1-1-2016

Talking about impact: A handbook for pre-tenure humanists and social scientists

Stephen Chrisomalis

Wayne State University, chrisomalis@wayne.edu

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2016

Why this handbook?

A few years into my pre-tenure period, I had an opportunity to converse at length with a senior administrator at my institution (now long since departed) about the tenure process. I expressed some concern because I had heard that peer-reviewed chapters in edited volumes were not considered by my institution as equivalent to journal articles of the same length and importance, even though my departmental tenure factors clearly did so. The answer was "Well, we tend to view those as not peer-reviewed". Unsatisfied, I pursued the point: "In that case, perhaps I should include the actual peer review I received as documentation?" The answer I received was instructive in its ignorance of the point: "Well, no. Chapters might be useful for you to find tenure recommenders, but you should always prefer journals, since we understand that they are peer-reviewed."

A few minutes later, the discussion turned to co-authorship, and I raised the subject of scholars (such as myself) who mostly publish single-authored work, versus other scholars who may publish far more (and shorter) multi-authored papers, and that these were not equivalent definitions of 'a publication'. The answer I received is that this was a problem with my discipline (anthropology), that failure to collaborate reflected a pernicious tendency towards uncollegiality and solitude, and that part of this administrator's role would be to change how my discipline (and others) thought about this issue.

Wherever administrators' response to the challenge of disciplinary diversity is to demand that humanists and social scientists conform to the norms of other disciplines, we have a serious problem.

This is a handbook directed in the first instance towards pre-tenure humanists and social scientists, with a broader audience ranging from senior doctoral students all the way up the academic chain of being. I'm writing it in part because I can; I am now one of those very lucky few to be tenured and to be in a position to do so. It hope it will be useful to scholars well before applying for tenure, to think about how and where to publish, and how one thinks of and talks about one's scholarly *impact*. Impact here is defined loosely, but normally centers around *scholarly impact* within one's field(s) of study, such as citations and reviews. I will also discuss how to talk about the *broader impacts* of scholarship on wide audiences.

I also hope it will be useful to all of us who, having surmounted the tenure bar and who continue to think about the impact of our work, includes those who serve on promotion and tenure committees or as external tenure reviewers. It is written for scholars who are actively involved in research, at all career stages and all sorts of institutions, while recognizing that some of the specific topics discussed here are more relevant to research-oriented institutions in North America (such as the one where I work) than others. But, in short, if you imagine it's directed at you, you're probably right.

Why care about impact?

I have occasionally heard it said among my colleagues that scholarly impact is just a buzzword, not really something that can be measured. I get it. The way that we are often asked to document our scholarly productivity bothers me and many others. And if measuring impact involves filling out tedious forms, or forcing your research to conform to a model designed for very different scholars, then this is a pernicious form of neoliberal bureaucratization and disciplining of scholarly production. On these grounds, refusal seems to be a sensible strategy – to simply insist that we cannot know, and thus that it is wrong to ask us to know, what our specific, verifiable impacts are.

But we all care about the impact of the research we do, in all sorts of ways. Ask yourself the following questions:

- By whom (and in what disciplines) are my scholarly publications read?
- In what ways are my scholarly publications being integrated into other scholars' work?
- How is my work being interpreted and challenged?

You can answer these questions. The notion that there is nothing we can or should do to produce verifiable information that people outside our disciplines and subfields can understand can strike onlookers as ignorant at best, deceptive at worst. The problem with a *counter-narrative*, though, is that it does not automatically entail a viable *counter-*

strategy. Refusal is small comfort to the unemployed. The counter-strategy I am advocating here starts from the recognition that while the tools currently in place for *measuring* impact may not be right, it is not hard to produce *verifiable* knowledge about the scholarly impact of humanists and social scientists that will be meaningful and comprehensible to our colleagues across the disciplines. If you aim at verifiability rather than measurability, you will satisfy many critics.

The counter-strategy

There are three things you need to do, at minimum, to increase your chances of having your scholarship evaluated appropriately at all levels during a tenure and/or promotion case.

- Know how scholarly impact is evaluated across various disciplines, including your own.
- Gather information about your own work, its readership, and its influence.
- Document clearly how someone from outside your discipline ought to think about your impact.

Knowing how impact is evaluated allows you to put yourself in the mind of a reader from another vantage point, and to think about how they might view your materials. Gathering your own information about how your work is being used is rewarding for its own sake, and helps support a verifiable case for your impact. Documenting that impact in clear terms turns evidence into a narrative that anyone can independently confirm.

Assumptions

I'm working from a set of assumptions based on my own experience and direct knowledge of others' experience.

- The normative, base-line way in which scholarly impact is currently conceptualized in research-oriented institutions is that of the life, medical, and exact sciences. However, these methods and metrics are historically recent and technologically dependent. There is no eternal, correct way to evaluate scholarship in any discipline.
- To whatever degree scholars from other disciplines (including but not limited to humanities and social sciences) have scholarly profiles that diverge from the current norm, there is the potential for misunderstanding of the true impact of a scholar's work.
- While personal narratives, letters of support, and other qualitative documentation are extraordinarily valuable in one's tenure case, humanists and social scientists must find a disciplinarily-appropriate verifiable accounting of their scholarly impact, which can and indeed should include quantitative data. But at the same time, 'verifiable' is not synonymous with 'quantitative'. The key is to be able to show our colleagues in other fields what we do and why.
- Most scholars and administrators who come from a background in sciences, medicine, and engineering do nonetheless honestly believe in the value of humanistic and social-

scientific research and are willing to fairly embrace methods of evaluation that appropriately weight our work. This is not to deny that there are bad actors, but to insist that the problem does not lie with a few nasty people.
- Most senior scholars in all scholarly disciplines were tenured prior to the development of widespread electronic citation indices, open access publications, and in general before *scientometrics* (the measurement of scholarly impact) was relevant to tenure and promotion (Price 1963). More junior scholars thus have a particular obligation to communicate the relevance of and to promote the development of discipline-specific ways to evaluate impact.

I'm writing this handbook as a recently tenured faculty member in anthropology. My research is highly interdisciplinary across the humanities, social sciences, and mathematics, which had both advantages and disadvantages for me as a tenure-seeker. On the plus side, my work is cited in journals and used by scholars in psychology and mathematics (among others) which gives my work a set of familiar benchmarks from which vantage point scholars can evaluate my work. However, both among my own discipline (anthropology), and taken as a whole outside the context of any specific discipline, there is also a risk that I am hard to peg down: if you don't know what it is I do, then how do you know how to evaluate it? This uncertainty is not exclusive to me, though. It permeates the evaluation of scholarly impact.

(At least) two cultures of citation

C.P. Snow's famous 'Two Cultures' lecture (1959) set out a framework through which much of the way we tend to think about the sciences *versus* the humanities. Snow abhorred this state of affairs but correctly diagnosed it as a dangerous and common form of dualistic thinking. Of course, it's more complicated than that, and particularly when you come to issues of scholarly impact, we should immediately pause and recognize that not only are there more than two divisions, but even within those divisions, there are enormous differences.

So, for instance, biological anthropologists tend to publish shorter and more broadly co-authored studies than cultural anthropologists. Conference proceedings count far more significantly in computer science than in chemistry. Some subfields of physics have hundreds of co-authors on papers; others have one or only a few. Some fields transform very rapidly so that the 'scholarly half-life' of a paper's impact is very short – half or more of its citations may come in the first year or so – while in others – I am thinking especially of fields like classics – it may take decades. The most widely cited article in *Classical Philology* was published in 1952 and has 199 citations – 43 of which are since 2012 (Bickerman 1952). The most widely cited article in *Cell* was published in 2000 and has 22,711 citations (Hanahan and Weinberg 2000). How can we possibly compare these meaningfully?

Realistically, then, there are multiple axes of variation on which citation practices differ. Your job, as a pre-tenure faculty member, is to be aware of what the practices are in your field, to communicate effectively about what those are, and to be aware of how they might differ from other fields.

Some of the critical factors to be aware of include (but are not limited to):

- Number of authors: Some disciplines (like philosophy) are deeply invested in single authorship, whereas in others (like chemistry) single authorship is almost unheard of. Know what your norms are and how you fit into it.
- Order of authors: Among disciplines where co-authorship is the norm, there are vast differences in who counts as primary author: is it the first-listed or the last-listed author? In some cases authorship is alphabetical, so you need to look at the notes to figure it out. Know your norms and don't leave committees guessing.
- Publication length and rate: In some disciplines, it is customary to publish numerous separate small articles, each one building on the last or dealing with some small issue. There's a tongue-in-cheek term for this practice: the *minimum publishable unit* (Ziman 1987). If you're in the humanities or social sciences, it's much more normal to publish longer, less frequent work. The key is to know where you fit.
- Citation norms: I've already talked about disciplinary differences in the 'half-life' of an article: how long it takes

to accumulate citations. You might also want to know how many references articles in your discipline typically have. Knowing where you fit allows you to preempt any possible narrative that your work has not been impactful.

- Number of scholars: How many people are in your potential audience? Fields differ greatly in size – there are far more biologists than anthropologists, for instance. But subfields also differ in size: if you are read deeply and often within a narrow subfield of (say) a couple dozen scholars, your impact within that area can be very significant, but nearly invisible to traditional metrics.
- Role of books: To what extent are scholarly monographs a norm or expectation? In many scientific disciplines, books are seen as mid-career endeavors, and even then, not necessary ones. In English, by contrast, most institutions with a significant research expectation require a book (at least in press) for successful tenure and promotion. At some institutions, the prestige of the press may be even more important than the existence (or not) of a book.
- Role of book chapters: Because there are some (like the benighted administrator I talked about at the start of this handbook) who regard these as non-peer-reviewed or substandard, be prepared to document the peer review process, the significance of the press, and the impact of your chapters (especially

since citations to chapters are tracked more poorly than citations to articles).
- Role of conference proceedings: In some disciplines (including some parts of humanities and social sciences, like linguistics), major conference proceedings are considered as prominent as key journals. Be aware of the need to talk about these as peer-reviewed and widely read publications, where appropriate.
- Discipline and field-specific presses: Many disciplines have small but very prominent presses – e.g., Verso for left-wing social science, or the School for Advanced Research in anthropology. If you work with these venues, you need to be able to talk about their relevance in their field.

Your Audiences

When preparing your materials to go up for tenure, you have at least five different audiences to think about:

- Your department: For most of us, the first place our tenure materials get reviewed is within our home department. If we can't convince our closest colleagues of the impact of our work, we are in some deep trouble. Of course, they know much more than our written documents alone say, but they often don't have the time to know just what their colleagues are up to, research-wise. Show them just how busy you've been.
- Your external reviewers: Almost everywhere, tenure depends critically

on the evaluation of some number of external reviewers in your area(s) of study (between four and ten, usually, depending on institutional norms). These people may know you well, or they may never have heard of you, but you can be sure that they will be reading your publications and CV in more detail than almost anyone else.

- Committees at your home institution: This is a diverse group, probably from all sorts of disciplines. At my institution there is a college-level committee from the liberal arts and sciences, as well as a university-level committee including all the professional schools and colleges. There's (generally) a willingness to recognize disciplinary difference, but you need to make the case being aware of this breadth.
- Administrators: This includes deans, provosts, chancellors, presidents, assistant vice-factotums for faculty discipline, and the like. Their concerns are (supposedly, ideally) above any particular discipline's, but you can be very sure that whoever is involved in your institution's tenure process is concerned with whether you have been productive and whether you will continue to be so if you earn tenure.
- Yourself: Honestly, if you can't convince yourself that you're worth it, you're in trouble. One of the most rewarding things, for me, of figuring out where my impact has been, is that it's so easy to imagine that you don't have an impact, or that your work isn't being read. Proving to yourself that this isn't true is powerful tenure juice.

The importance of self-curation

Academics live in a world with what appears to be almost limitless access to data. Yet when it comes to self-presentation, we don't always do our best in presenting our work in ways that will be meaningful even to the most relevant of our audiences. Ask yourself the following questions:

- Who do I want to see my work?
- Where can they go to find out about my work?
- How will I find out they've read my work?

You should care about these questions throughout your scholarly career. Even if you have no interest in how your institutional promotion and tenure committee will read your file, or how your colleagues in other disciplines regard you, these three questions are intrinsic to figuring out key aspects of your research trajectory: where you want to publish next, what new audiences might engage with your work, and where you have been less successful than you want to be.

There are three critical aspects to self-curation of my own scholarly research:

- I keep ongoing lists (in Endnote) of every piece of scholarship that cites my work, and update them regularly. I discover interesting scholars and scholarship by doing so. I also get a sense of which of my publications are reaching their intended audiences (or not), which shapes my future goals.

- I use an online research repository (there are both commercial and institutional varieties of these) to store work in a way that can be accessed directly by readers.
- I keep a Google Scholar profile and keep it up to date. Because Google Scholar is so widely used, I do this, not just because some nasty bureaucrat might check, but so that my readers can see the scope of my research easily.

Taking a few hours a year to properly account for what you're up to and what you're doing is manageable and important. Here's how you can do it.

Terminology for measuring impact

At this point, let's familiarize ourselves with the terms you're likely to hear in discussions of scientometrics relative to tenure decisions. Bear in mind that these aren't necessarily the ways in which you want to talk about your own research (though they might be), but they are the ways in which scholarly impact is currently measured quantitatively in most institutions.

Impact factor
A journal impact factor (sometimes abbreviated JIF) is the measure of how many times, on average, articles in a particular journal are cited over some span of time (usually 2 years). So if there are 20 articles published in a journal in one year, and these are cited a total of 50 times in the 2 years following their publication, its impact factor will be 2.5. This is a *very* loose

definition and there are all kinds of ways for journals to game the system, and also difficulties in verifying and reproducing results. Also, bear in mind that most measures of impact factor count only citations in certain indices – so, for instance, the ISI Web of Science can only count citations in the sources it indexes, not in all peer-reviewed sources. An article doesn't have an impact factor (only journals do). Lots of humanities and social science journals don't have a JIF and so this can't be used consistently to evaluate the prestige of your work.

H-index
A scholar's h-index is the number such that, ranking their publications from the most cited to the least cited, they have at least h publications with at least h citations each (Hirsch 2005). So, for instance, if you have 5 articles published and they're each cited exactly 3 times, your h-index is only 3 because you have at least 3 publications with at least 3 citations. But if each of those were cited 7 times, your h-index would be 5 (not 7) because you have 5 articles cited 5+ times each. So it's a measure of scholarly breadth and depth simultaneously. Of course, if a scholar only has one publication, but it's a really well-known book, their h-index will be at most 1, no matter how many times it's cited. So for scholars in book-based disciplines (like cultural anthropology or history), your h-index may not accurately reflect your scholarly impact. An h-index of 5 in anthropology is probably fine for tenure, but in physics it is probably low.

Journal ranking

Impact factors measure the citation rate of any particular journal (under a very limited set of parameters), but are essentially impossible to compare across disciplines because of the different norms and practices in each field. Field-specific journal rankings like the JCR (Journal Citation Ranking) and SJR (SCImago Journal Rank) compare journals *within* specific fields in terms of some criterion like impact factor. For humanities and social sciences, SJR is normally more appropriate because the JCR has very limited coverage in most of our fields, because SJR uses a broader (but still imperfect) citation metric than impact factor alone, and, most importantly, because SJR is freely accessible. So, for instance, one might list after each publication its SJR ranking within the field, e.g. (SJR rank 23 / 358, Religious Studies).

Citation count

This is a count of the number of times a particular individual publication has been cited. Normally only peer-reviewed publications count toward this total in scientific disciplines, and you should not attempt to pad your citation count for your publications. Its power is that it allows you to highlight not just that you have an impact (h-index), or that you have published in impactful places (impact factor), but what specific work has had an impact. Citation count is relevant across disciplines but isn't comparable across disciplines – so just as with h-index and impact factor, you need to be able to talk about your impact rather than just assume that the numbers speak for themselves. Sometimes tenure files will discuss not only the number of times each individual publication has been cited, but also the total number of times a scholar's work has ever been cited.

In my experience, one of the strongest ways you can document your own research impact is to find and list your cited work, not only in terms of the count, but also a full list of all scholarly material that cites each of your works. It is very satisfying to discover who is citing your work; it is even more effective to be able to show your peers and colleagues exactly where your work engages with other scholars'.

Altmetrics

Altmetrics are a relatively new way of evaluating the impact of publications that replace traditional citation counts with other ways of measuring impact (Priem et al. 2010). For instance:

- How many times has your article been read or downloaded?
- How many times has your book been mentioned in Wikipedia?
- How many page views does your academic blog have?

The goal here – as it relates to a tenure case – is to show people who aren't intimately familiar with your work the broader impact of your scholarship. In an era where you can't get NSF or NIH funding without specifically addressing broader impact, such as the non-scholarly readership of your work, altmetrics can be a valuable tool.

Citation case studies

As a couple of case studies, let me show you some information from two articles published earlier in my career (so we have a pretty good sense of what their total citation count will be). For each, I came up with four citations counts:

- The ISI Web of Science citation count (used in most scientometric accounts)
- Scopus (an alternative database meant to parallel the Web of Science count)
- Google Scholar (the 'Cited by' count of the article in Google Scholar)
- Total count: All citations occurring in the three first sources, minus false positives, plus additional citations found through Google Books or directly from the original publication

A. Journal article (Chrisomalis 2004)

Web of Science: 24 (5 false positives)
Scopus: 23
Google Scholar: 69 (38 false positives)
Total: 35 (including 2 self-citations)

- I chose this article because its impact (its citation 'footprint') is largely scientific: it is referenced primarily in psychology journals and so it 'looks like' a science article to traditional metrics like Web of Science and Scopus.
- It also has a *lot* of false positive citations, which I suppose is great if you're looking to put together a big number, but if your interest is to actually accurately reflect your impact (for your own knowledge or for self-promotion) that's no good. My article was cited in an article that has a series

of response articles that follow it, but that uses a single bibliography for the whole series. Each response was 'counted' separately, so it was treated it as if the article plus all its responses *each* cited my article.

- On the other hand, you can see that while the Web of Science and Scopus counts are similar, the total citation count is much higher. The reason here is primarily due to Google Scholar's much greater coverage of materials.

B. Journal article (Chrisomalis 2003)

Web of Science: 4
Scopus: 3
Google Scholar: 12 (5 false positives)
Total: 11 (including 1 self-citation)

- In contrast to the previous article, this one has a highly 'humanistic' citation footprint – in this case, from classics & the history of science. Its total count is lower, which is not surprising because there is so much less material published in those disciplines.
- This article also has a lot of false positives in Google Scholar. In this case, most of these are due to non-peer-reviewed articles, webpages, and other material cluttering the results. You can count that in some other way, but treating it just like a peer-reviewed citation will not help your case.
- And again, lots of false negatives – citations that don't show up in any traditional account. This is largely because of books and book chapters that don't end up indexed fully by the big citation indices, and even Google Scholar misses some.

Finding your own citations: tips and tricks

These two case studies should illustrate some of the advantages and perils of tracking your citations. One of the reasons why traditional metrics work at all in certain disciplines is that the most significant publication venues in those disciplines are indexed in places like the Web of Science, so that there is a closed circle of citation and publication. But because many of us publish our work as books, chapters in books, in non-impact-factor-bearing journals, or other important venues, inevitably these tools undercount our impact. Partly that means that the work falls on us to find our impact and document it. This is an annoyance but it has both extrinsic and intrinsic rewards.

Here are some tips that I've found useful for finding citations to my work more broadly than would be possible through the traditional indices, using full-text searchable tools like Google Books and Google Scholar:

- Be aware that publications in languages other than English, and indeed, certain whole national traditions, may have different orthographic practices that you'll want to be aware of when searching for citations to your publications.
- The search for citations to your work in footnotes and endnotes can be frustrating, especially in journals and traditions whose publications use footnotes alone (i.e., no formal bibliography) when citing, but almost always worthwhile.
- Abbreviations are a special pain – be aware of, and search for, reasonable abbreviations of the titles of your publications.
- Search for common misspellings of your name and/or your major publications. When your name is Chrisomalis, this is particularly necessary.
- Check indices / databases like Proquest Dissertation Abstracts that index things that Google Scholar doesn't cover well (and most other databases don't cover at all).

Keeping a citation profile

I find it useful to update my 'citation profile' four times a year (at the same time as I update my CV), adding new citations to my work into an Endnote file (there are lots of other ways to manage the task). There are some good reasons to do so. First, it's good to know who's talking about you, for good or for ill. You may learn about a PhD student engaging with your work, or find new material to cite in your next article. Second, as anyone who has ever (ahem) set up a Google alert on their name knows, academics can be a wee bit narcissistic at times. There is a little joy in seeing your name unexpectedly in print. Third, there are other promotions, other jobs, other opportunities that will come up, and so you'll want to treat this as more than a one-time exercise. A citation profile is a mindful habit in self-curation that supports your career narrative.

Beyond 'impact'

A lot of what I've talked about so far has treated verifiable scholarly impact synonymously with being cited in scholarly publication. And make no mistake: I do believe that showing how your work has been cited is something that we can and should do, both in the context of tenure and promotion cases but also more broadly as part of a research-oriented career. But it is certainly not the only way that humanists and social scientists (or, for that matter, anyone else) can or should talk about their work. Thus, it shouldn't be the only way you talk about your impact in your tenure package. Let's have a look at some other things that you will want to talk about in conveying the range of your scholarly impact.

Talking about Money

If you're reading this, you are probably already painfully aware of the disparity in available funding between various disciplines. For a historian, for instance, trying to compete with physicists, dollar for dollar, is a great way to have your research devalued. If you are a humanist or social scientist and happen to be in an institution where the dollar amount of grants is scrutinized closely at tenure time, you have my sympathies. It's no fun to have your work constrained by externally-imposed expectations that the only good research is funded research. But if you're at an institution with significant research expectations, no matter what, research funding counts, although the degree to which it's expected and the way it's evaluated can vary significantly.

A $5000 competitive summer stipend in French literature is small change within the big picture of an institutional budget, but it might matter tremendously for your scholarly trajectory – more so than a $100,000 grant would matter to a chemist. Fair-minded colleagues in the sciences want to see that our work is supported by our peers, and having a competitively funded application matters much more than the amount – but they need to know what it means, and it's our job to explain. If you know what the funding rate is for some successful competition (for instance, the NEH summer stipend funding rate was 9% over the last five years), that is a verifiable figure that will have an enormous effect on even the most skeptical tenure committee.

But probably an even better way to learn to talk about grants and fellowships is to focus on two things: *what it let you do* and *how it can lead to future opportunities*. Here you're moving beyond quantitative material and towards a real narrative of scholarly impact. The key is that you can't assume that your readers will infer your narrative automatically – you need to set it out. It's an argument, a case to be made. And isn't that what we do best? Here, the best case is that it allows you to do more work, whether it has already led to publications or is going to do so in the near future. This is why grant funding is so useful in the life and physical sciences (it keeps the lights on), so your case should reflect a parallel narrative.

Talking about your Reviews

If you have a book published as part of a tenure or promotion case, inevitably you will be forced to think about how to deal with its scholarly reviews. Certainly you should list these on your CV and/or, if appropriate, in material describing and outlining your publications. You should list every review – even a less-than-positive one – for three reasons. First, you don't want some committee member to do a Google search and treat your omission as deceptive. Second, no one is saying you need to disclose the content of every review: if your book is being received and reviewed in good venues, that matters. Third, people who positively review your book are potential letter-writers and you want to signal that to your departmental tenure committee – with the converse being that a negative reviewer should be avoided.

At present, it does not seem advisable to list informal reviews such as blog posts, Amazon reviews, jacket blurbs, or any other sort of reviews of work as part of a tenure or promotion case. To do so runs the risk that you would appear to have nothing else good to say about your scholarship. Reviews that appear in print in venues other than academic journals, however, warrant special attention: if your book is reviewed positively in *Kirkus* or *Choice* or the *New York Review of Books*, for instance, you should sing this fact to the stars, and not look back.

Talking about Mentored Student Research

In large parts of the life and physical sciences, the norm is to publish and present material alongside your postdocs, graduate students, and undergraduate students. But in large parts of the humanities and social sciences, especially where single-authored publication is the norm, the expectation is that graduate students will present their own material at conferences, and your name won't appear anywhere on a project with which you might have played a major role – certainly as much as would count as 'authorial' in another discipline. Just as a humanist might look at a twelve-authored article in *Science* and think, "How can there really be twelve *authors* of a six-page paper?" an engineer might well regard a lack of material co-authored with students as evidence of poor mentoring or unproductivity.

I recommend producing a separate category for 'Student Research Supported' (it could be a standalone document, or a section of your CV) where you list, at minimum, your students' publications and peer-reviewed conference presentations where you played a significant mentoring role. Your job here is to show that you are working closely with students on their research, and to communicate – if not specifics about your role in each paper – at least that there is a body of research on which you do not appear as an author but in which you played a significant role.

Talking about Digital Research

This section is probably already obsolete by the time I'm writing it. Prejudice against articles that don't appear in a printed paper journal (even if no one actually reads paper journals anymore) still exists. To a significant degree, fortunately, the proliferation of digital-only and open access journals has mitigated this (formerly common) knee-jerk response against peer-reviewed online work (Togia and Korobili 2014). However, there are lots of other forms of digital scholarship that you might want to talk about, such as:

- A website for a research project
- An academic blog
- Podcasts, Youtube, other 'new media'
- Student-based online papers
- Non-peer-reviewed online papers

There's a fine line here; overemphasizing this work runs the risk of being read as a scholarly lightweight. But this sort of work is critical to how many of us engage with both scholarly and non-scholarly audiences. It constitutes a large part of the 'broader impact' of our work that funding agencies like the NSF require of us. Some of this sort impact can be handled through altmetrics (see above) such as web page visits, but it's more than that. You need to be able, in your personal narrative, to set out why you do these things in a way that emphasizes the broader impact of this work on your academic trajectory. Did a student's blog post help them get into graduate school? Did a mention on a popular social media site lead to an invitation to participate in a conference or

a grant? Complementing your CV with a thoughtfully-worded document in your tenure narrative can make a real difference, especially in national or institutional contexts where relevance of your work to the public at large is as important as your relevance to your narrow scholarly field.

Summary

Thirty years ago, when the more senior faculty in our institutions were themselves untenured, no one in any discipline measured impact as it is currently measured today. Impact factors were something talked about in rarefied circles, but no one had any idea how important they would now become (Tomer 1986). Thirty years from now, what we do now will similarly seem archaic. There is no eternal, neutral standard for measuring impact in any field.

But we don't live in the past or the future. Noting that scholarly impact is socially constructed is correct (Hacking 1999), but it's probably not what your tenure committee needs to hear to be convinced of the value of your scholarship. We need ways to communicate the value of our work to people outside our disciplines, in terms they'll understand, while simultaneously redefining 'what counts' and how. The goal of this short document has been to reflect on new ways that we can document what makes our scholarship important, in a way that is not only instrumentally useful to us in earning tenure, but also that is personally enriching as a career-long practice.

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Acknowledgements