

Metrics 2015: Workshop on Informetric and Scientometric Research (SIG/MET)

Presentation

A New Interest Indicator Based on Researcher Behavior in the Web of Science

SYNOPSIS

This presentation offers an overview of the new interest indicator that Thomson Reuters is releasing for the Web of Science. Intended as a discovery aid for researchers, it may also prove useful in understanding the influence of scholarly artifacts. This “first look” will assess some aspects of this new indicator in comparison with other altmetrics, and explore the concept of “interest” it embodies.

DETAILED SUMMARY

Millions of researchers worldwide use the Web of Science every day. For over half a century, they have relied on it as the trusted source for discovering new insights from the most important scientific and scholarly literature. But *how* do researchers actually use this resource, and, in the context of this use, is it possible to determine what value they place on the documents they find referenced in it? Solving this problem would put us in the enviable position of having a common, standardized interest signal across the entire range of global scholarship. Even beyond the Web of Science, such a signal may be applicable to other large metadata environments.

In spite of this tantalizing possibility, usage data has not to date yielded a robust set of indicators beyond simple download counts and “views”. Largely, this is because of the complexity of events and behaviors going on within large-scale aggregated metadata databases such as the Web of Science. Logs must be mined in a manner that carefully distinguishes various types of behavior and selects accurately the events that truly indicate levels of researcher interest. Of course careful attention to privacy issues must be front and center. Success also requires “big data” tools. Foundationally, it also requires that we address the distinction between automated and “human” behaviors—a distinction that is increasingly blurred in practice.

Taking the metaphor of an informed user choosing an item and incorporating it into his or her scholarly work, we have carefully focused this new indicator away from behaviors associated with automation, whether they are actually “robotic” or not. For example, a researcher who downloads several hundred metadata records at a time is certainly interested in those items, but perhaps not in each item as a unique scholarly artifact. Nor should we confuse such behavior with “gaming” a metric. In fact, such behaviors are frequently necessary aspects of research, especially in meta- and statistical analyses.

In this presentation, we focus on one initial indicator that combines the actions of saving information for later use and accessing full text. We distinguish between two general types of use—those of no or limited “intent” and those of greater “intent”. We propose that the data derived from this approach yields a useful indicator that can be applied across the entire Web of Science corpus.

IMPLICATIONS

Web of Science usage counts as defined above are a small subset of the millions of events that go on every day in this important resource. Yet they provide significant benefit in offering new ways for researchers to navigate this rich environment. They also demonstrate properties that make them important for future investigation, such as:

1. They reflect expected patterns shown in related altmetrics—situated more closely to scholarly activity than to public-facing social media.
2. They show reasonable disciplinary variations while revealing new patterns.
3. They provide new data about value for documents in fields in which citation data is sparse.

As we launch this new indicator and develop it and others further, we welcome discussion with the ASIST community.