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## Developing indicators of the impact of scholarly communication is a massive technical challenge – but it's also much simpler than that

Blog Admin



*Conversations on impact tend to revolve around technical issue of measurement and finding appropriate metrics. To widen the conversation [J. Britt Holbrook](#) presents a list of 56 indicators of impact developed by the [Center for the Study of Interdisciplinarity](#) to help simplify the question of impact. By moving beyond technical aspects there is a greater opportunity for academics to embrace and explore other facets of impact.*

Perhaps the most frequently asked question regarding impact is logistical: *how can we measure the impact of our work?* A recent [story](#) in the *Chronicle of Higher Education* suggests: “The larger conversation about how to measure scholarly impact is probably as old as scholarship itself.” Today, the question ranges from the development of [article level metrics](#) to building a [shared infrastructure](#) for all of scholarly communication.

*Why should we develop new ways to measure the impact of our work?* [Jason Priem et al.](#) and [Heather Piwowar](#) answer that current measures of impact don't work; since traditional approaches to measuring scholarly communication don't reward impact, we need a way to measure and reward other approaches that do. Similar views are shared by [some](#) and contested by [others](#).

What's most striking about answers to the 'why' question is how quickly they turn toward the 'how' question. Altmetrics developers are doers and inventors – they take action and try to figure things out. We can't figure out impact just by thinking about it; we have to do research, warns Piwowar in the post linked above. After noting that the system is broken, [Priem and Piwowar](#) quickly ask, “How can we fix it?” Instead of answering the 'why' question, we ask a [different](#) question: [Do altmetrics work?](#)

*Should we resist attempts to measure the impact of our work?* [Philip Moriarty](#) offers sophisticated arguments against the 'impact agenda', while others are more [demonstrative](#). Robert Frodeman and I argue that embracing impact in a way that preserves [autonomy](#) is a better strategy than mere [resistance](#). Despite contrary answers to the question of resistance, many of us agree that not everything that counts can be counted. Our disagreement rests on different [conceptions of freedom](#). 'The resistance' tends toward a negative concept of freedom that sees all forms of interference as [evils](#). Advocates of [owning impact](#), however, embrace a positive view of freedom, emphasizing [self-determination](#) as fundamental.

### Infrequently asked questions

Although these frequently asked questions are interesting and important, it's ultimately simpler than that. Colleagues at the Center for the Study of Interdisciplinarity (CSID), Kelli Barr, Keith Brown, and I, submitted something simple and quite messy to *Nature* to see whether they might join us in catalyzing a conversation on the question of impact. Frankly, we doubted it. Nevertheless, we submitted the following list, along with a brief [discussion](#) of how and why we generated it.

## 56 Indicators of Impact

H-index	Social networking contacts	Meetings with important ppl
G-index	Increased diversity	Invitations to present
Universal H-index	Degree of ID/TD	Invitations to consult
HM-index (standardizes co-authorship)	Degree of transformativity	Invitations to evaluate
Peer review	ID/TD rigor	Protests/demonstrations/sit-ins
Place of publication	CSID advisors	Coining/debunking phrase or buzzword
# of pubs	Special problem requests with CSID faculty	Trending in social media
# of citations	Internationalization	Esteem surveys
Book sales	Grant \$	Trust/reputation
Article Product downloads	Audience size @ CSID events	Rankings
Website hits	Success of faculty fellows	Blog mentions
Media mentions	Esteem of senior fellows	Student surveys
Quotes in media	Success of graduate / UG presentations & grants	Student testimonials
Quotes in policy	Posters?	Faculty recommendations
Developing a metric that people use	Impact factor of journals in which CSID publishes	Faculty award/prize
Rabble rousing	Number of Angry letters from important people	Textbooks
Muckraking	Mention by policy makers	Influencing curriculum creation
Lawsuits		Participating in public education programs
Arrests		
Cited in testimonials		
Town hall meetings		

Of course, the editors at *Nature* declined to publish it. Instead, they asked us to clean up the list to make it more generally applicable and less CSID-specific. We did so, and the officially published version of our correspondence is available [here](#). It can also be viewed free of charge [here](#). The editors of the LSE Impact blog had a similar urge to clean up our mess. This is the table they proposed:

50 indicators of positive Impact			
H-index	Social networking contacts	Increased diversity	Special problem requests with faculty
G-index	Trending in social media	Degree of interdisciplinary	
Universal H-index	Blog mentions	Degree of transformativity	Invitations to present
HM-index (includes multi-author manuscripts)	Website hits	Interdisciplinary rigor	Invitations to consult
Peer review	Media mentions	Internationalization	Invitations to evaluate
Place of publication	Audience size at events	Grant amount (in \$, £, € etc)	Rankings (positive move up)
Number of publications	Quotes in media	Textbooks	Cited in testimonials
Number of citations	Quotes in policy	Influencing curriculum creation	Developing a useful metric
Book sales	Meetings with important people	Student surveys	Coining/debunking buzzwords or phrases
Product downloads	Esteem of senior fellows	Student testimonials	
Mention by policy maker	Posters	Faculty recommendations	Townhall meetings
Impact factor of journal in which department publishes	Participation in public education programs	Faculty awards and prizes	Esteem surveys
		Success of faculty fellows	Trust and reputation
		Department advisors	Success of graduate / undergrad presentations and grants
Six more ambiguous indicators of Impact			
Protests/ demonstrations/ sit-ins	Rabble rousing	Lawsuits	Angry letters from important people
Muckraking	Arrests		

Comparing the original and edited versions illustrates the value of the simpler questions about impact I propose we begin to ask more frequently. I realize that people have already been asking some of these questions – but not frequently enough.



*What do we mean by 'impact'? Does it make a difference if we speak of 'scholarly impact' rather than 'the impact of scholarly communication'? Does 'scholarly communication' include teaching, as well as publishing (whether in traditional or alternative venues)? I'd be interested to develop an account of why we ought to revive one feature of the [Humboldtian idea of the university](#): research and teaching as mutually reinforcing activities essential to what it means to be a professor. Our list includes both research and teaching activities, as well as activities that might fall under the rubric of 'outreach' or policy engagement.*

*Why do we use the term 'impact'? The impact horse has left the barn. But we ought to question what sorts of activities fall within its scope, even if we would prefer a different term. Claire Donovan's reaction to CSID's list is priceless: "Only one on the list has anything to do with impact." Before you click on this [link](#) to the twitter exchange, see if you can guess which one Claire had picked out. I couldn't.*

No question could be simpler: *if we want to have an impact, then who will/should be impacted?* The answer to this question should inform and be informed by research on *how to measure impact*. But asking the [question of audience](#) takes us beyond thinking of the 'how' question as susceptible only to technical answers.

Not all academics are interested in putting a number on their impact. The more frequently asked question of *measurement* favors technical answers. Technical answers paradoxically foster expertise in impact measurement *and* take the question of impact out of the hands of most academics, while placing a ready-made answer into the hands of managers. Technical answers, in other words, foster technocratic domination over the question of impact. Imagine if HEFCE or the US NIH merely had to grab and drag the Altmetric [bookmarklet](#) onto their bookmarks bars, visit someone's CV to find an article, then 'Altmetric it!' to see its score. There's a danger that push-button evaluation by non-experts could replace peer review. This could be the end of the data-driven impact story.

Despite my hyperbole, I'm not arithmophobic. CSID's list incorporates numbers, and we include things captured by altmetrics. I love altmetrics and spend (too much) time 'altmetricing' my own products, using both [Altmetric](#) and [Impact Story](#). But, along with the thrill that comes from knowing that people are paying attention to my work, what motivates me to explore altmetrics is a drive to write my own impact story. I don't want 'the data' driving that story for me. Nor do I want someone else at the wheel. I want to tell my own story and to appeal to numbers when I decide they can help correct my course or bolster my impact claims. Numbers themselves – or metrics – are not the danger. The danger is numbers being arbitrarily imposed on us.

This is the simplest, yet most difficult, question of all: *where do we want impact to go?* For now, we still have some say in the matter. We might even be able to impact the question at a policy level. I've offered some of my suggestions, above. I'm very interested to hear yours.

*Note: This article gives the views of the author, and not the position of the Impact of Social Science blog, nor of the London School of Economics.*

## **About the Author**

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