RETHINKING RESEARCH ASSESSMENT

IDEAS FOR ACTION

5 COMMON MYTHS ABOUT EVALUATION

Hiring, promotion, and tenure decisions are largely made on "merit."

Quality research is easy to recognize and rises to the top

JIF and other similar journal-based indicators measure research quality

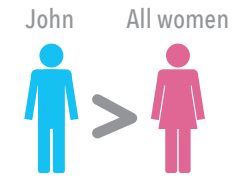
Researchers mostly care about journal reputation

Assessment practices will naturally improve over time

Assessing research and researchers, especially in research-intensive institutions, frequently relies on indicators like Journal Impact Factor (JIF) and similar measures as proxies for quality in research, promotion, and tenure (RPT) decisions. But a closer examination indicates that the perceived value of JIF is often grounded in five common myths:

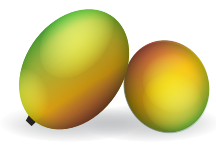
Analogous examples of these myths exist, both inside and outside of science:

Large volumes of applications for faculty searches make it difficult for evaluators to distinguish between top-tier candidates, and unintended biases—like the halo effect, availability, and confirmation bias—influence decision making.



There are more male CEOs named John than the total number of female CEOs[1].

Novel research, including breakthrough Nobel-prize winning work[2], often becomes influential (and cited) outside of the JIF measurement window[3], and findings with significant societal impact are not always published in journals with a high JIF.



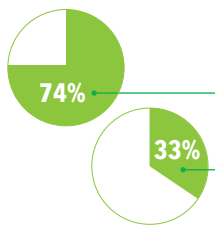
Low-profile, high impact research on extending the life of mangoes transformed the industry, where transportation damage had historically reduced yield by 40% and incurred $1 billion in losses[4].

JIFs are intended to reflect overall journal measures, and do not provide reliable or scientifically sound information about individual articles or researchers[5].

Forty percent of research-intensive institutions in North America mention JIF in RPT documents, but interpret it inconsistently to mean quality, importance, or prestige[6].

Brand name medications are often preferred to generics, even if they are the same formulation.

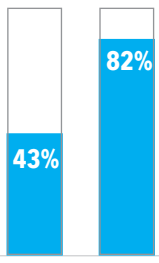
Faculty members claim to prioritize peer readership when publishing, yet the perception that their peers value prestige and a reliance on university rankings puts pressure on researchers to publish their work in high impact factor journals[7].



A 2019 US poll found that 74 percent of Democrats and Independents were comfortable with the idea of a woman president, but only 33 percent believed their neighbors were[8].

"Invisible work" like service is typically not valued in RPT, yet disproportionately falls on women and other scholars historically excluded from research[9,10].

Based on a model of current post-doc to faculty transitions, faculty diversity will not significantly increase until 2080 without active intervention[11].



Only forty-three percent of doctorates in the biomedical sciences are awarded to historically well-represented populations (i.e. white and Asian males), but this same group accounts for 82% of full professorships[12].

5 DESIGN PRINCIPLES

to help institutions experiment with and develop better research assessment practices

Instill standards and structure into research assessment processes

This might look like...

Tools like **narrative CVs** and **assessment matrices**[13] provide standards to increase consistency in decision-making.

Discussion amongst evaluators can be used to **define expectations and identify desirable qualities** before any assessment takes place.

Foster a sense of personal accountability in faculty and staff

This might look like...

The Universitat Oberta de Catalyuna established a **working group**[15] **to develop and implement an action plan** for responsible research assessment.

The University of Utrecht hosted a **series of town halls**[16] **to collect feedback** before revising their policies.

Make it explicit that it's **everyone's responsibility to "stop the line"** in the face of suspected bias at the beginning of every decision-making situation.

Prioritize equity and transparency of research assessment processes

This might look like...

Needhi Bhalla compiled a **checklist of proven strategies to increase equity in hiring**[14].

The Molecular, Cell and Developmental Biology Department at UC Santa Cruz **includes untenured faculty in departmental tenure decisions** to demystify the promotion and tenure process. Other institutions **invite postdocs to "chalk talks"** of faculty candidates discussing their future plans to provide insight into the faculty interview process.

Take a big picture or portfolio view toward researcher contributions

This might look like...

The Biology Department at the University of Richmond **evaluates the applicant pool** to better identify the subset of faculty candidates that match their needs, rather than focusing on individuals[17].

Cluster hires can help institutions think about hiring in terms of their larger academic portfolio[18]. They are also a proven strategy to increase diversity.

Refine research assessment processes through iterative feedback

This might look like...

Make **short and long-term goals for new policies and practices to measure success.** No process is perfect; there needs to be flexibility to revisit and refine policies and practices as needed.

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