Editorial: Evaluating research: Do we know what 'works'?

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In 2012, an open letter signed by nine Nobel laureates made stinging criticism of the UK Engineering and Physical Sciences Research Council (EPSRC) and called for an urgent review of how funding decisions are made. The signatories of the letter claimed that:

Through manipulating the processes of peer review to meet policy objectives and establishing favouritism schemes, where substantial funding packages are given to a few selected individuals identified by its own administration, the EPSRC is no longer allocating funds on a fair and transparent basis. Excellence is a secondary consideration.

Whether or not one agreed with the nine laureates, the issues regarding value for money from publicly funded research are no less pressing today then they were in 2012. What has changed is the increasing emphasis given to research that delivers 'impact'. In the UK, impact is defined in the upcoming Research Excellence Framework assessment 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'. The definition appears to tacitly acknowledge that academic research can, in principle, be highly regarded within academia (e.g. generates lots of citations) and yet have little or no impact in the 'real-world'.

Many UK-funding programmes now are strongly thematic with specific calls that are highly prescriptive. That, in itself, seems a recipe for outcomes that are more likely to be incremental than deliver 'excellence' and/or genuine impact. The UK has also seen a shift towards ever-greater research concentration: fewer, larger research centres, with PhD programmes outside of the approved Doctoral Training Centres actively discouraged. One of the few points on which many economists agree is that a strong SME sector is necessary to sustain a healthy, dynamic economy – these are more often the sites of innovation than the established 'giants'. Might a similar dynamic apply to academic research and development?

Does any of this matter for lighting research? The emergence of well-being as a key consideration in building science has effectively 'weaponised' the research agenda in this area. And light/illumination is very much at the forefront of this. Researchers are increasingly under pressure to headline their research proposals with sensational claims for the likely outcomes should the project be funded. Academics cannot be entirely blamed for responding in kind to the funding zeitgeist. What is needed however is some system to monitor the outcome of publicly funded research – to learn from what worked well and what did not work so well, or even not at all. At present in the UK, and perhaps beyond, it seems that these either do not exist or have a largely unknown effectiveness.