This was before the Internet, hence a journal. Scientists around the world would be encouraged to send questions to the Chairman of the Examination to be read out. The examination should be in a public act (open “Defence” of the thesis) as in the case for Nordic countries and The Netherlands.

A couple of years later we had the opportunity to publish in *Biomed & Pharmacotherapy*, a rather obscure journal by comparison to *Nature*, a detailed analysis of the papers used in Swedish and UK biomedical PhDs (Breimer and Mikhailidis 1993a, b). In this study we used the Science Citation Index (SCI) to judge the quality of the journals used. The quality was high. As far as we know, this was the first time that the SCI has been used in this way. This paper is cited by Rigby and Jones on their page 4, although they fail to mention that this was a bibliometric analysis of PhDs, something they ask for. We then went on to compare with British MD research degrees (not MDs in the US sense) (Breimer and Mikhailidis 1994), not cited by Rigby and Jones.

In 1994 one of us (LHB) received a small grant from Sandoz, enabling him to travel to Leiden and study Dutch PhDs with his namesake, Douwe Breimer — no relation. This resulted in the other 2 papers cited by Rigby and Jones (Breimer and Breimer 1995, 1996).

By that time the Internet had got going. Consequently, Douwe and Lars Breimer proposed that the Internet be harnessed to create an electronic version of the Thesis Journal originally proposed by Breimer and Mikhailidis in *Nature*. In the same vein, the Examinations could be held internationally through this new medium. Asner and Polani, also cited by Rigby and Jones (also on their page 4), opens with a synopsis of our system and credits us with being the first to propose PhD-theses available through the Internet (Asner and Polani 2008). PhD-theses being available on the Web is now standard. We know of at least one case (in 2013) when a Swedish PhD was examined by Skype (Breimer and Nilsson 2014). During the current Covid-19 pandemic it has become standard to examine PhDs in Sweden using Zoom and other internet based media; LHB has participated as reviewer in 2 such examinations so far in 2020.

Our original paper in *Nature* is referenced by us in the 3 papers that Rigby and Jones cite. We are surprised that they missed this paper published in a journal with one of the highest Impact Factors (IFs) in the world, far exceeding the IF of the other cited 3 journals.

After those articles, LHB went on to publish 9 other articles on higher education in peer-reviewed journals—7 in *Scientometrics* (Breimer 1996a, b; Breimer 2010a, b; Breimer and Nilsson 2010; Breimer and Leksell 2011; Breimer 2013; Breimer and Nilsson 2014), 1 in *JIAMSE* (Breimer 2010b), and a communication to *Nature* with supplementary material on the EMBO web-site (Gannon et al. 1997). The material in *JIAMSE* and *Nature/EMBO* investigated what happened to researchers down the line—the *JIAMSE* looked at Swedish medical doctors who had obtained a PhD, comparing 2 cohorts, and the one in *Nature* looked at what had happened to EMBO Fellows 10 years later. The material published in *Scientometrics* has looked at a number of aspects, including nurses who do PhDs, international collaboration patterns, and the method of selecting external examiners of PhDs. LHB also published 2 items in the more popular press in 1995 – in *The Times* newspaper and in *Science & Public Affairs*.

Rigby and Jones are concerned with introducing PhDs based on published works in the Social Sciences and Humanities. Theses by published works is, in fact, rare in the Social Sciences both in Sweden and The Netherlands, where “tome-based” theses still dominate in those disciplines.

Douwe and Lars Breimer published one more article, this time together with professor Michael Breimer, Lars's brother (Breimer et al. 2011), also in *Nature*. Thus, the circle that was set alight by Dimitri Mikhailidis in 1991 has closed.

Oddly enough, missing from Rigby's and Jones's article is the big advantages of doctorates by publication: less time spent on writing (cost, more time doing actual research work), training to publish papers, multiple and probably international expert reviewers (including via the correspondence section of relevant journals) rather a small number of (possibly biased) examiners and more parity among nations, something which we discussed in our *Nature* paper in more than 30 years ago (Breimer and Mikhailidis 1991).

Whatever the decisions made by academic institutions, it would be reasonable to allow both doctoral systems to exist in parallel. Let democracy rule! Also, such an approach may eventually allow some comparisons of standards.

Compliance with ethical standards

Conflict of interest The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper. This work was written independently; no company or institution supported the authors financially or by providing a professional writer.

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