A Field Normalized Exploration of Awoken Papers

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Mathematics is the biggest driver for the creation of Awoken Papers

Awoken Paper Example

Citation History for Investigating Causal Relations by Econometric Models and Cross-spectral Methods with a dotted line indicating a linear growth to its max citation. The SC is essentially calculating the difference between these two plots.

\[ B = \sum_{t=0}^{m} \frac{c_{m-t} - c_0}{c_{m-t}} \cdot t + c_0 - c_t \]

- \( t \) is the age of an article
- \( c_t \) is the number of citations it receives in year \( t \)
- \( m \) is the year with the most citations.

The papers with SC values in the top 0.1% of all articles are defined to be APs

A Discipline's AP Ratio is a discipline's number of APs divided by its total article count.

Observations
- Mathematics, in many different forms, is by far the most likely area to generate highly cited APs
  - At least half of the top 10 disciplines for each citation cut off are mathematical in nature
- Multi- and Interdisciplinary, social science, and engineering disciplines all generate highly cited APs with regularity
- For mathematics articles published in the last century, there is
  - Over a 1 in 10 chance that is an Awoken Paper for articles with 100 Citations (11.5%, the next highest is 6.6%)
  - Over a 1 in 5 chance that is an Awoken Paper for articles with 300 Citations (22.7%, the next highest is 16.2%)
  - Over a 1 in 4 chance that is an Awoken Paper for articles with 500 Citations (26.2%, the next highest is 21.9%)

Limitations
- Web of Science indexes more STEM content than other subject areas
- Not all Subject Categories are indexed for whole period under investigation

\(^a\)Only disciplines with at least 1.06% publications having 100 citations were considered (Top 80th Percentile)
\(^b\)Only disciplines with at least 1.17% publications having 300 citations were considered (Top 75th Percentile)
\(^c\)Only disciplines with at least 0.42% publications having 500 citations were considered (Top 70th Percentile)