

Editorial

Zoom Fatigue, Hyperfocus, and Entropy of Thought

OK. I am getting sick of this lockdown and prohibited travel. I miss interacting with authors. I miss the meet-the-editor sessions at conferences. I miss the crappy coffee and over-priced drinks at the lobby bar (usually whisky). One of the benefits of this position was the opportunity to discuss science, and now that is... restricted. Quarantined. Ugh.

Sure, there are plenty of Zoom meetings and webinars to attend. If anything, the pandemic has exposed some of the bloated nature of scientific conferences, with high travel costs, high registration fees, and hundreds of folding chairs in neat rows, not to mention the environmental impacts. There are definitely benefits to an online model—I personally have given talks across multiple time zones for an audience of thousands of people, all from the comfort of my own home, pants optional (no worries—I was wearing them). Virtual symposia and online presentations are definitely the *plat du jour*.

There are ruminations of a tipping point: the shift to online models and virtual conferences persisting beyond the pandemic. Indeed, major 2020 conferences have pivoted to virtual mode, and their success (be it attendance or registration fee based) will serve as a trial for future online endeavors. Hopefully, the near future will introduce more robust platforms (Zoom 2.0?) with conference-specific features. For example, options for real-time polls, more seamless audience engagement, or integration of more dynamic presentation materials (i.e., not limited to projected PowerPoint slides). Maybe an option to kick the presenter offline via a majority vote from set judges, like on *America's Got Talent*. More seriously, I'd like to see a virtual lobby—where attendees can sneak out of the talk to converse with each other, perhaps with the main presentation playing in the background.

With zero travel costs and ability to scale, there are clear benefits. In the distant past of physical conferences, maybe a PI could attend and bring along a postdoc or senior graduate student. Online, entire research groups can host viewing parties around a symposium. Each presentation can be recorded and potentially viewed in perpetuity. I vote for an academic version of *Netflix*—an online repository of presentations. Then, you could binge a “season’s” worth of talks. Sign me up!

At the same time, as we move to the new socially distant normal, there are constant laments expressed about “Zoom fatigue”. I recommend that you Google the term. It has been discussed by Forbes, the BBC, and National Geographic, among other outlets. Personally, since quarantine, my workday has (1) been much more structured and (2) seems to be saturated with online meetings. What once used to be a “drop by your desk” chat has turned into “schedule a 30 min Zoom”. And since the agenda is attached, and everyone has the next Zoom to attend, these meetings seem more hyperfocused than their in-person equivalents; they force us to concentrate more intently on conversations in order to absorb information and feel like constant surveillance through a modern telescreen. They are exactly a meeting version of the “zoom” function on a camera lens, which by definition narrows the field of view but increases the detail. This is good for productivity I guess, but it sucks out much of the humanity and office camaraderie. It’s draining.



Back to conferences, online efforts are evidently useful and can complement in-person meetings. No doubt, the 10,000+ mega-conferences could use a restructuring. But there is something about online-only that puts anxiety in this Xennial (I fall somewhere between Gen-X and Millennial... don't hate). Like my daily Zoom meetings, I believe the virtual conference model is too focused.

If you attend a conference and spend all the time sat in a chair listening to speakers, you are missing out. Sure, you get all the technical information, and some of that may be useful and spur some ideas, but it is narrow perspective, like the Zoom webinars. I imagine very few conference attendees walk straight from a hotel room to a symposia session, listen to the talks, and then walk immediately out of the conference. This would be silly. A waste of registration fees and travel costs. Yet, that is exactly what we do when we close the Zoom window—virtually walking back to our hotel rooms.

When I was active faculty, I hated those 30-minute one-on-one research meetings—the kind scheduled for visiting researchers who wanted to meet and greet the faculty (we've been on both ends of the meeting, acting as both the visitor and the host). Regardless, the meeting typically consisted of two PIs sitting at a desk, pitching research to each other. It offered great insight to their work, and an associated business card to add to the collection, but little else. No new ideas, no creative tangents.

It is not a novel opinion that the benefit of conference gatherings occurs outside the speaker sessions. They are complementary. Those one-off discussions in the hallways of Exhibit Hall B, a small gathering of researchers shooting the breeze. These conversations are typically not about the Yankees or Manchester United (although that happens), they are usually about science and research—faculty and PIs can't help themselves. Frequently, sessions are skipped to “grab a coffee,” and the conversations continued, sometimes followed by dinner, invited colleagues, and gatherings at the hotel lobby bar. It sounds like a vacation, but there is a lot of idea exchange. When I used to start traveling to such conferences, my wife once carped that I was lucky to eat out with peers every night, having fun—I assured her it was closer to work than fun, as the dinner conversations revolved around molecular dynamics simulations and various atomistic water models (true story). Little did she know that to an academic, discussing science *was* fun (*shhhh*).

In my current role as editor, the social aspects of conferences are even more important. The talks typically only present what you have published (with maybe a new result sprinkled in here or there). I want to know what you *plan* to publish a year from now. What are you working on that will be groundbreaking? I'm not interested in citing your prior works (anymore). My conference days are typically filled with meetings over coffee and manuscript pitches in the hallways, outside of the speaker sessions. I bounce from session to session, trying to glean the most exciting topics, and extend discussions beyond what is presented on the slides. It's caffeine-fueled information overload—but exciting! I see a vibrant community with lots of ideas and exuberance (maybe not so much on day four of the conference). This is the science I enjoy—the sheer magnitude of fresh ideas and melting pot of creative ideas.

The point is that ideas and discussions are much more mutable during these informal discussions and meetings. You enter a symposium on topic X, you may learn a lot about topic X. Go out to dinner with experts in X, Y, and Z, and you come out with a fuzzy head full of new ideas (and potentially a hangover). In less formal situations (i.e., “beyond the slides”), researchers describe their works in completely new ways—perhaps a small story describing how they came with the idea or talking about

a complete catastrophe in the lab. The science is there, but it's told through the eyes of an individual, not a paper or PowerPoint. I personally find this mode more interesting.

Science should have personality. It is not too serious for a little levity. Sometimes it helps get the point across. If you have been following my Editorials, you know I try. At the same time, we should feel comfortable to lose some focus sometimes—a little entropy of thought. Let your mind wonder, consider things outside the box, and brainstorm in a judgement free environment. The type of discourse facilitated by in-person conferences and (currently) lacking in the virtual model.

If you see me post-pandemic hanging out at the conference hotel lobby bar, feel free to introduce yourself. I'll buy you a drink, and we can discuss science for fun—even if we have to maintain two meters social distance.

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