"Resolved: The journal impact factor does more harm than good."

While I wouldn’t say the issue is resolved, I’ll argue the journal impact factor does more harm than good (but perhaps not for the reasons you’d expect).

After all the JIF’s shortcomings are well documented. It has become the “test” to which the academic research community “teaches.” Rather than letting it provide a small quantitative indication of a journal’s performance, it has morphed into a number that researchers, journal publishers, and editors chase in the hunt for prestige and compensation. While it was originally meant to help scientists decide where to publish and what research to read, it has devolved into a single all powerful number meant to “rule them all.”

So before we get into the more insidious issues with the JIF as a metric, let’s review the arguments repeated ad nauseum with respect the JIF’s shortcomings:

First, it lacks context (there are many reasons for citing articles including refutation, clarification, criticism. The context of these citations can’t be captured in a number.); it disadvantages fields and research products that can’t or don’t publish; it is supposed to reflect journal influence but has become a proxy for article quality; it privileges journal articles as “the” vehicle for research dissemination (despite the fact that many fields produce other kinds of research products ; it’s gameable (and frequently gamed!)); and perhaps most importantly, it ignores evolution of an open, iterative research life cycle that has become possible thanks to the internet, preprint servers, open acess and the proliferation digital platforms for sharing research.

Put simply JIF reduces a complex set of factors into a number that does neither the journal, its authors, readers, nor their institutions justice. Despite consensus on this fact, the JIF still dominates the metrics landscape.

(The irony of me making this case and representing Altmetric – a company that created a scoring system for articles and other research outputs – is not lost on me. Trust me. But more on alternative metrics later.)

All this said – my issues with the JIF run deeper. It’s harmful because it’s a crucial cog in the western research industrial complex, and it perpetuates the inequities that deeply underpin the academic endeavor in that space.

What is the western research industrial complex? It’s the system of evaluation and rewards designed by white, western, English-speaking, and largely male centers of knowledge and wealth to evaluate all scientific research globally. It was born of political and scientific theories that spurred the age of Enlightenment when thinkers like John Locke, Francis Bacon and Adam Smith were prolific. It’s proponents on this side of the pond are names we’re familiar with: Benjamin Franklin, Thomas Jefferson and James Madison. This complex and the institutions that comprise it are deeply implicated in building structural barriers designed to further advance its own scholarly and economic interests.

These institutions and their scholars create the research, vet the research and accept or reject the research. These scholars write, edit, and review for huge commercial entities like Springer-Nature and Elsevier – and while they do not necessarily receive monetary compensation for these contributions, they cement their status as part of this closed ecosystem. These same individuals run the professional societies that bestow awards, establish connections, and cement prestige. They also review the thousands of grant applications that determine who gets money to continue their work. Lastly, their students enter this highly-networked ecosystem early benefitting from the name recognition of their institutions and PIs.
This highly privileged “superstructure” (if you’ll allow me an irresistible allusion to Marx) is an enclosed loop with gate keepers at every entry point. The JIF is one such gatekeeper but the list of barriers to entry is well known.

If you want to read our research, you will pay for it. You will pay so much for it, in fact, that governments have to intervene on behalf of research they have funded so that the tax payer can read what you wrote. If you want to get a job, you will study in our labs and at our institutions. If you want to be accepted in our community, you will acquire our mores and standards around definitions of excellence. In exchange for all this you will MAYBE receive a job, grant funding, and status.

Theorists of power, knowledge, and status like Michel Foucault and Karl Marx have long argued that systems of power insinuate themselves so subtly that their captives not only accept but embrace the norms and conventions of the system even if those norms disadvantage them.

Recent quantitative, peer-reviewed research corroborates these theories. (And I emphasize “peer-reviewed” and “quantitative” because these are the qualifiers most prized by the western research industrial complex, and of course I chose a Nature article for the same reason – even I can’t escape using the system’s terms to argue against it.)

Cassidy Sugimoto and her collaborators at Indiana University Bloomington documented the significant disparities in citations by gender in a paper in Nature in 2013. In short their data confirms that for various structural reasons women receive fewer citations than men. “Our study lends solid quantitative support to what is intuitively known: barriers to women in science remain widespread worldwide, despite more than a decade of policies aimed at levelling the playing field.”

While the Sugimoto team is discussing number of articles published and citations – not JIF specifically – they are all interrelated metrics produced mostly famously by Clarivate Analytics in their Journal Citation Reports.

And that brings me to the money-making side of things... (I should caveat this bit by saying that working for a for-profit myself, I have no intrinsic issue with a company that responsibly makes a profit in return for delivering an innovative product or service). That said, it should be no surprise that the impact factor was created and monetized by a son of this privileged ecosystem. Part of Eugene Garfield’s brilliance was not just creating the impact factor but his development of a whole set of algorithms and indices for measuring engagement with journal content. Not only does the JIF reinforce the successes of the the power centers that created it, its commercialization by western companies further cements the JIF’s status by bringing money and profits to those very same power centers. The “knowledge producers” in this ecosystem are now not only served by the metrics they’ve created, they’re incentivized to create more products and services that leverage the power of those metrics to generate profit.

Thus we see the inevitable silent handshake between the research industrial complex and its component parts. Not true you say? Ceaselessly cynical you say?

Consider how many new alternatives to JIF have come out recently. From the CiteScore, SNIP, Eigenfactor (and yes – altmetrics – I’ll get to those momentarily). These new metrics – all still based on journals or journal articles – are meant to give us a “way out.” If JIF isn’t working for you, here’s another journal or article based metric that might make you look better. Nevermind that these news measures are just as deeply entrenched in the politics of journals and journal publishing as the old ones.

While it’s not likely that Garfield intended to build and monetize a system that privileged white, western, male, English-speaking norms he had the sense to see everyone was playing the game. If the game is happening, why not build a field, a fence, keep score and charge people to play?
As with all ticketed events, though, there are always folks who get in some other way. The advent of alternative metrics has been driven in large part by dissatisfaction with paywall driven journal metrics that don’t serve the growing and evolving research landscape. Digital humanities, social science research, research with a strong community engagement component – these will never be served by the existing publishing structure.

One way researchers are getting into the game is by making new fields – that is, creating new dissemination platforms that bypass traditional gate keepers. The students at Rice University’s Baker Institute for Public Policy created their own publication to discuss gender and conflict in the Middle East. They started the *The Journal of Women and Human Rights in the Middle East* most likely because, as students working in a niche area, they couldn’t get published elsewhere. While they couldn’t buck the research industrial complex completely, they redefined its contours. And you know what? Their journal doesn’t have an impact factor.