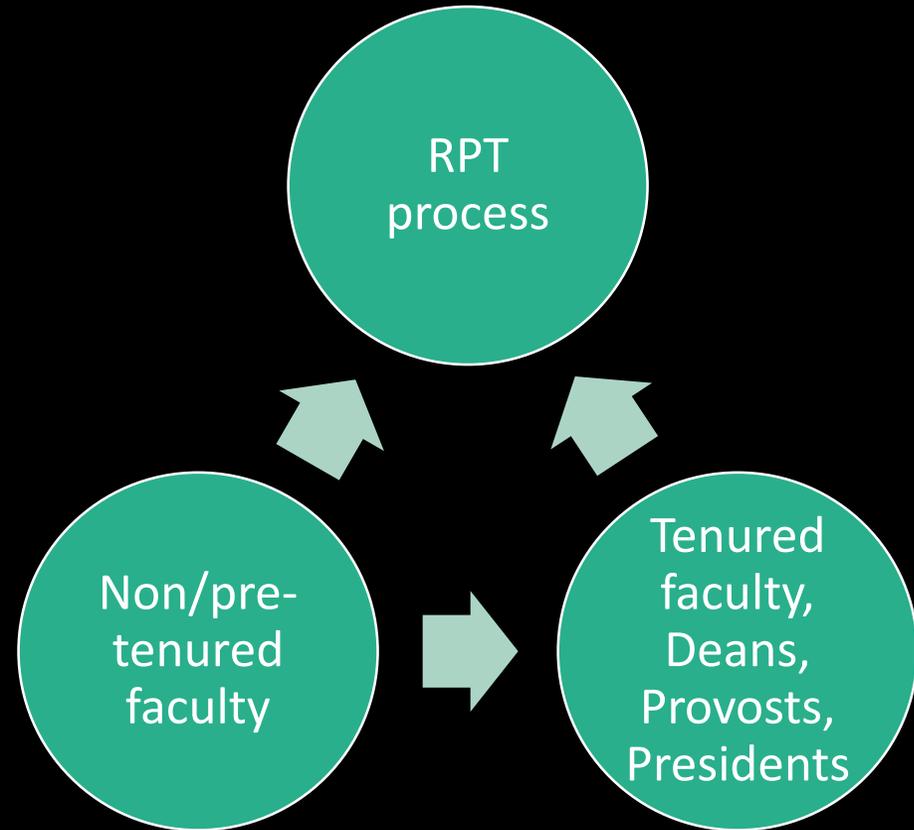# What Will It Take to Advance Open Science?
A Perspective from the Inside

Meredith T. Niles

Assistant Professor

University of Vermont

We Need Top Level Leadership

RPT process

Non/pre-tenured faculty

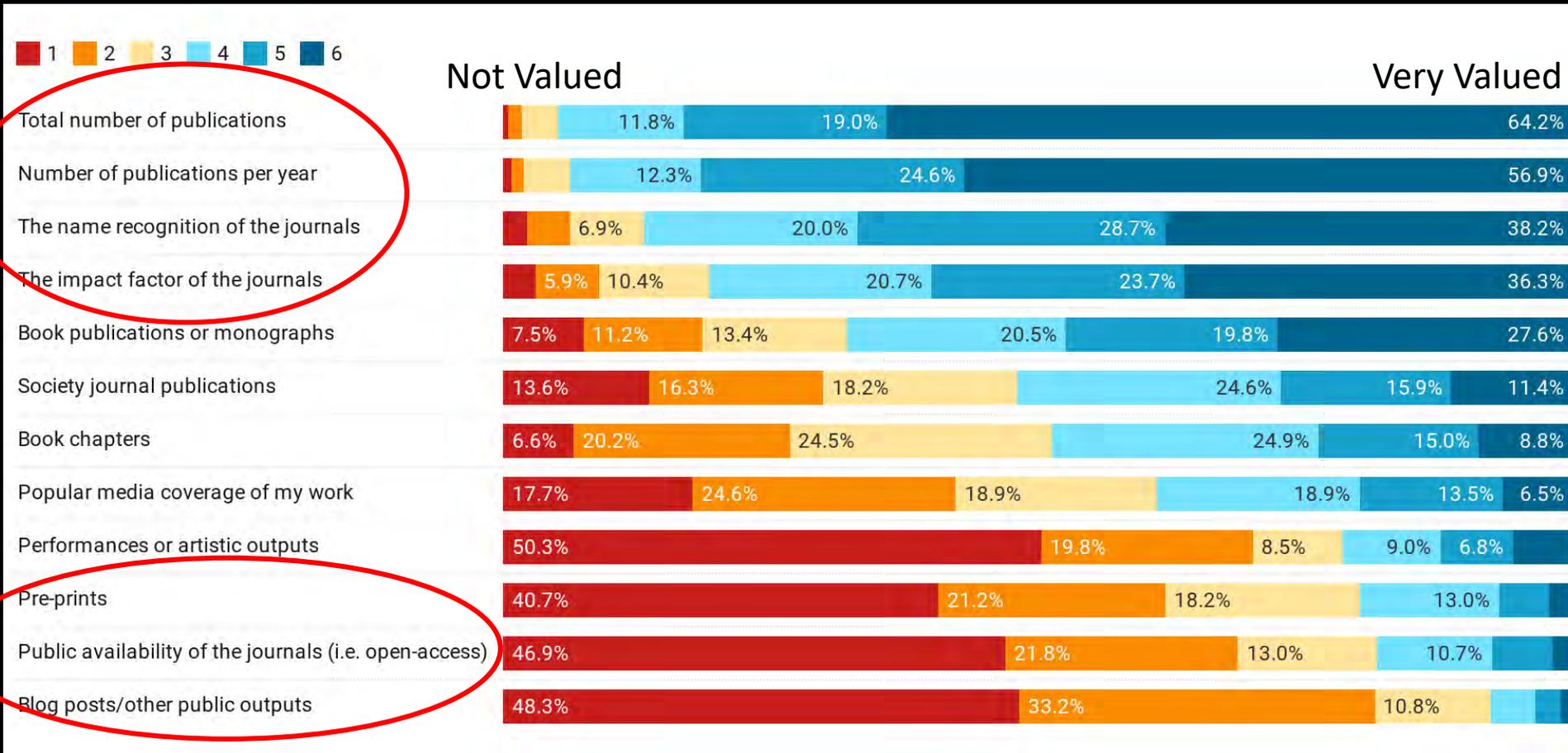**Tenured faculty, Deans, Provosts, Presidents**

"Junior faculty are the only publishers now in my department. They are targeting the best journals in their respective fields.

Tenure is their sole goal."
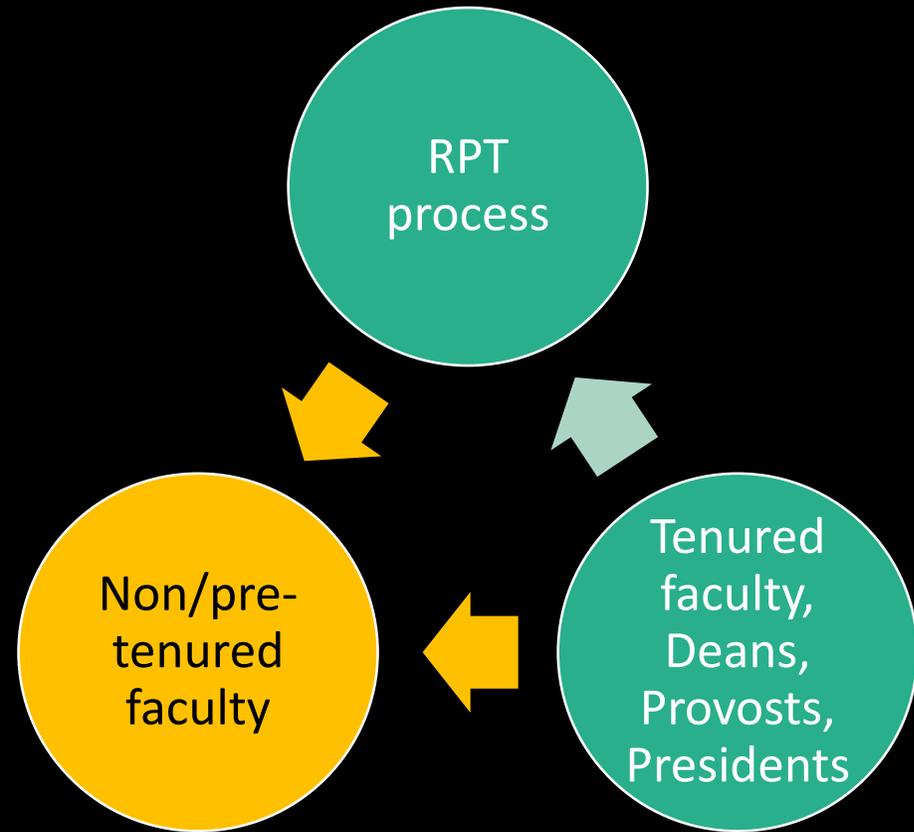
- Respondent from RPT Survey

What's Perceived to be Valued in RPT

Not Valued — Very Valued

Legend: 1, 2, 3, 4, 5, 6

	1	2	3	4	5	6
Total number of publications				11.8%	19.0%	64.2%
Number of publications per year				12.3%	24.6%	56.9%
The name recognition of the journals			6.9%	20.0%	28.7%	38.2%
The impact factor of the journals	5.9%	10.4%		20.7%	23.7%	36.3%
Book publications or monographs	7.5%	11.2%	13.4%	20.5%	19.8%	27.6%
Society journal publications	13.6%	16.3%	18.2%	24.6%	15.9%	11.4%
Book chapters	6.6%	20.2%	24.5%	24.9%	15.0%	8.8%
Popular media coverage of my work	17.7%	24.6%	18.9%	18.9%	13.5%	6.5%
Performances or artistic outputs	50.3%	19.8%	8.5%	9.0%	6.8%	
Pre-prints	40.7%	21.2%	18.2%	13.0%		
Public availability of the journals (i.e. open-access)	46.9%	21.8%	13.0%	10.7%		
Blog posts/other public outputs	48.3%	33.2%	10.8%			

- Older faculty were more likely to value blogs, book chapters, performances, and open access journals*
- Tenured faculty were more likely to value books and book chapters*

*$p < 0.05$

Niles, M.T., Schimanski, L., McKiernan, E., Alperin, J.P. 2019. In Review. Pre-print on Biorxiv.

We Need Top Level Leadership

- **Change RPT documents**
  - 40% of RPT documents at research institutions use impact factor- 87% of those were positive[1]
  - 5% of RPT documents mention open access- majority were negative[2]

- **Open is HARD. Make it EASIER.**
  - Faculty will NOT upload articles into repositories on our own
  - Faculty (generally) have no idea how to curate data or understand federal mandates
  - Open access fees are often not possible

RPT process

Non/pre-tenured faculty

Tenured faculty, Deans, Provosts, Presidents

1 McKiernan, E., Schimanski, L.A., Nieves, C.M., Matthias, L., Niles, M.T., Alperin, J.P. 2019. eLife.
2 Alperin, J.P., Nieves, C.M., Schimanski, L.A., Fischman, G.E., Niles, M.T., McKiernan, E. 2019. eLife

Change the Culture- "It's Not Me, It's Them."

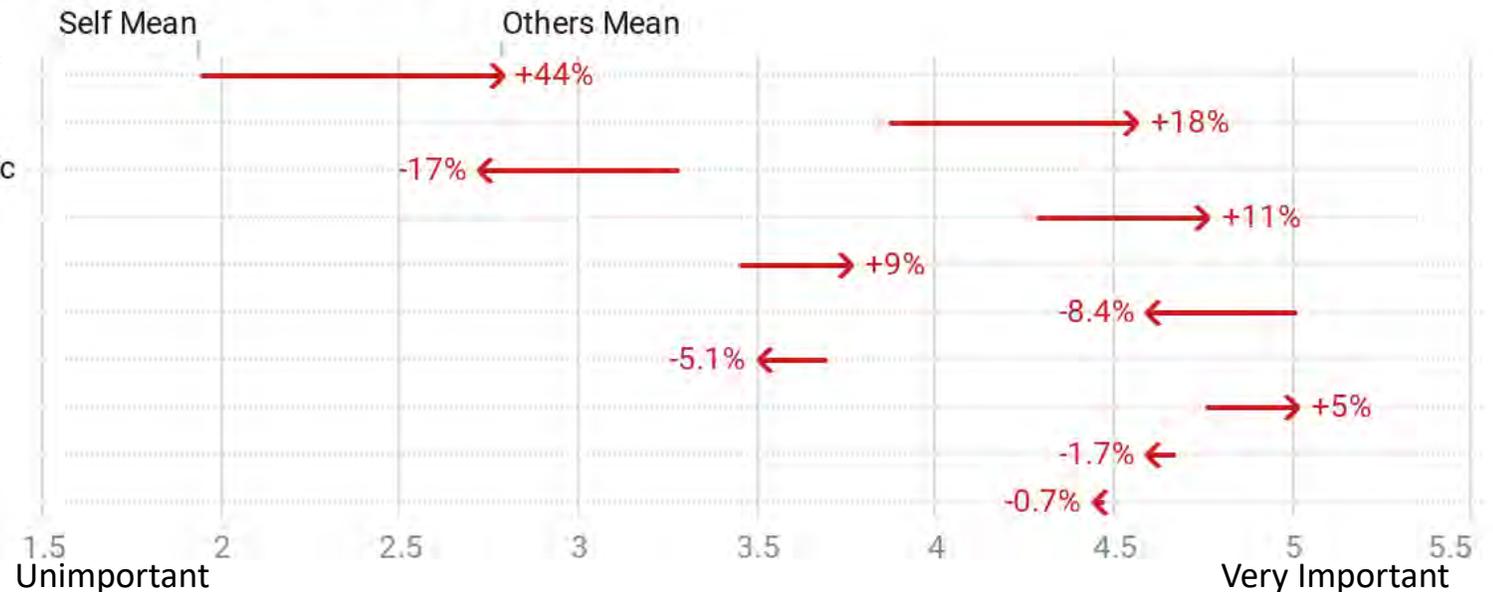**Top 3 publishing factors (for myself)**

- Readership I want to reach
- Overall prestige of the journal
- Journal my peers read

Top 3 publishing factors (for my peers)

- Overall prestige of the journal
- Impact factor of the journal
- Readership they want to reach/ Journal my peers read

Difference in Publishing Decisions Between Self and Others

	Self Mean	Others Mean
Receive direct support (e.g., money) for pubs in specific journals *		+44%
How often the journal appears to be cited *		+18%
That the publication makes my article freely available to the public	-17%	
Impact factor of the journal *		+11%
Journal of a society to which I belong *		+9%
Has a readership that I want to reach *		-8.4%
The cost (or lack of cost) to publish		-5.1%
Overall prestige of the journal/publisher/venue *		+5%
Journal/publisher/venue that my peers regularly read		-1.7%
Journal/publisher/venue that I regularly read		-0.7%

1.5 — Unimportant 2 2.5 3 3.5 4 4.5 5 5.5 — Very Important

* $p < 0.05$

Change the culture- Tell Faculty The Real Cost

"No one would submit their work where they had to pay to have it published. That's lunacy."
– Respondent from RPT Survey

- If we want to change the funding models, we need faculty to care.

- Provide resources and funding to analyze the cost per use and communicate it

- Technology to educate in the moment faculty want an article?

What We Can Do (And You Need a Coalition*)

i. Peer Reviewed Contributions

List all works reviewed prior to publication by peers / editorial boards in the field, such as journal articles in refereed journals, juried presentations, books, etc. Indicate up to five of the most important contributions with a double asterisk and briefly explain why these choices have been made. Include a description of the stature of journals and other scholarly venues and how this is known (e.g., impact factors, percentage of submitted work that is accepted, together with an explanation of the interpretation of these measures).

- Change the Form(s)*.

- Make Open Easier- Everything needs to be simple. Or take it out of faculty hands altogether (unless you change the form).

- Help us talk about what we really value.

- Tell faculty what it costs- (and flip the models)*.