

# Wai Chee Dimock, John Plotz, and Colin Milburn on the litera...

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## SUMMARY KEYWORDS

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## SPEAKERS

Wai Chee Dimock, John Plotz, Casey Wayne Patterson, Colin Milburn, Margaret Cohen



Casey Wayne Patterson 00:06

Welcome, and thanks for joining us in this episode of Cafe, the Stanford Center for the Study of the Novel podcast. In this installment, our host Margaret Cohen is joined by guests Wai Chee Dimock, Colin Milburn and John Plotz to discuss the place of climate change in contemporary speculative fiction. Wai Chee Dimock is William Lampson Professor of English and American Studies at Yale University. Colin Milburn is the Gary Snyder Chair in Science and the Humanities at the University of California, Davis, with appointments in English, Science and Technology Studies, and Cinema and Digital Media. John Plotz is a professor of Victorian literature at Brandeis University, and a fellow at the Radcliffe Institute for Advanced Study at Harvard University. This conversation was recorded on May 23 2019, shortly before our guests gave papers and a panel titled "Speculative Fictions: Possible Futures for the Planet." We're thrilled to be sharing this conversation with you, so thank you again for listening in as we scholars have a friendly chat among ourselves.



Margaret Cohen 01:12

I'm hoping we can have a conversation about the role of narrative in climate change and our current debate about it. So as the French would say, sans etre indiscret, what were you guys talking about breakfast?



Colin Milburn 01:26

We were talking about--one conversation that I really liked, Wai Chee, when you were talking about people who are thinking about programs that merged together science and humanities departments.



Wai Chee Dimock 01:37

Yeah.



Colin Milburn 01:38

I know it's something you'd like to write about. But so, ways in which you can imagine, yeah teaching people how to write for the sciences, or the earth sciences, I think wasn't that--



Wai Chee Dimock 01:47

Right, well, environmental humanities--



Colin Milburn 01:48

Environmental humanities, and in a way that actually takes advantage of what humanities...



Wai Chee Dimock 01:52

Yeah, I mean, actually, I think that in some places, it's been demonstrated, you know, in terms of enrollment, that getting narrative and thinking about the environmental future, is a great way to attract students. This will be creative nonfiction, and students will be writing, they will be research based, they have to learn a lot of facts about climate change, and imagining what futures there might be for all of us. I mean, it is writing, there's no question about it, it is narrative writing. But it is completely dependent on some, a) the ability to do research, and to discriminate among different kinds of evidence, and also to weave everything together into an interesting story. So it's great training for the students, you know, all around. And it's a great way for English departments to get into the [...]



Margaret Cohen 02:45

I'm wondering if you received a paper or if there's one example of something that stands out for you and your work?

W

Wai Chee Dimock 02:53

I haven't, you know, I was thinking of trying to do that, but I haven't done it myself [...]. One is just kind of a personal anecdote, you know, that just heard from someone who taught a course, using exactly the same method. And she said, "it will be this way." But I think that at Illinois, Urbana Champaign, they actually have an environmental writing program, that is a certificate program, and it's what is keeping the English department alive. It has a lot of recognition about undergraduates, because that's a program that they want to get into, it's a certificate program, both for undergrads and for grad students. So really, it has lots of appeal at different levels of teaching, and is a great way to put English at the center of lots and lots of, you know, intellectual and institutional traffic.

C

Colin Milburn 03:45

It really does seem that these interdisciplinary programs that bring together the humanities and the sciences are increasingly popular among students, not only environmental humanities, but medical humanities programs, I see students really flocking towards those programs, because they're, they have a sense of the utility of having skills trained in the humanities, in the social sciences, in data analysis in some quantitative skills that they can then have tremendous flexibility going forward. And of course, they care about the future of the world as well. So these programs often appeal to a wide number of student concerns.

W

Wai Chee Dimock 04:20

Yeah. And I think the public university is actually leading the way. I mean, they're just that much more innovative, just compared to--they're much more innovative in thinking about ways that can speak to the students, to the parents, but also intellectually exciting, you know, seems like something new that the students can do.

M

Margaret Cohen 04:38

And I also think what you said Colin, it's their future. They I mean, they feel very keenly that this is a problem that they need to be involved in and they need to solve.



Colin Milburn 04:50

the other aspect of it that I was thinking about when another thing we were talking about at breakfast was about, that where you see increases in numbers of humanities, it's often in the creative art. So, to use another buzzword, "content creation," they're less interested in analyzing the works of the past than they are figuring out the shape of what it is they're doing. And I mean, my experiences teaching like a science fiction class or a fantasy class, the moment that you give them space, to do their own thing, that's, you know, that's when the eyes started sparkling. So how did that, you know, how do we harness that energy? I mean, given that we're not going to turn into Creative Writing departments, but how do we, you know, keep that content creation part as consistent with our mission to get people to think realistically, or...



Wai Chee Dimock 05:32

I mean, I think that maybe one way, and that's why, you know, I call myself a coward, because it did occur to me that the paper assignment, as is currently constituted, might not be the best. Maybe it shouldn't be the only way to educate students. So maybe instead of assigning three, you know, traditional papers we can assign two and then have one that is the creative nonfiction writing.



John Plotz 05:55

I talked to a historian of science, who has them do podcasts, essentially responses, do you do this too?



Colin Milburn 06:00

I also do podcasts I also sometimes give them the option to make games, whether video games or some other alternative assignments, and I do find them responding in ways that we would call "nonfiction" but in very creative fashions. They're analyzing cultural materials. They're analyzing social and political issues, but in the form of a great creative multimedia framework. And that that does seem to inspire them in ways that the traditional paper



John Plotz 06:23

Yeah, I'm gonna try that. I was totally excited by that. Yeah.



06:26

So is there lab, IT lab at UC Davis that will help students do the--



Colin Milburn 06:33

Yeah, at Davis, we--so I run Media Lab called Mod Lab. And so we, through that lab provides services for students in the courses that are run by the faculty and grad students affiliated with that program. The university itself doesn't necessarily sponsor the university-wide service center. I know some universities do with this kind of this so at some campuses, I think that's probably easier to activate than others.



Wai Chee Dimock 07:00

Yeah. So I mean, so is this, this is funded by which department? I mean, how much funding does it require?



Colin Milburn 07:06

So funding in my case is often coming from external research grants.



Wai Chee Dimock 07:12

Well, that's interesting, actually, maybe maybe even talk about that.



Margaret Cohen 07:14

I did want to ask you about your Mellon grant and your experience learning to code?



Colin Milburn 07:20

Oh, well, yeah.



Wai Chee Dimock 07:21

Oh, that's wonderful.



Colin Milburn 07:22

The Mellon Foundation offers this wonderful fellowship for what seems to be primarily

aimed at mid career faculty in the humanities to retrain in a different field in order–

**W** Wai Chee Dimock 07:33  
I've heard about that, yeah, yeah, yeah.

**C** Colin Milburn 07:37  
So I been working in digital humanities and critical code studies for a little while that I am feeling, especially running this media lab that a lot of computer science students who are coming to work in the lab with me, were operating at a level that was just well beyond my capacity to helpfully engage with their work. So I needed to go back to school. And so that foundation enabled me to take a year of taking courses in computer science and I learned much more than I had known before. And I feel I left that year feeling very, very confident in my capacities as a programmer and to be able to talk to the graduate students and the undergrad students in the computer science fields.

**W** Wai Chee Dimock 08:19  
You know, it's not uncommon now for the richer of professors to take a year off and get some kind of degree in computer science. I mean, I think that maybe [...] was doing something similar? What courses did you take in computer science? I mean, that seems like a year is a long time, right? I mean, you should be learning a lot.

**C** Colin Milburn 08:37  
Yes, yeah. In my case, even though I had a little bit of basic coursework in computer science, I actually did start again, with some introductory courses just to sort of refresh my capacities and some of the computer languages that I had learned back when I was an undergraduate or not the ones that are standard, a lot of the curriculum. So that was also a reason to start with the, the sequences as if I imagined myself as an undergraduate students [...] and having the luxury of being a lifelong student and learner, I was able to learn a little bit more rapidly than perhaps a lot of undergraduates who are encountered for the first time so--

**W** Wai Chee Dimock 09:20  
So you were in class with a lot of undergrads?



Colin Milburn 09:23

I was in class with undergrads, and I was also in online courses. Yes, which turned out to be fantastic. I've always been rather skeptical of moves to online learning. And I am afraid I've had to eat my words a bit, really and retract my criticism. Because many of those courses at least when it comes to computer science, and I think online learning works really, really well.



Wai Chee Dimock 09:44

So can you talk a little bit about them?



Colin Milburn 09:48

So for example, in a lot of the--and this I think it's true of the number of campuses--many of the introductory courses are offered online so the students will register, they have a series of video lectures that are offered by the main instructor for the course, they have a textbook, there's usually an army of teaching assistants who are available in some cases around the clock to help students virtually when they need help that the students work through their assignments online. And when they do coding exercises online, the courses are set up such that the rating and evaluation of the codes that students submit is evaluated automatically, a system can look at the code that the student has submitted and in the case of the courses I took, the system was designed to help pinpoint areas where things might have not been working quite successfully in the code and never gave you the right answer immediately, but have suggested areas where you as the student needed to look to hear your code. And I felt that was a really great way of learning. Because if it helps guide you to figure out where you are wrong. And then in order to move on, you still had to learn what right how to make it work correctly.



Wai Chee Dimock 11:02

So this automated right?



Colin Milburn 11:06

Aside from the fact that we're human teaching assistants, some where in the back, and they'll answer questions, the rest of the course was completely automated.



Wai Chee Dimock 11:14

There must have been some incredible software that was able to do that.

- C** Colin Milburn 11:17  
Yes, yeah. And I think that it, it's not going to be the case for much more advanced algorithm research, but it's certainly for kind of introductory courses and doing testing of code for errors and bugs.
- J** John Plotz 11:32  
So was there a lecture component?
- C** Colin Milburn 11:33  
Yes. But they're video lectures.
- W** Wai Chee Dimock 11:35  
Yeah, yeah. This lectures are really deemphasized, right? Yeah.
- J** John Plotz 11:39  
Do you meet your classmates at all?
- C** Colin Milburn 11:41  
I never met them in person. Yeah, I often had conversations with them. So some times those were really wonderful learning experiences as well, because of course many of the students are struggling with the same questions. And then yeah, you know, you'd log on midnight, and there's 30,000 other students who are also logged on. One of the classes I took had 30,000, 60,000 students enrolled from around the world, simultaneously. But did you interact with them?
- W** Wai Chee Dimock 11:47  
At MIT?
- C** Colin Milburn 11:50



Yeah.

**W** Wai Chee Dimock 11:54  
Wow. 60,000.

**C** Colin Milburn 12:12  
They're all available to help each other.

**J** John Plotz 12:14  
How on earth can they have TAs for 60,000 people?

**C** Colin Milburn 12:14  
So I have--

**W** Wai Chee Dimock 12:17  
What is, what is the name of the course?

**C** Colin Milburn 12:19  
This, this one was called introduction to computational--computation and data structures using Python.

**W** Wai Chee Dimock 12:28  
So is Python the language that you learn?

**C** Colin Milburn 12:30  
I learned Python, and c, c++, C sharp, and R.

**W** Wai Chee Dimock 12:37  
You know, you have to tell the story to me.

**M** Margaret Cohen 12:39  
Yeah. it's greek to me.

**C** Colin Milburn 12:41  
So Python is a really useful first computer science language to learn because it is quite human-readable, but it's also very, very technically efficacious, you can do a lot of very advanced things with Python. But students who are still coming to grips with the formalisms of computer languages are able to get a grip on Python relatively quickly. So it's often taught now in many universities as, as the first language, and for many programmers, it remains a favorite language like very, very advanced programmers, they continue to use it for a huge number of applications that have improved.

**J** John Plotz 13:27  
So can I take a step back and ask, like in terms of how we think about, like, you talked about being initially really phobic about online classes and how you had to eat your words. I'm not yet at the word eating stage, I'm still just phobic. So to hear, you know, like, it seems like there's a few different ways to think about this. And I'm wondering, which is the best way, and one is the distinction I've heard made by people who look at something like the Khan Academy, which basically says that online is good for anything understood as training. But to the extent that you actually get education, like advanced algorithms, I heard you say, then you can't do online. So that's a model that just says, This is basically, you know, the commodified labor of training instruction we can do, but the higher, classier sort of teaching...But, but that's not exactly what you're actually saying the algorithm did a lot of the teaching.

**W** Wai Chee Dimock 14:17  
Yeah, it's a better teacher, in some sense.

**C** Colin Milburn 14:20  
Yeah. But I don't think that is transferable across all domains. And they also don't, I think it's probably most strongly effective for introductory computer science. Yeah. I do agree with that assessment. Yeah, their education may in fact, be somewhat different. And I am I still remain skeptical that it can be adopted as a model for humanities instruction, like who knows, maybe maybe at some point algorithms will be able to be very, very good writing trainers as well, but I don't think we're quite there. Do we have a professional

deformation, which means we're always going to over estimate the humanist--like the amount of value we are adding to the classroom?

**W** Wai Chee Dimock 15:03

Yeah, yeah. But But I want to hear more about the contents of what you learn, you know, I mean, how is Python? How would you rank Python in relation to the other languages that you mentioned? I mean, what are some of the disadvantages of Python that will make people want to turn to other languages.

**C** Colin Milburn 15:21

So there are industry standard languages used for different different purposes. And different platforms will often be pre adapted to different languages. So for example, Video game programmers who use unity as the game in general, C sharp is the language that you need. There's ways translating language, one language to another. But generally, if you're writing in a way that all contributors can, that their functions are harmoniously, meshing, well, and then some languages are well suited for some tasks better than others. So R for example, is very, very good for doing statistical work for digital humanities work that's based upon the quantified analysis of text mining, like R is a really rich for doing that, it's also very quick and easy to learn how to use

**W** Wai Chee Dimock 16:18

Right, well, I take it that for you, data mining might not be the primary focus for you, right? For me, not to do that work myself. But sometimes I'm interested in reading the scholarship and then...

**M** Margaret Cohen 16:31

So John, I'm going to put you on the spot. If you got a Mellon grant, and you could go back and or go and spend a year getting educated in a really radically different discipline related to your research, what would you do?

**J** John Plotz 16:45

So I have done two different things. One, Brandeis is this great, small place, so it's very easy to hop from one lecture class to another. So I've, I've sat in on neuroscience graduate classes, which I love, not because I want to learn to be a neuroscientist, but I like learning how scientists think. So those are, those are basically Journal Club classes. But I think

that's not a good answer for your question. Because there's no way either that I could learn enough to practice. So the other type of class that I sat in on is linguistics. So I think for me, it would probably be linguistics. Yeah. I mean, because I think of because I think of what I do as a form of aesthetic history. And I think I understand the history methodology, I feel pretty good about it, but I think that aesthetic seems to be rooted in aspects of language that I don't understand all the way down. So I feel like I can understand how a line of poetry works. Like I may be okay, on the semantics level, but get below that, and it becomes like a black box, and I would like to know more.

W

Wai Chee Dimock 17:42

Linguistics seems to be spearheading a lot of, kind of, kind of empirical, you know, to extent that we still, you know, believe in that word, of empirical research in terms of just getting us to think more about languages that people think is being extinct. I've just done a new column on the contribution of linguistics to indigenous languages. And that actually is so important to, you know, thinking about the environment as well, because suddenly, Native Americans have been, have been so important, you know, in getting us to think about the environment, both in terms of the future, but also in terms of past and, you know, just the history of land use or even healthcare. So, you know, getting us to think about indigenous languages from the perspective of linguistics is very, very different from thinking of it in terms of English.

M

Margaret Cohen 18:36

Yeah, you're reminding me of a conference I was at in Utah, in February, about the oceans that was really, really interdisciplinary. And so there was a paper that was given about essentially the failure to bring together indigenous knowledge about the environment and contemporary science. And it found really interesting listing, it was by a professor whose last name is Ikou, I have to look for her first name, who was teaching University of Hawaii. And she talked about bringing together someone who had Hawaiian knowledge of marine climate and marine science, a graduate student with someone working in you know, 21st century Western paradigms and trying to see what they had to say to each other. And one of the, I thought, the most moving and like honest parts of her paper was, it was really hard And I kind of want to just put that on the table.

J

John Plotz 19:32

Margaret, I'm actually meant to ask you whether you've read Christina Thompson's new book, Sea-- Sea People?



Margaret Cohen 19:38

[laughter] Calling me out! Of course not, I haven't read it yet, the answer is no.



John Plotz 19:38

It just came out! But I loved it. It's amazing, but it's about that. It's about--first of all, it's about Butler library or Butler Museum, which is obviously in Hawaii, which is one of the hotbeds of putting those languages, those different cultural encounters on the table, but it's also about, you know, Cook. Cook had this friendship with this guy, was his name...



Margaret Cohen 19:49

Tupaia.



John Plotz 19:56

Tupaia! Tupaia, right, exactly. And you know, they made a chart together, which people have been puzzling over ever since because it clearly contains some Western ways of depicting the islands, but other ways which, Polynesian ways of thinking, right, about sea currents, and also we're stars rise and fall. But the map itself is virtually unreadable because it represents this collision of these two different modes. But, but there's a great chapter about linguistics as well. Yeah. Because all the Polynesian language related to one another and you can make a kind of genetic tree, of like, you know, you can tell that people got to New Zealand last based on like, linguistic...



Wai Chee Dimock 20:38

But also, I think that there's this great repository for thinking about food. I mean, I think that one of the ways in which Indigenous Studies is going forward, is to link up with food studies. So at University of Washington, they seem to be emphasizing with indigenous indigenous language is really important. food sovereignty is an important aspect. So that has laws of public health implications. And I think that, you know, just from the kind of attention that's given, you know, to the sous chef, you know, just alternative to ways of celebrating Thanksgiving, or just thinking about the human / non human interaction, in terms of how we think about food, you know, both the economy of food, but also the ecology of food. So that would be one way in which Indigenous Studies can be deghettoized? I mean, you know, I don't think that it's a good way to go forward thinking that okay, only Native Americans would care about Indigenous Studies. Yeah, you know, it really should be something that everyone should care about.

M

Margaret Cohen 21:42

I guess I want to come back to the question of difficulty, though, we're talking across the science, humanistic or anthropological divide, because it's a really hard divide to cross. And maybe our current moment with the way in which narrative so involved in climate change gives us an opportunity to reach out and speak with scientists in a way that 30 or 40 years ago, may have not interested the scientists. So I'm wondering if you've had experience with that and could talk a little bit about impasses and potential ways forward?

J

John Plotz 22:19

Well, can I just say, really quickly, in terms of the timing of it, I just think like Colin, I was reading one of your chapters recently, and you talk about these early hackers who are reading the E.E. "Doc" Smith, is that right? Those sort of space opera sized, sci fi, the Lensman. I was thinking, "so that's probably 40 years ago." But there's an even longer tradition where science fiction, you know, science fiction has to do with scientists, like Fred Hoyle, right? So I actually one of the reasons I like science fiction is that it doesn't seem to me necessarily just at the present moment, but like, throughout the history of science fiction, it's been a kind of complicated messy--it's a contact zone, actually. So yeah, in the sense of that, you know, the Mary Louise Pratt notion of like the site of conflict. So you get a lot of messy, you get a lot of bad experiments, you get a lot of failures, you get a lot of things that are like Olaf Stapledon that people loved at the moment and then disappear again. But you also get Frankenstein or, or HG Wells where there's clearly you know, I mean, it's very important, I think, that Wells was one of the first students of Huxley at the museum school in Kensington in the 1870s, that's not just pure coincidence. Like, there's spaces that open up constantly.

W

Wai Chee Dimock 23:31

Absolutely. I happened to mention to my downstairs neighbor, who is a software engineer at Google. Anyway. So I mentioned that I'm going to talk about The Three Body Problem. And it turns out that he has heard of the book. I mean, he just hasn't, he hasn't read it. But there was this discussion, actually, there was a lunch thing, apparently, at Google, about this book. And they have host speaker series of inviting authors to come and talk about books, and this will be the book that they'll be talking about. So and I think that, um, you know, sci fi, absolutely, it's the one, its a really key contact zone, between humanists and non humanists, in fact, I think that Stanford can really spearhead this, you know, and get in touch with Silicon Valley and just to team up with them, just to make sure that, you know, we have some kind of partnership. I think that in terms of university administrations we, one way to demonstrate to them that, you know, we actually think in terms of

partnerships, because I think that the, the currency is innovation and partnerships. So.



Margaret Cohen 24:34

Have you done a pmla column on this?



Wai Chee Dimock 24:37

I haven't. I haven't, I'm thinking of doing one. Yeah. I did do one on on the data refuge movement, at Penn, which is led by librarians who wants to save climate data. So that was featured. By all media. I mean, it was Washington Post, everything, New York Times, everything. WHY magazine, read your article. And it was bringing together the Union of Concerned Scientists, librarians, from Penn, lots of librarians from Toronto as well, which seems to be a really important hub for this kind of thing. And plus all the people capable of doing online archive, archiving, because what happened was that they were afraid that the Trump administration was just gonna go ahead and make the EPA erase a lot of important climate data. So it's really important to make a copy of the available web pages, the scientists consider important. And it is not the kind of archiving that we're equipped to do, right, because you need to, to be able to do online archiving. So it's primarily librarians who have some kind of technical training, who would be able to do that, and plus, you know, whoever is willing to learn, you know, may really take some kind of self education, new kind of education, to be able to do this kind of work. But this is one very concrete area, once again, the humanists, and scientists will be working side by side.



Colin Milburn 26:03

And in relation to that kind of work archiving of data or data science in general, this is an area where humanists and literary scholars in particular, I think, can contribute a lot. And to help scientists who often are looking for this kind of collaboration. There's a recent semi recent field called Data Storytelling, the data science...



Wai Chee Dimock 26:21

At Penn too, right?



Colin Milburn 26:23

Yeah, it's spreading as a concept. And so the idea often coming down to: that data doesn't speak for itself. And data always needs to be communicated effectively amongst peers in the research field, as well as to broader public constituencies. And so data

storytelling is a way of emphasizing that the notion that narratives are the things that convey meaningfulness to, to data and make data communicable that make data impactful in the world, and who better knows how to talk about narratives than literary scholars.

J

John Plotz 26:58

So I, I get that idea. And I like it, and I'm in favor of it and all that. But the thing that is interesting to me talking to scientists, is that is that most people that you talk to, in that context, understand that as a "communicating to the public" question, whereas to me, when you think about the work of somebody like Edward tuft, it's actually not just about the outward facing presentation of the results. It's that actually like, in your poster your sessions, for example, which scientists do all the time, that actually putting together the narrative, I don't know, in house, I guess is the right word. You know, when you're still talking to the group, not the audience, like you're still in the phase of working through the problem. Like in other words, you need a conception of narrativity that isn't just PR.

W

Wai Chee Dimock 27:00

Yeah, it's a conceptual tool.

J

John Plotz 27:17

Yeah. It's a conceptual tool. Right. And this is formative assessment. Right. Yeah. Rather than being presentation.

W

Wai Chee Dimock 27:51

Yeah. I mean, it should, theoretically helps scientists think as well.

C

Colin Milburn 27:56

Yeah, to have a critical perspective on their own data. And I do think that is an emerging in some areas within data storytelling, particularly when there's a kind of critical data studies perspective that's entailed. Yeah, that exactly as you say, the sort of inward facing aspect of analyzing and communicating data amongst one's own research peers and thinking about the transformation of so called "raw data" into meaningful data is a, is a non--it's a process that has social dimensions to it.



J John Plotz 28:27  
Totally.

C Colin Milburn 28:28  
And understanding those social dimensions and being able to say where data comes from, why was this data gathered, for what purposes, what was the set of parameters that enabled this data to be collected as, as a database? Those questions have often been elided or included in thinking about data communication, but good, responsible data storytelling, I think, tries to grapple with some of those things.

W Wai Chee Dimock 28:53  
Right. I mean, and also some specific stories that you know, I mean, for instance, the geology is telling. I think that evolutionary biology and geology, I mean those sciences they're almost committed to narrative, by definition, I mean, for those sciences, it really is important, you know, to be able to tell the story well, right. So I mean, there's certain concepts. What is the one that Stephen Jay Gould, punctuated equilibrium? Exactly. I mean, you really need that kind of two words, memorable narrative that is going to stick to my head, you know, nothing else will stick to my head. Or, I think that for some geologists, there is this story called "Snowball Earth," once again, it tells a particular story. I mean, I don't think the scientists really do a good enough job telling stories about climate change right now. And that's why we're in the situation that we're in now. Yeah. I mean, so I think that this is really, you know, scientists definitely need some training. But I think the human those can also help tell the story.

C Colin Milburn 29:57  
Ok so I have an interesting anecdote about this. But I have a colleague, a guy named Gael McGill, who runs something called the data visualization project at Harvard. And he had, well, he had a complicated background, but he actually was running an independent private company, which did data visualization. So what they did was things like, you know, they would make for the Museum of Science, a film that would take the data of what happens at a cell membrane when a molecule passes in. And they would present it in a way that, you know, child audiences at the Museum of Science could work. And that's how they got their money. But what they're really invested in is using data visualization, in the process of coming up with the paradigms while doing science. But there's a sort of bait and switch there where in order to make it attractive, you have to talk about it as kind of National Science Foundation wants you to do outreach, but what they really want is to be

able to take, you know, if you could show what the membrane of a cell looks like, at the moment, that a molecule passes through it, that's incredibly helpful as you're doing the science.

W

Wai Chee Dimock 30:57

Yeah, some public libraries are doing that. Boston Public Library actually has a data visualization panel. I mean, I didn't really I didn't go there. But I got an email notification about that. And it was partly, you know, just to educate the public, you know, using visual tools to get them to see exactly what climate change would do. And it just seemed to me that that, you know, I mean, I do think that libraries are really crucial in this. Yeah, I mean, I think that loss of both in terms of, you know, just, just libraries, as a place where disadvantaged people can have access to the internet, but also just for education, ongoing education, for everyone else, that was wondering if, you know, Stanford is doing any kind of outreach in their own terms, use any library.

M

Margaret Cohen 31:44

I think it's very complicated. You know, it's an educated community. And it's also a community, which has some outreach, but the outreach is often done in more traditional ways. It's a strange aspect of Silicon Valley, that Silicon Valley invests a lot in blue chip, old fashioned values, when it comes to...here, I'm kind of gonna go off into a rant so I should stop myself, but but I feel that, that there's a certain--

J

John Plotz 32:12

it's a podcast, right, you're supposed to rant! There would be no podcasts if there were no ranting!

M

Margaret Cohen 32:17

[laughter] Alright, alright. The problem with Silicon Valley is that all the engineers who are creating, like, the kind of new innovative technologies are all bound up in that during the day, and fighting the wars over how to like create them, and the intellectual property and all that, and that at night, they want to go and, like have the assurance of, you know, blue chip, blue chip culture. And they can't both, like be fighting, you know, to get resources and for all the innovation, at the same time, be doing this more aesthetic form of work. Right. So it's a very strange place in that way.

W

Wai Chee Dimock 32:58

Yeah, I mean, I don't think that actually I don't think Stanford would, I mean, I think that essentially public libraries, most like Boston Public Library, and Cambridge Public Library, for that matter. They do a lot of outreach. So, in fact, you know, I think the Cambridge Public Library is teaming up with MIT, although it basically is K to 12 education, but making sure that they are shaping, you know, the younger generation.

J

John Plotz 33:21

Do you know what the National Humanities Center is doing about that these days? Because I feel like in the back in the day, they did a lot, you know, with curriculum design, they were very innovative with web based American history from below, curriculum design, but I don't know if they've gone forward with that.

W

Wai Chee Dimock 33:37

So I did look up to see some of the grant recipients. I'm curious who's getting their huge grants, and what they've done to me, and it's really interesting, I've heard many stories that it's very hard for people from elite institutions to get a huge, grant, not so much fellowships, but grants, project grants. So I was curious to see you know, who is getting the grants? And it turns out that lots of community colleges, and also tribal colleges. So the Standing Rock Sioux College was getting a grant.

J

John Plotz 33:42

And what are they doing?

W

Wai Chee Dimock 34:06

It was linguistics. I mean, you should go to that. Yeah. And there was another one. Oh, Pawnee, Pawnee Nation, they also got a grant. So it's really I mean, I think it was very talkative and plus, they like collaborative projects, so if several schools are teaming up, liberal arts colleges, they tend to give to those, you know, people, schools that are not resource rich, which I can totally understand. I mean, so Berkeley got one. But it's, it's about the only named school, Berkeley and Virginia got grants, but I would say most schools like me, I don't see--Oh, Stanford! Stanford got one there was some kind of medieval, global medievalism.

M Margaret Cohen 34:49  
Oh, yeah, that was our entrepreneurial medievalists!

W Wai Chee Dimock 34:51  
Okay, so I saw that. But they'll say Princeton or Yale or any of those schools, don't get anything.

C Colin Milburn 35:00  
I mean, public libraries are definitely at a scary moment. Right? Because public libraries have some of the same problems that like undergraduate libraries have, where they could be emptied out. I mean, you can go to some public libraries, and there's virtually no books in them. Because they've decided, Community Center is the models. So the thing you're describing is so inspiring. Because it gives the archival side of the of the research scholarship project back to the public library. Which, they've been just, they run the risk of turning into just collections of terminals and bestsellers. This makes them something more than that.

W Wai Chee Dimock 35:33  
Absolutely. I mean, I think they are transforming education in a very interesting way.

J John Plotz 35:37  
Yeah, but they kind of have to.

W Wai Chee Dimock 35:38  
They have to. So this morning, I just heard on NPR, apparently free community college education is something that has been done in Georgia. I mean, that, this is not Bernie Sanders' idea. This is different kind, right. And it's been implemented already. So you know, if that could be, if just, you know, computer literacy and climate literacy could be made into a key part of community colleges. And in fact that has been done in Massachusetts, Bunker Hill Community College has a really thoroughgoing climate education program.

J John Plotz 36:13  
I love Bunker Hill, they're the ones to give credit for in class, in prison education. Yeah. The

credits get [...]

**W** Wai Chee Dimock 36:21

Yeah, I was thinking of doing a feature on them, yeah, yeah. It's really I mean, if that is the mother, but the loss of other I mean, Southern California is not... it's not the University of California, but the Cal State, Cal States. And then community colleges everywhere.

**J** John Plotz 36:39

Wait, Margaret, can I come back to your rant for a second? Because that is really provocative. You're--so if I understand your point, the point is that like, while they're busily creatively destroying in the internet space, from nine to five, or nine to eleven pm, and then they want to come come home, they just want culture to play it safe. Yeah, they want armchair art, more or less. So then maybe the challenge is, I mean to go back to why I love science fiction, then the challenge is, is there a way to convince people in the world of science and technology that culture is not that other thing over there that represents the safe armchair for them, but it's actually like a living conversation.

**M** Margaret Cohen 37:13

I think science fiction smuggles it in. And so what you're making me think is that maybe to have like a center or some sort of an outreach series on science fiction would be a really great way to try to...

**J** John Plotz 37:25

You guys know how that "The Martian," that Andy Weir book, was crowd sourced basically, like he put it up. Like, if you described the process that you arrived at with The Martian, you would think it was an oulipot experiment, right? Like he writes the draft, he puts it up, people shoot holes in it for various ways, he modifies it...maybe, Colin, you know more about the process than I do.

**W** Wai Chee Dimock 37:45

Yeah, you--well, you teach a scifi course, right? Yeah.

**J** John Plotz 37:49

So in other words, that's actually like a very unusual way of writing a novel. And only

worked because of all these dweeby scientists. Who loved science fiction and who wanted to...

**W** Wai Chee Dimock 37:56  
Right. Yeah. You guys should have a science fiction fans website as well. Yeah, that'd be really great.

**M** Margaret Cohen 37:57  
Okay. And you're all gonna help me?

**W** Wai Chee Dimock 38:03  
Yeah, absolutely.

**J** John Plotz 38:06  
Well fandoms were invented for scifi, you know, in the 20s and the 30s.

**W** Wai Chee Dimock 38:09  
Yeah, no, I mean, scientists are the perfect. You know, they are the perfect fans.

**M** Margaret Cohen 38:14  
Yes. Right. Yeah.

**C** Colin Milburn 38:16  
I teach a science fiction class that has about 200 students in it each time. And more than half of the students are like from the sciences. Yeah that's been my experience, or like 75%. Yeah.

**M** Margaret Cohen 38:26  
This is such a great appetizer for later. But I have a question I really wanted to make sure we talk about just quickly, what about collaboration in the humanities? Are we done with the like, original genius, single author of the monograph, or an interview, move on and be

involved in teams and give this up?



Colin Milburn 38:49

We're definitely, I feel we're in a transitional moment here. I love collaborating, and I work on teams. Nevertheless, I still mostly publish single authored publications, even though so much of the research I do now is with my graduate students is with colleagues from other departments. I'm on so many grants with colleagues from other departments. But in the, in the end, there's still this kind of institutional pressure and often when I talk to friends in the humanities we're never entirely sure exactly where it's coming from. So some of it is very much self-imposed. But certainly from my own sense of pleasure as a researcher I enjoy the collaboration much more than the single authored work.



Wai Chee Dimock 39:28

Yeah, I do you have one kind of big and sustained collaboration grad students, which is putting together an anthology. That is easier than writing, because you know when it comes to--so my American religion world anthology is not selling well at all, you know partly because of the particular kind of authorship, but it was so--maybe it's more important just doing it you know, that I learn more from the process. The outcome is, is not going to be profitable, but we may basically make all the decisions about the selections collectively. Every one of us voted for every single item included in that anthology. I did the intro, I have to confess I did that. It was easier that way. But everything else was collectively done. And I'm very happy to say that of the four students, actually three grad students than one undergrad. So of the three grad students, one is an assistant professor Chicago. One has been a hist-and-lit instructor at Harvard and he just got a tenure track job at Kentucky. One is--has just gotten his PhD. So he's going to be a postdoc at Dartmouth, and the undergrad, who is an economics major, he has been working for McKinsey. I mean, he was actually there as an intern before he graduated, and he's been working for, McKinsey, so I mean, I think that for them, you know, you know, I shouldn't take credit, you know, for all the good results that, you know, good things are happening to them. But nonetheless, it seems interesting that, you know, they all went on from that project and things worked out for them.



Margaret Cohen 41:07

It didn't hurt them in an institutional way.



Wai Chee Dimock 41:08

Yeah, it definitely did not. And I think that, just kind of going off in a slightly different tangent, I think that some companies are hiring on the basis of the kind of the wide ranging expertise of the applicant, so, you know, I had one undergrad, and he's, I mean, he's very unusual in the sense that he's been writing for The New Yorker ever since he was a freshman. So you know, this is definitely, it's not a generalizable case. But at first, at the outset, when he first applied, the first year that he applied to jobs, he applied, you know, to all kinds of things like TripAdvisor, he didn't get a job with TripAdvisor, he got a job with Microsoft, they flew him out, they, you know, so it was very intense was a one day interview, he was brought out, and he was offered the job on the basis of the fact that he was a double major, I think. I mean, you know, he said that, for most other companies, that was not an asset, but for Microsoft, it probably was. And I think that you know it, and now, you know, he basically is guaranteed a job at Microsoft if he wants to go back. So I think that, that in one way or another, having some kind of humanities component in the education of a software engineer, whatever, is definitely a plus at this point.

J

John Plotz 42:37

So I, this is totally consistent with what you guys said, but I want to take to take a different spin on it, which is like, in terms of whether we're at a transitional moment or not. So I, at--Brandeis is great, because it's a small place. I spend a lot of time with the scientists in the social scientists, especially the physical scientists, the biologists, the earth scientists, the physicists, they just collaborate in ways that I really admire and we've worked hard to kind of emulate that in the humanities. So we, I have a couple of different sort of innovation groups that talk together. And while that... I love the fact that we partially import those models, it does seem to me there's something about the humanities that does still reward individual work. Like when you were describing the distinction between the moment of assembling the pieces versus, say, writing an introduction, like, I just don't think--there's a baby and bathwater issue. You know, like, because when I talked to the scientists, I had a friend, Gina Turrigiano, come talk at a conference about creativity that we do that the Radcliffe, and she was saying, you know, "I'm there, because I think of English professors as people who know how to go off and write things on their own. And as a scientist, I want to make sure I remember how to do that, too, because so much of what I do is done in the team." So I just think we shouldn't...Yeah, yes. Collaboration, but collaboration for part, the parts that reward it. And then you know, there isn't...there's something, I don't know, when you go to a party, you can tell the English professors are different from the scientists. Not just because they're awkward and stand in the corner. There's a deep thought thing going on!

W

Wai Chee Dimock 44:08



Writing, it's a very individual thing. Very hard. Yeah, yeah.

J

John Plotz 44:11

It's a very lonely thing. I'm not saying you can't get away from it. But let's not stigmatize the people who are just good at going off and writing by themselves.

W

Wai Chee Dimock 44:19

Yeah, no, absolutely. Absolutely. At the same time, I did notice that a lot of the submissions to pmla, are actually jointly written. I mean, there really is a kind of interesting shift. Yeah.

M

Margaret Cohen 44:32

Very interesting, yeah.

J

John Plotz 44:33

Well, it just seems like it's, it's, there's no downside to putting pressure on the model and encouraging people to do things more jointly. But I would be surprised if the result of that is that individual writing goes away.

W

Wai Chee Dimock 44:43

I mean, I think the [...] that I just mentioned, I mean, I think that he does all his work collaboratively. Yeah. And quite often with grad students as well, I mean, which seems a really admirable way of, you know, and I think that in his case it's because, I mean, so he uses different kinds of corpora for the kind of the novel thing, that I mean, it's not unlike the Lit Lab here. So, so the kind of corpora that he needs to consult, I mean some of them are actually other schools. So you know, he would collaborate with whoever it is at that school, and then jointly write the paper. And so we are going to publish one, and I can't remember that, you know, it just goes to show that pmla is really anonymous. So, that I'm blanking on the name of the other author. But anyways, very successful instance of somebody, because it's, it's been accepted, I can say this. So as anonymously submitted, we did know that it was written by two people because they refer to themselves as "we." And it was actually turned back, it was returned to them for revise and resubmit. So for me, that actually was the test because you know, you can start off two people working together at the first round, but the next round revision actually is really important. And whether two people can work well together. I mean, I think that actually is the real test.

And they were able to pass that test.



John Plotz 46:09

You know, that raises a really interesting question, which is that collective authorship in the sciences is actually a little bit different in its meaning, from what we talked about writing together, because lots of those collectively authored science papers, that just means somebody contributed the data, somebody contributed the [...] sample, somebody is that chief. But it could be written by one person, actually. So authorship is much more complicated.



Wai Chee Dimock 46:29

It's a much higher bar. Yeah. But if we can, if there's a high bar that we can meet, you know, it says a lot about us too.



Colin Milburn 46:37

In that regard, the science model of having multiple authors where different people may have contributed things besides the direct writing: certain journals require that there is an acknowledgement of their contribution to the, in the sciences, of their contribution to the writing of the article. But that general model, I think, is helpful for the Humanities for us to be able to acknowledge as scholars the kind of debts that we owe to other contributors to our research: to graduate students or others who may sometimes be left out of authorship but who may have contributed significantly to research or thinking. So to be able to have a flexible author byline to acknowledge these kinds of questions...



John Plotz 47:14

That's such a helpful way of thinking about it. You know, I mean, I'm sure I'm not alone and feeling that "acknowledgments" is often the first thing I read in a book. But, and you feel slightly guilty because it feels a little personal. But actually, the acknowledgments page is, in a sense, an extension of the author.



Wai Chee Dimock 47:30

But I think what that grants you is more than just an acknowledgement, too, they need their names right up there.



John Plotz 47:37

The point is that if you could think about those, those two sections is having more fluid relationship between them, that might be...



Wai Chee Dimock 47:44

I think that, you know, students are very, I mean grad students, in a way, I mean, they are more tech savvy than the rest of us. I mean, I'm, you know, I don't think that we should think that we're always in the position to teach, you know, our students. I mean, I often...students know more than we do. I mean, so this will be one place for them to showcase the skills that we don't have.



Colin Milburn 48:05

One of the projects that might Media Lab, the mod lab team put together was a video game for Shakespeare in performance called "Play the Knave," and so we had computer science students who were involved, we had English literature students involved, we had historians of science involved. And so the game exists, and it's being used in a variety of schools for education. And then a number of research publications have come out that have been co-authored, and the first author has been my colleague, Gina Bloom, who is a Shakespeare scholar at UC Davis.



Wai Chee Dimock 48:33

Oh I have heard of her! Yeah, yeah.



Colin Milburn 48:35

Yes, she's a well known early modernist, but so, the students who contributed the programming to the game are named as co-authors on these publications as well. Because none of the research could exist without them.



Margaret Cohen 48:48

It's interesting it has, it's a way also to bring back older periods, which for a while, I think we were afraid that they were being lost. I'm just thinking about the entrepreneurial medievalists or, you know, Shakespeare and, you know, digital that somehow this makes come alive.

- W** Wai Chee Dimock 49:05  
I think so. I think that, you know, early modern and medieval are really coming alive, you know, with a new kind of, you know, new uses of archives, you know, and then new ways to make those archives accessible. And just making them interesting. So what is that game?
- C** Colin Milburn 49:25  
The game is a 3d motion capture game, that requires players to essentially put on a performance of different scenes from Shakespeare. And the point of the game is to understand how changes in performance, changes in staging, etc, can affect the meaning of the play.
- W** Wai Chee Dimock 49:40  
Wow, yeah, that's it. Yeah. that's perfect.
- C** Colin Milburn 49:43  
It's now in a pilot program where we're sending it around to high schools around the country and also some colleges, but high schools often don't have funding to be able to buy the equipment. So we got a small grant at UC Davis to be able to buy kits to be able ship out free of charge.
- W** Wai Chee Dimock 50:02  
So this is totally portable?
- C** Colin Milburn 50:03  
Yeah, it's portable. So we, essentially the kit is a computer plus a connect 3d camera with the software loaded on the computer. We ship it to them and then they can do their exercises in class and they ship it back to us when they're, they're done.
- W** Wai Chee Dimock 50:15  
They ship it back to you to do what? Then we ship it on to the next school. Oh, okay. Okay, so you just have one version of this thing that is passed around?



Colin Milburn 50:23

Yeah, well we have a few dozen computers at this point. But this is, it's not a tremendously scalable model, until we have more funding, but it was one thing that we were able to figure out relative to so many high schools that were contacting us wanting this as a tool for teaching Shakespeare in their classes, but not being able to afford the hardware, the equipment that was needed.



Margaret Cohen 50:43

Thank you for this amazing conversation.



Casey Wayne Patterson 50:51

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