

For ethical 'impactology'

Abstract

The routine evaluation of broader impacts of research has made the UK an impact-aware culture, although the practice of assessment has run ahead of its theory. The paper describes UK practice in assessing broader impacts, notes the rise of the profession of 'impactology' alongside the rise of academics' impact-fatigue, and notes that the two combined may lead us to commit 'metricide' by abandoning time-consuming impact narratives in favour of simple metrics. The paper concludes by considering what an ethical impactology might look like, and finds at its heart the responsible use and non-use of metrics.

Keywords: *Impact; Research Excellence Framework; REF-fatigue; Impact-fatigue; Metricide; Ethical 'impactology'.*

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Biographical note

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1. Introduction

Discussion at the *Evaluating Broader Impacts: The state of the art* workshop highlighted that the routine evaluation of broader impacts is more advanced in the UK at the national level when compared with other countries. This is in large part due to attempts by the UK government to hold public research funding agencies to account so that scientific research is seen to benefit wider society. Yet, in this context, the practice of assessing broader impacts has raced far ahead of its theory. The workshop allowed time to take stock, and to reflect on positive and negative aspects of assessing broader impacts, and possible future directions. Below I outline UK practice; describe the rise of 'impactology' and how impact-fatigue might lead to committing 'metricide'; and present the case for an ethical impactology.

2. Broader impacts: the UK context

UK Higher Education Institutions (HEIs) rely heavily on government funds, which are received through a dual support system. First, competitive grant funds are distributed by various national Research Councils, amounting to around £3 billion (\$US 4.3 billion) per year. The UK Research Councils require all grant applications to include a 'pathways to impact' section describing strategies for achieving broader economic or societal impacts, currently defined as 'fostering global economic performance, and specifically the economic competitiveness of the United Kingdom, increasing the effectiveness of public

services and policy, and enhancing quality of life, health and creative output' (Research Councils UK, 2016).

Second, an annual block grant is distributed to Higher Education Institutions (HEIs) based on their relative performance in the Research Excellence Framework (or REF) exercise. The last REF was conducted in 2014, and approximately £1.5 billion (\$US 2.16 billion) was distributed to HEIs for 2015/16. The REF is a national research evaluation exercise that rates the relative performance of groups of university researchers (Units of Assessment or UoAs) by discipline. Scientific quality accounts for 65% of UoA ratings, research environment 15%, and broader impacts 20%. The impact criterion was first introduced in 2014, and comprised an impact template that set out individual UoA approaches to creating research impact, and impact case studies demonstrating the 'reach' (breadth) and 'significance' (depth) of broader impacts, presented as a narrative ideally supported by evidence including appropriate metrics. The 2014 REF defined broader impact as 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia' (HEFCE, 2015), and there was also panel-specific (or discipline-specific) guidance. The next REF exercise is due to be conducted no later than 2021 (Department of Business, Innovation and Skills, 2015a), and the impact criterion may possibly increase to 25% within UoA ratings.

It is fair to say that UK HEIs now have an impact-aware culture. However, there are concerns about the future of impact assessment in the REF in particular. Ben Martin (2016, 18-19) has argued that the quality assessment component of the REF (and its predecessor, the Research Assessment Exercise) has run its course: overall research quality standards have been raised, and the costs (financial, behavioural, institutional) of any future REF will outweigh its possible benefits. He believes this will also be the case for the broader impacts element of the REF:

...there will no doubt be widespread criticism of the "simple-minded" approach adopted, and work will start to "improve" the assessment of impact in the following REF. REF 2 will consequently be more elaborate, more burdensome and more time-consuming. It will also encourage more sophisticated game-playing. (2016, 17)

And so on, he argues, for REF 3 and beyond.

The shape of the next REF is currently under review by the UK government, which is seeking to reduce institutional and researcher burden, including whether metrics can reasonably replace the

narrative element in the assessment of broader impacts (Department of Business, Innovation and Skills, 2016b).

3. The rise of ‘impactology’

The workshop coined a new term: ‘impactology’ (the practice of assessing broader impacts, and the study of the practice of assessing broader impacts). There is also the rise of a new class of ‘impactologists’ or impact professionals comprising HEI-based impact managers, supported by consultants (including professional case study writers) and for-profit companies supplying impact documentation software and training courses. As impactology becomes more professionalised and bureaucratised, it is important to guard against expedient pressures to save time and money by pursuing impact metrics at the expense of more appropriate and nuanced assessment approaches.

4. Impact-fatigue

Assessing the broader impacts of research at the national level in the 2014 REF was a world first. While initially controversial, there is now ‘grudging support’ amongst the UK’s academic community for the narrative approach to assessment (Oancea, 2016). Yet this needs to be balanced with the fact that writing impact statements and impact case studies involves a great deal of time and effort, and that many academics want to be less regulated and left alone to get on with research and teaching. Anecdotally, after the REF 2014 deadline, several of my colleagues around the UK confessed that while the impact case study approach was more equitable than simple metrics (especially for the humanities, arts and social sciences), they were so tired of the REF burden that they would happily switch to a metrics-only system. We can call this REF-fatigue or, more generally, impact-fatigue. But a weary backlash against bureaucracy presents the danger of committing ‘metricide’.

5. (I + IF = M): Impactology + Impact Fatigue = Metricide

How broader impacts are defined and assessed is a vital issue. For example, in 2011 an expert workshop on the state of the art in assessing research impact concluded that best practice was the use of narratives supported by available robust metrics (Donovan, 2011). Little has changed in recent years in the form of innovation or best practice, the exception being the nascent (and yet to be realised) promise of altmetrics and social media data linking publications, dissemination, and engagement with research users, to broader impacts. In this light, the approach to assessing broader impacts in the 2014 REF matched the state of the art. As already noted, the UK REF system is currently under review. James

Wilsdon produced a summary of submissions to the consultation phase of the review, and observed ‘widespread recognition that robust metrics for impact don’t yet exist, such that narrative case studies, assessed by peer review, remain the best option’ (2016: 3-4). Yet while the future of the REF hangs in limbo, we should not take this reasoning for granted.

Ben Martin (2011) has drawn our attention to the fact that best practice in assessing the broader impacts of research is drawn from a long tradition of evaluating research outcomes in the health and medical sciences. For example, ‘payback studies’ use mixed methods to produce very detailed accounts of the impact of research on the research system, product and drug development, changes in clinical practice and public behaviour, improvements in service delivery, health gain, and economic returns (Donovan and Hanney, 2011). Yet, for Martin, this has been more akin to a craft industry with bespoke items being ordered by specific clients, while impact assessment is moving into mass production for the whole Higher Education sector. In this light, metrics seem to promise efficiency in terms of time and money saved, but at the expense of nuance and detail.

A parallel may be drawn with similar exercise, the development of Australia’s Research Quality Framework (abandoned before implementation and replaced by Excellence in Research for Australia). An almost identical narrative-based approach to assessing research was recommended because robust impact metrics did not yet exist, but a new minister balked at its apparent complexity, and instead four simple metrics were adopted for the whole sector: patents, plant breeders’ rights, registered designs and registered commercialization income (Donovan, 2008). This is perhaps the starkest example of committing metricide in broader impact assessment, which ultimately hid the wide and varied benefits of the impact of research for society.

6. For ethical impactology

The Higher Education Funding Council for England (HEFCE), the body that administers the REF, commissioned an independent review of the role of metrics in research and management, which reported in 2015. The review studied the evidence and its report, *The Metric Tide* (Wilsdon *et al.*, 2015), recommended a balanced approach to impact assessment using narratives and available robust metrics, and echoed Diana Hicks *et al.* (2015) in calling for the responsible use of metrics in research assessment and management. Specifically, responsible metrics are robust, transparent, diverse (vary by field and career path), reflexive (understand the effects measures may have on what is being measured, and respond appropriately) and humble (accept that quantitative data supports, but is not superior to,

qualitative expert assessment) (Wilsdon *et al.*, 2015, x). This would seem a good starting point for devising an ethical impactology.

Might REF-fatigue or impact-fatigue be symptoms of innovation gone wrong? Perhaps the largest challenge ahead is to retain an impact aware culture, but with less regulation, and to use the lens of responsible metrics without completely falling into a mass production mode of assessment. It is important that definitions of research impact remain open and defined by the academic community, rather than be closed down and restricted by impactologists and the limits of whatever simplistic data is to hand. Overly data-driven systems are likely to neglect social and cultural impacts, and overlook the distinctive contributions of not only the humanities, arts and social sciences, but of all research endeavours, to society at large.

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