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Review of: "Measuring researchers' success more fairly: going beyond the H-index"

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I enjoyed reading this article as it was easy to appreciate exactly Guilio Formoso arguments: create a system to attribute credit for authorship quantitatively but simply. Assigning credit according to the position of the author in the paper is straightforward to apply. However, I would say that perhaps a more in depth analysis would be appropriate:

(1) M. Formoso correctly points out that the principle investigator puts their name last, but that is unrepresentative of their contribution so how does one know if the second highest score should be the second author or the last author but what if their are two supervisors;

(2) in our university, students that write a thesis based on articles must contribute 80 % of its content, which is certainly not a universal rule, so again M. Formoso's relationship would be making a wild guess about the factor "x";

(3) how does one measure contribution quantitatively as it is not obvious why an article gets accepted, or rejected in a high impact factor journal versus a lower impact journal (if I write 80 % of the article but haven't done any experimental work, what is my contribution?);
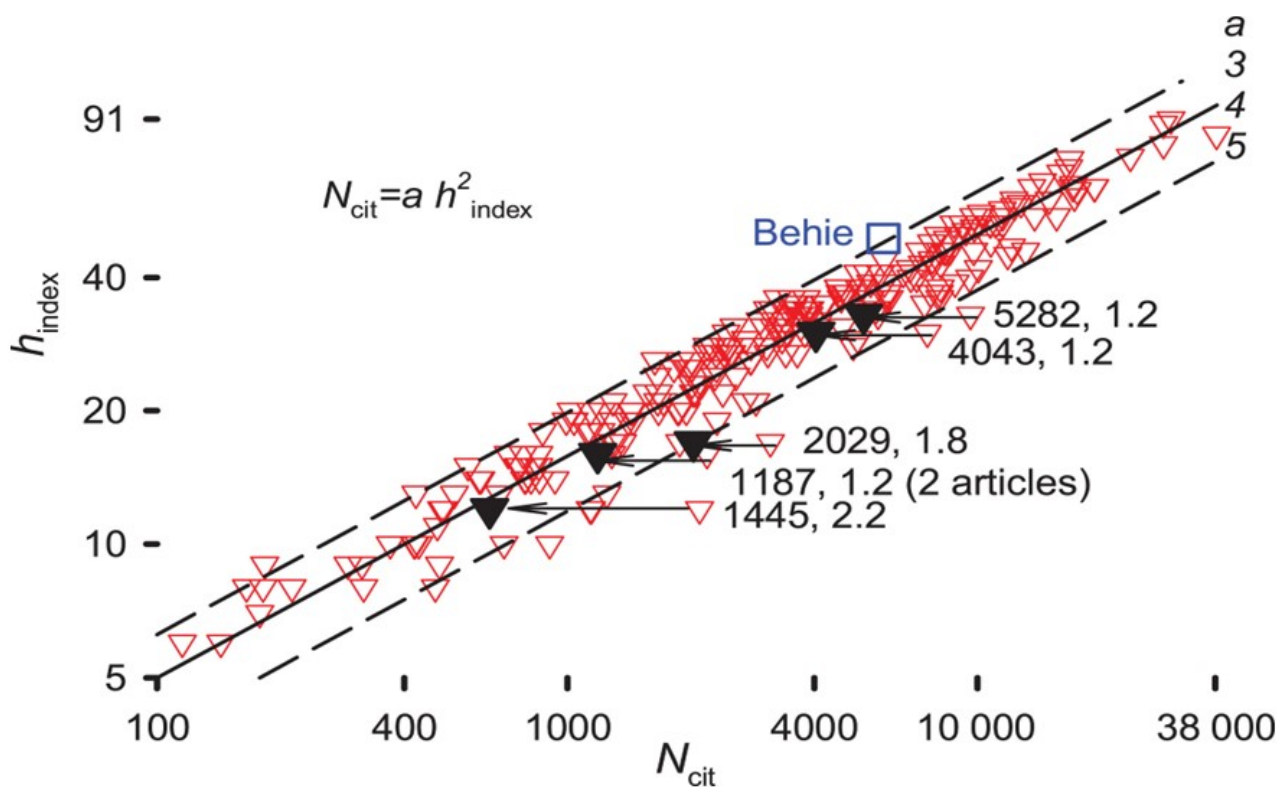
(4) DORA has been recommending that we apply other measures to quantify academic excellence rather than the h-index, the number of citations, or the number of articles (which I don't necessarily agree with because in the last 8 years publisher have been addressing the the concerns of DORA), so more granularity goes against their philosophy;

(5) M. Formoso assumes that high-impact factor journals have more rigour, which is probably often correct… but (a citation would be helpful because in my anecdotal experience there are so many exceptions that it would be inappropriate to call it a rule);

(6) it would seem to me that there are data in the literature that could contradict the cited limitations of the h-index. These limitations are real but represent a small fraction (as shown in the figure below), the extremes of a "normal" distribution: we can probably find examples where people's h-index is unmerited, but my own work would suggest that Hirsch's original assessment was excellent

NSERC discovery grants and a tribute to Leo A. Behie

$$N_{cit} = a\, h^2_{index}$$

Figure labels: a, 3, 4, 5

Behie

5282, 1.2
4043, 1.2

2029, 1.8
1187, 1.2 (2 articles)
1445, 2.2

y-axis (h_{index}): 91, 40, 20, 10, 5
x-axis (N_{cit}): 100, 400, 1000, 4000, 10 000, 38 000

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These data are taken from researchers that have submitted grant applications to NSERC and it shows how well the h-index correlates with citations (and eventually correlates pretty well with the number of papers). The h-index is only an indicator, and an excellent indicator based on this analysis. An additional index is unnecessary.