Rewards & Recognition in the context of Open Science

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Rewards & Recognition in the context of OS

Journal Impact Factor (JIF)

- The JIF is the mean citation rate of all articles contained in a journal.
- Often used as an indicator to assess the influence & quality of a journal.
- Often used to evaluate researchers, e.g., for hiring, promotion, and tenure.

h-index

- Number of papers co-authored by the investigator with at least *h* citations.
  - An h-index of 5 means that the five top-cited papers of a researcher have at least 5 citations.
- Often used to measure the success of researchers for funds and positions.

Rewards & Recognition in the context of OS

Goodhart's law: "When a measure becomes a target, it ceases to be a good measure"

h-index: limitations

- Does not incentivize other activities, e.g., education, sharing, public outreach.
- Correlates with age to the disadvantage of early-career researchers.
- "Incentivises" publishing in high-impact journals → leads to high APCs.
- Does not differentiate between first and last co-authorships.

Hirsch: "If you make decisions just based on someone's h-index, you can end up hiring the wrong person or denying a grant to someone who is much more likely to do something important. It has to be used carefully."

Rewards & Recognition in the context of OS

Men Set Their Own Cites High: Gender and Self-citation across Fields and over Time

Molly M. King, Carl T. Bergstrom, Shelley J. Correll, more... Show all authors

First Published December 8, 2017 | Research Article | Check for updates

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Article information

Altmetric 1850

Abstract

How common is self-citation in scholarly publication, and does the practice vary by gender? Using novel methods and a data set of 1.5 million research papers in the scholarly database JSTOR published between 1779 and 2011, the authors find that nearly 10 percent of references are self-citations by a paper's authors. The findings also show that between 1779 and 2011, men cited their own papers 56 percent more than did women. In the last two decades of data, men self-cited 70 percent more than women. Women are also more than 10 percentage points more likely than

RESEARCH ARTICLE

Historical comparison of gender inequality in scientific careers across countries and disciplines

Junming Huang, Alexander J. Gates, Roberta Sinatra, and Albert-László Barabási

PNAS March 3, 2020 117 (9) 4609-4616; first published February 18, 2020 https://doi.org/10.1073/pnas.1914221117

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ITC

Rewards & Recognition in the context of OS

Journal Impact Factor: limitations

- Correlates poorly with actual citations of individual articles.
  - Conceals the difference in article citation rates: most cited 15% of the articles account for 50% of the citations.
- Review articles are heavily cited and inflate the JIF.
- JIF depend on the research field and citation culture of a discipline.
  - Field-weighted JIFs do not help in the case of inter/transdisciplinary research collaborations.
- Databases can have an English language bias.
  - Reduces impact on society in areas where English is not common.

DORA & narrative CVs

San Francisco Declaration of Research Assessment (DORA)

1. Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.

3. For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

4. Be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting, especially for early-stage investigators, that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

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DORA & narrative CVs

San Francisco Declaration of Research Assessment (DORA)

6. Greatly reduce emphasis on the journal impact factor as a promotional tool, ideally by ceasing to promote the impact factor or by presenting the metric in the context of a variety of journal-based metrics (e.g., 5-year impact factor, EigenFactor [8], SCImago [9], h-index, editorial and publication times, etc.) that provide a richer view of journal performance.

18. Challenge research assessment practices that rely inappropriately on Journal Impact Factors and promote and teach best practice that focuses on the value and influence of specific research outputs.

DORA & narrative CVs

Aims: Researchers should

- be able to communicate & get recognition for all their contributions.
- be able to follow different career paths.
- be able to inform about their personal circumstances.
- not need to rely on uninformative indicators (h-index, JIF, number of papers).
- explain HOW their achievements have contributed to science.

DORA & narrative CVs

Résumé for Researchers

Below is the suggested structure for the Résumé for Researchers tool.

Personal details

Provide your personal details, your education, key qualifications and relevant positions you have held.

Module 1 – How have you contributed to the generation of knowledge?

This module can be used to explain how you have contributed to the generation of new ideas and

Module 2 – How have you contributed to the development of individuals?

This module can be used to highlight expertise you provided which was critical to the success of a

Module 3 – How have you contributed to the wider research community?

This module can include various activities you have engaged in to progress the research

Module 4 – How have you contributed to broader society?

This module can include examples of societal engagement and knowledge exchange. It can include

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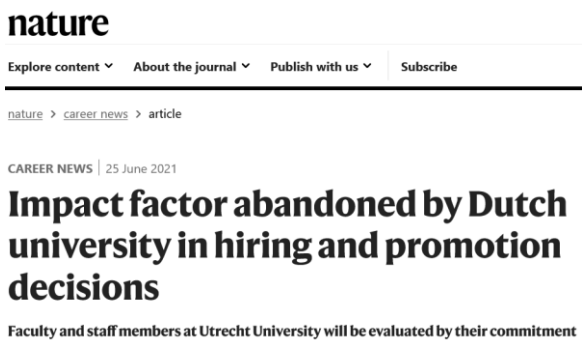
A debate around R&R



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CAREER NEWS | 25 June 2021

Impact factor abandoned by Dutch university in hiring and promotion decisions

Faculty and staff members at Utrecht University will be evaluated by their commitment

- Paul Boselie: “Impact factors don’t really reflect the quality of an […] academic. We have a strong belief that something has to change, and abandoning the impact factor is one of those changes.”
- JIF, h-index “contribute to a ‘productification’ of science”, output > quality.
- Academics should be evaluated based on teamwork and Open Science.
- Realising new R&R system challenging and individual.
- Researchers applying for a job at a university that sticks to the traditional metrics might have a competitive disadvantage.

A debate around R&R

Nieuwe Erkennen en waarderen schaadt Nederlandse wetenschap

Opinie | door gastauteurs

19 juli 2021 | Een groep van 171 wetenschappers, waaronder 142 hoogleraren, waarschuwt in deze ope het nieuwe Erkennen en Waarderen de Nederlandse wetenschap schaadt. Zeker de medische, exacte en levenswetenschappen dreigen door het nieuwe Erkennen en Waarderen hun internationale toppositie te omdat niet meer duidelijk is waarop wetenschappers worden beoordeeld.

- A group of 171 researchers (incl. 142 professors) warned in an open letter that the new R&R system will harm Dutch science.
- They see several problems:
  - Unclear how scientists are judged if not by impact factors → More arbitrariness, less quality.
  - Affects international recognition of Dutch scientists.
  - Negative consequences for ECR, cannot compete internationally.
  - Narrative CV makes assessment difficult.
- Saying that JIF says little about quality is a misconception.
  - Average Nature/Science paper based on more work than in other journals.
  - Top journals consult the best experts → high impact and quality.

A debate around R&R

We moeten af van telzucht in de wetenschap

Opinie | door gastauteurs

21 juli 2021 | In antwoord op de kritische open brief van oudere wetenschappers over het nieuwe Erkennen en Waarderen verdedigen 113 jongere wetenschappers de gewenste veranderingen binnen de academie. In een open brief stellen zij dat wetenschappers tegenwoordig meer doen dan onderzoek. "Daarom is de wetenschappelijke publicatie naar onze mening niet langer de enige eenheid om kwaliteit uit te drukken; deze is immers niet representatief voor het takenpakket van de moderne wetenschapper."

- A group of 113 younger scientists defend these changes.
- Number of papers not representative for the tasks of a researcher.
  - Teaching, public outreach, consulting not included.
- Abandoning the JIF does not mean abandoning any kind of quantitative metrics.
  - **Quality** of the paper is important, not the **quantity** and place of publication.
- A broader set of indicators is needed to measure talent and excellence.
  - Not everyone needs to be ‘excellent’ in every domain.
- A workable and transparent rating system is needed – realisation is a challenge.

The quality of research cannot be measured by the impact factor of the journal where it is published.

Academics and support staff should only be assessed on the team level.

Education and research should have equal weight in the assessment of academics.

The university rankings hinder the recognition and rewards reform, so let’s get rid of it!