

Evaluating altmetrics acts through their creators – how to advance?

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Altmetrics17 Workshop – The Dependencies of Altmetrics

Toronto, 26th September 2017



Altmetrics' diversity, a double-edged sword

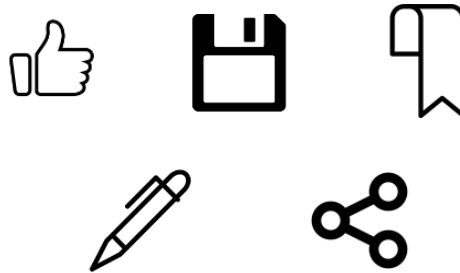


Altmetrics' differing premises

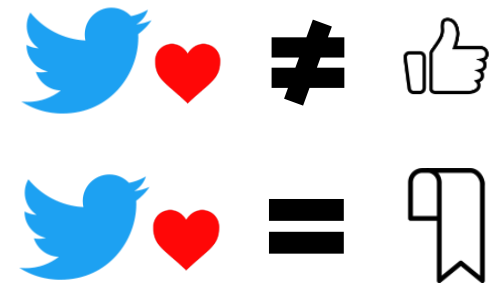
Types of Platforms



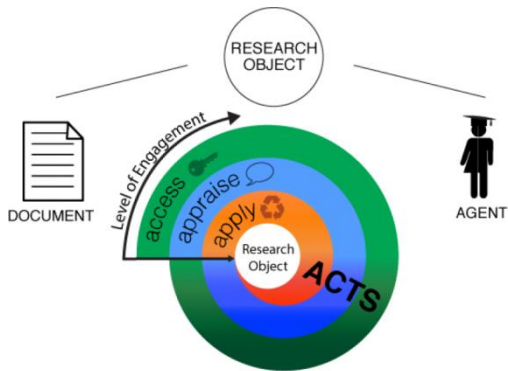
Types of Actions



Intentions



Degrees of Involvement¹



Actors



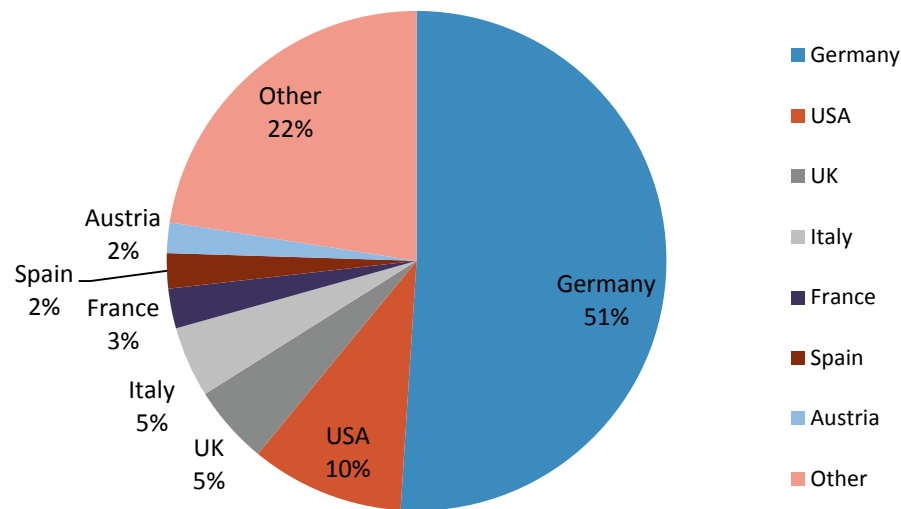
...

¹From: Haustein, S., Bowman, T. D., & Costas, R. (2016). Interpreting 'Altmetrics': Viewing Acts on Social Media through the Lens of Citation and Social Theories.

*metrics Survey on Social Media Usage by Researchers



- Online survey, running for six weeks over March-May 2017
- 3,400 respondents, emphases on economists (60%) and social scientists (22%)
- 13-20 questions about professional usage of 90 social media services
- Participants from 84 countries



Countries of current (or last) affiliation of the survey's participants

Usage Frequency of Actions



How often do you...?

	Several times a day	About once a day	Several times a week	About once a week	About once a month	Less often	Never	No answer
post about academic research on Facebook	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
send a tweet about academic research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
write a post about academic research on LinkedIn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
write a post about academic research on Google+	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
review academic research on F1000Research	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
write a post about academic research on Reddit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
write a post about academic research on StackOverflow	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
review academic research on Amazon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Usage of Actions: Differences in Frequency

- Welch test - comparison between early-stage researchers and professors:
from 107 actions, 30 are used with significantly different frequencies



Early-stage researchers (n = 1,010) :



Downloading



Bookmarking



Professors (n = 1,419) :



Writing



Facebook



Twitter

Assumption!

A metric's meaning is shaped by who performed the action leading to its occurrence.

A possible implication, based on the previous slide:

- Counted occurrences of an action that is more frequently performed by professors than by early-stage researchers better reflect the respective article's impact upon more experienced researchers

Usage of Actions: Correlations “Frequency - #recent publications”

- Actions that correlate positively and significantly with the number of traditional publications during the last 5 years:

Action	r	Action	r
Cite academic research on Wikipedia	0.12***	Reply to a tweet about academic research	0.18***
Comment on a post about academic research on Facebook	0.21***	Retweet a tweet about academic research	0.19***
Comment on a post about academic research on Google+	0.17**	Send a tweet about academic research	0.22***
Comment on a post about academic research on LinkedIn	0.14***	Share a post about academic research on Facebook	0.22***
Comment on a post about academic research on wordpress	0.14**	Share a post about academic research on LinkedIn	0.14***
Comment on a scientific video on Vimeo	0.23*	Share a scientific video on Youtube	0.22***
Comment on an article on PLoS	0.16**	Share an article on SSRN	0.13***
Dislike a scientific video on Youtube	0.11***	Write a post about academic research on Google+	0.19***
Favor a tweet about academic research	0.17***	Write a post about academic research on Facebook	0.26***
Like a post about academic research on Facebook	0.12**	Write a post about academic research on LinkedIn	0.22***
Subscribe to a research(er's) channel on Youtube	0.21*	Write a post about academic research on wordpress	0.14**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$



Questions to Discuss

- What do you think – is weighting altmetrics based on their originators a desirable approach at all?
- If so, what might be meaningful platform-related factors to base different “classes” of altmetrics upon?
 - Relative share of users with scientific background
 - Coverage of a certain discipline
 - Users’ average degree of scientific experience
 - Users’ average productivity by bibliometrical means
 - Geographical aspects
 - ...

Thank you! Any questions?

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