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Metrics and indicators for research (0459)

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Metrics (or more appropriately, indicators, the term favored by the *Metrics Tide* review - Wilsdon et al, 2015) function not only as a device for organisational governance, but also as one for positioning within organisations, sectors and disciplines or fields. The result is challenge and flux, with numerous proposals for new metrics and indicators vying for primacy to legitimise potential shifts in hierarchies. This contribution will illustrate how the performative vocabulary that has grown around research metrics varies by scope, from the individual to the field level (and beyond - though the national and international levels are not included in the table); and by level of aggregation, from specific measures of research performance (micro-metrics) to global assessments of research success (macro- indicators).

Micro-metrics of research activity are usually concrete measures which are quantifiable, time-defined, and narrow in scope. Micro-metrics show the degree to which research inputs, outputs or outcomes/ impacts display a particular characteristic. They are often coopted by organizations to function as indicators of performance, in which case they need to draw legitimacy from meso, macro and meta-indicators in order to compensate for their inherent lack of contextual and normative information. As snapshots of a particular moment in time, the resulting micro-indicators are of limited direct use in summative judgements of research, despite the bewitchingly normative language they often employ, such as 'success rate' or 'grant value'. Their transient nature means that they invite constant monitoring over time, despite the doubtful meaningfulness of the resulting quarterly and annual figures.

Meso-metrics are what is commonly meant by the term 'metric'; they too are measurable and largely quantifiable, usually on the basis of cumulative or combined measurements of single micro-metrics over time, and with variable degrees of validity and reliability. Meso-metrics play a dual role: first, as targets for micro-performance; and second, as proxies, separately or combined, of macro-metrics.

Macro- indicators are global, composite criteria. These criteria are usually defined at national, disciplinary or international level. Given their contested nature, their assessment is largely qualitative and requires high levels of expertise and trust, but it can also be informed by the refinement and integration of mezo-metrics and indicators.

Finally, the so-called meta-metrics and indicators are artifacts of the assessment exercise itself and of the high reputational stakes it raises. They are either post-factum calculations in order to create various league tables out of the results of the RAE/REF (e.g. 'Grade Point Average'), or normative terms used in internal management talk as shorthand for predicted performance in formal assessments (e.g. the "REF-ability" of publications and of examples of impact, or the '4 by 4'-ness of individual researchers, i.e. researchers with four potentially 4* publications at a particular moment in time – usually a REF dry-run or a recruitment or retention decision). Many of these terms have entered everyday language in higher education, administrative organisations, and in the media and social media, often with damaging consequences for research cultures and individual morale. These performative byproducts of assessment continue to thrive in management vernacular inside and outside the HE system, despite growing expressions of organizational commitment to responsible uses of metrics and/or indicators in response to exhortations such as the San Francisco Declaration on Research Assessment in the US - <https://sfdora.org/>, the Leiden Manifesto for Research Metrics in continental Europe - <http://www.leidenmanifesto.org/>, or the UK Forum for Responsible Research

Metrics - <http://www.universitiesuk.ac.uk/policy-and-analysis/Pages/forum-for-responsible-research-metrics.aspx>.

The increasing use of metrics and indicators is a soft and pervasive change that tensions academic identities. Academic 'metrics-natives', whose formative years as academics have coincided with the rise of performance monitoring and performance-based funding in research, are pressured (for example, through recruitment and promotion expectations) to assimilate it to their academic habitus from the start of their careers, alongside the outputs-impact-environment and rigour-significance-originality triads of the RAE/REF. Non-natives (either by length of career or by geography) are expected to update and adapt their academic selves, often as a precondition of performing strategic and management roles in their institutions. Some embrace metrics, hoping to make assessment less onerous and more equitable, and to make data about and from research more open. Others oppose them as a threat to quality, diversity and professional judgement, and see their use as out of tune with academic norms of scholarly argumentation, criticality and intellectual integrity. Some go with the tide, while acknowledging that they felt pressured to 'play safe' for research assessment in REF 2014 by sticking to the more easily measurable and demonstrable (see interview data reported in AUTHOR et al, 2018), rather than making wider claims for, for example, discursive or cultural contributions from research. Many exercise domesticated resistance while part of the performance management system, and relieved disdain when they no longer need comply.

And so the use of metrics, like that of other assessment technologies, is beset by tensions about what we are trying to get at, how we go about it, and to what purpose and effect. That is because, when integrated in particular performance regimes, metrics become multiply ambivalent technologies. These rankings, criteria, metrics and indicators are not meaningful on their own, but are ascribed meaning as part of wider narratives, institutional practices and flows of power at different levels and for different entities and purposes. They play out in distinctive ways in governance processes. The issue is not just technical – which metrics to throw in the basket and how to fine-tune them – but also substantive and normative: what do these metrics and/or indicators mean, to whom and in what structural conditions, why are they seen to matter, whose view takes precedence, and for what purposes and in what context are they mobilized? The reason behind this ambivalence of metrics and indicators, however responsibly used, is that they are inevitably drafted into an ongoing renegotiation of the principles underpinning the relationships between universities and the state, mediated through public funding arrangements. Excessive focus on technical issues can distract from more fundamental debates around the ways in which highly formalized, complex performance assessment systems may affect these principles.

Note: this contribution draws on a paper currently in preparation for *Palgrave Communications* and on an earlier piece in *Research Fortnight*.

References

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