

Reliability

Conversation 2 of 3

From “Vacuuming and Digesting,” a fall conversation series at Yale about interactive design

November 28, 2017, 1:30pm

Yale School of Art, EIK (32 Edgewood Ave)

‘Reliability’

Part 1. Preservation

Suggested reading: Jill Lepore, “The Cobweb” (2015)

Part 2. Primary or secondary

Suggested reading: Alexander Galloway, “Jodi’s Infrastructure” (2016)

Speakers (in order of appearance):

Dan Michaelson (Critic), Ayham Ghraoui (Fellow), Simone Cutri (Graphic Design ’19), Nilas Andersen (Graphic Design ’18), Bryce Wilner (Graphic Design ’18), Laurel Schwulst (Critic), Matt Wolff (Graphic Design ’18), Nate Pyper (Graphic Design ’18), Rosa McElheny (Graphic Design ’19)

Sections

- **Introduction**
- **Fidelity of Documentation**
- **Heap or Archive**
- **Accessibility and the Institution**
- **Context: Image, Medium and Content**
- **Audience**
- **Distribution, Publishing and Narrative**
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Introduction

Dan Michaelson: Today’s umbrella topic is “reliability,” which contains two other topics.

On the one hand, we’re hoping to talk about issues of preservation in a digital context. This is relevant specifically to all of you, because almost all the work you make as a student in this program intersects with the digital—you’re using a software program and/or a hardware device (your computer, RISO, etc.). How do you all think about preservation in that context? For your own work? And also with respect to the work of other artists, designers, makers, cultural producers?

On the other hand, we're thinking about a difference or gradation between making primary work and secondary work. As you all start to think about your thesis books that might document your own work, so too will you also be thinking about documenting your work. Inherently, there is a primary and a secondary, because you're objectifying your own work, to some extent. It's good to pull out some interesting themes from that idea. Documentation is never a neutral, crystal goblet.

Last week, we talked about art.yale.edu. We talked about the site's history function—that it versions everything—and some of the problems and shortcomings of that. Even though the content is versioned, web browsers are not. So we looked in some detail last time at some of the unreliability of that documentation, or some of the places where it breaks down a little bit, and what those old pages look like now is not exactly what they looked like at the time. We also talked about reliability in the literal sense—that these systems can just break and stop doing what you expect them to do. They may not be around forever. We also touched on reliability in the sense of trust. That is, what is in these systems isn't what you think it is. Can you really know what people are saying and communicating? What kind of cultures are evolving out of a system like this? There are going to be moments when that culture is doing things that are unhealthy or destructive or misleading. How do we work around that very contemporary condition?

Having monologued for five minutes now, I really hope that today's conversation is participatory. We are especially curious how this all connects to your own work.

Ayham Ghraoui: Institutions like the Internet Archive put such a significance on the idea of documenting and preserving the web because it's something that's changing, this includes unsolvable problems like links breaking or web pages being taken down. It is a significant project to try to preserve that. How does this affect the relationship of being online? For example, sometimes screenshots of events that happened are important—so that it's preserved and documented so it can be referred to, maybe in a legal situation, or something more subtle.

More importantly, how does the documentation affect the work that you're interested in and making? We should talk about anxieties related to either your work being ephemeral or the possibility of losing the material. Or, is there greater anxiety that instead of being wiped away, all of it will be preserved? (I think this is especially relevant in this program. Particularly in regards to the thesis book's idea of reflecting and preserving the two years we're here, and having a legacy and putting that in the library.) Is there a greater concern of losing it all or preserving it in a library?

Then there are questions of what should be preserved. What is valuable? What do you consider a publication? So far, we are calling a publication "something that was made intentionally public."

Institutions like the Internet Archive aren't really concerned with publications, because they have this general idea of wanting to preserve and document everything. But national archives are more intentional about what specifically is valuable.

What does it mean to archive something that is constantly changing? What are the strategies? Is there a difference between documenting or screenshotting the surface of what you see versus preserving the code or the structure? What's primary and what's secondary? What's the difference between medium and content of the web? When do websites contain the content and when are they themselves the content?

I don't think we'll answer all of these questions, but they all have something to do with each other. I think we're also interested in how these questions relate to everyone's work and practice.

Fidelity of Documentation

Simone Cutri: I have a question about the accessibility of these materials. We are talking about the digital, which is different than a library or some other physical system. So I'm wondering: how exactly can I access these archives?

Dan: That's a great point about intentionality. When you make a choice about a mode of documentation, it's inevitably going to influence how accessible it is. So, if you're taking screen captures, the durability and fidelity are quite good, but screen captures are not searchable. And maybe a screen capture doesn't capture what's below the fold.

Ayham: The documentation is an image, not the thing itself.

Dan: Exactly. One wonders what would happen if the Internet Archive were comprised entirely of screen captures. Would the fidelity be better? Probably. But it wouldn't be searchable in any way, and the storage issues would probably be huge.

Ayham: The Internet Archive is actually difficult to use. While it's this monumental project of preserving everything, what's the use in it? If it's not accessible, what's the point?

Laurel Schwulst: That's funny because archive.org's motto is "Access Drives Preservation."

Dan: How do you guys actually back up? What are your archives physically right now, of your own work and online lives?

I mean, I have all of these DVDs—that's my thing. That's my carbon date stamp, my predecessor had floppy disks, my successors had hard drives. What do you guys have?

Nilas Andersen: You have your work on DVDs?

Dan: Yeah.

Ayham: We have that on the record, now, by the way.

Bryce Wilner: The disk drive is very rapidly being phased out...

Dan: Yeah. I don't know if I can read those DVDs anymore. Also, DVDs get bit rot and have calibration issues.

Nilas: I have all of my stuff online. Like every single digital file.

Ayham: But not public?

Nilas: Not public, no.

Dan: On Dropbox, or something?

Nilas: Yeah. DVDs are not public either.

Laurel: Do you know where your actual servers are?

Nilas: No idea.

Dan: It's two o'clock.

Bryce: That's a serious question, though, because I've heard stories of people archiving family photos. I forget the name of this one service, but it was used for archiving huge amounts of photos, and many people would use it for photos of their children. It went down for about a whole year, and people had no idea if they would get their photos back. For a lot of people, that service was their only storage.

I'm super unsatisfied with leaving all of my work on Dropbox, so I try to do a combination. I do use Dropbox, but I also back up on a hard drive as well.

Ayham: Because, naturally, you're very concerned about losing all of your work.

Bryce: Yeah, for sure. I assume I will have researchers. Well, I hope I have researchers, and I want them to be able to access that stuff.

Matt Wolff: Do you scan your own journals? Do you take whatever you have tangible and make a digital file?

Bryce: Whenever I use my computer, I feel like I'm constantly archiving everything I'm doing. I'm taking screenshots all the time of whatever I'm working on. And I'm putting writing into my journal, but also some of that goes into Are.na and some of it goes into the notes on my computer.

Heap or Archive

Ayham: That points to something I'm really interested in. What are the bounds of what people define as their work? Is it the finished project? Is it easier to describe when we're making books or posters or something? But what if your work is more fragmented than that, something like your journal entries you're considering part of your work? I'm assuming because of the way you're talking about it. Is that the case?

Bryce: I think it's all definitely related.

Ayham: Do they all have the same priority?

Bryce: Maybe not the same priority, but they're worth preserving, in my opinion... or at least for the work I do.

Laurel: It reminds me of Andy Warhol's time capsules. He would treat everything at a similar level, like stuff he picks up off the street, just throw it in a box and label it, then send it off into storage.

Dan: Yeah, it's like the modern condition: just throw it on the heap.

Ayham: Toss it back.

Dan: And, like, get back to it sometime.

Ayham: Does archiving this way cycle back to how you're making work?

Simone: I don't know. I'm not that organized. I have like seven files called "final, final, final."

Ayham: It's not very accessible.

Simone: Yeah. I don't think anyone other than me could go through my files and understand.

Matt: There's an interesting distinction between the heap and the archive. The Internet Archive is a heap—it's not sorted and filtered and accessible via tagged metadata. It's just collected.

Laurel: Even though The Internet Archive calls itself an archive, we seem to believe "an archive" does something different.

Accessibility and the Institution

Dan: We should start talking about people accessing your artwork.

We can differentiate these ways of archiving. In one way, you say, "Okay, that was something primary, and now I'm going to just step back mentally for a second and capture that moment—frame it," however fleeting that gesture is. Not that it's a lot of work. Versus the different condition of the back-up being completely in the background—it might be an automated, bigger hard drive with some redundancy in the cloud so you're not anxious.

Laurel: This makes me wonder: are any of you looking at previous theses in the library? Maybe as models or as counter-models? They might help you to imagine the time leap. You might begin to consider your thesis in the future, like, "When someone approaches my thesis in 15 or 50 years, I want them to have this feeling."

Nilas: I haven't looked at anything.

Ayham: I notice it's happening less and less now.

Nilas: Someone told me that my undergraduate teacher once used one of my projects for her teaching. I actually really didn't like that teacher—we had a bad relationship—so I think that's weird that she's allowed to show my work. I had no control over the work that was made at the school. The school legally owns it.

Matt: That's the case with most universities, right? With most archives, once you give your work to the institution, you've relinquished the ability to sort of go back in and edit or touch.

Ayham: I don't know what it's like here, but at my undergraduate art school they made it explicit to us that they have the right to keep the work if they want as well as to document it, catalog it, preserve it, and publish it.

Nate Pyper: I think that's a good question, too. What do we give up when we archive or when we compile our archives? We think about the bureaucracy and structures that have come before and are built to carry permission but don't necessarily have our best interests in mind. When is it appropriate to resist the archive?

Dan: We could talk about different kinds of archives. There's the archive that you own. There's the archive that does serve someone else. If you were to archive your work on art.yale.edu, who is that serving? It's a complicated question. Or, if it's in Dropbox, there's a bit of a funny ownership there, too. You don't physically have possession of it.

Laurel: My answer to "What do you give up when you give an institution something to archive?" would be some sort of context—a specificity of how and where it would be used.

Dan: When do we think about making our work public? What are the implications of making your work accessible, even in part? If I said to my classes, "I'd like there to be a real-time, public stream of your work in progress, and everybody in the world can watch it evolve" there would be a lot of resistance.

Nilas: Yeah.

Dan: It seems like some of you do value this "wall around the ivory tower" a little bit. But presumably not completely. On the other hand, if I said to you, this program is an ivory tower—nothing you do should go out and you shouldn't have any interaction with the community, because you're here to learn from each other and from faculty—you would say that's kind of gross.

Nilas: I think it's about the individual freedom in what you want. For some people, it makes sense. I know people in my class, our class, who document stuff and put it online and as they are here. I personally don't do it. Growing up with the internet in the way that we all have here, we're all changing our approaches to it. For example, Facebook is suddenly a lot bigger than it was when we joined. Once you put something out there, you lose control of it, and maybe some of us are hesitant about being public with stuff because we felt we've lost control of things. Especially in an educational situation, where you are here to change or develop, you might not relate or identify with the work you did two years before you came here, because being here can elicit a significant development. But also after your time here, you might develop further. If you're a person who changes so much, then the identification, the internet as a mirror, can be frustrating.

Ayham: But in that argument, what is being controlled? The identity of your work, or your own identity? In controlling what you make public, it implies that you're also trying to construct a specific image.

Nilas: I'm controlling how I'm seen by others.

Ayham: Yeah. I personally find that relationship hard to deal with as well.

You see people who are completely transparent—an archive that shows their process—and in a lot of ways that's really freeing because there's no concern about trying to construct this specific outside-facing message.

Context: Image, Medium and Content

Nilas: I think there's also another level to it, and I think that's what Laurel was talking about—context clues. If you're very serious about the context of your work, you might be concerned when the internet picks and chooses which specific parts it likes of your work, and that's what is dispersed and circulated through all these different circuits, and often the context is totally lacking because the description was lost. There's not three images—there's just that one that looked the coolest or was most interesting for some people.

Ayham: Ideally, the content—or context—is also part of that image. The way you describe it, which is typical, is that the image that is made public is only the image of the posters. In a way, the context of the work should always be trailing behind it. It should be attached to it in some way, conceptually at least.

Simone: I don't know if you all know about it, I don't know who runs it, but there is this Tumblr...

Ayham: Everyone always describes it that way, "I don't know who runs it, but there's this Tumblr..."

Dan: One of the people who said that actually runs it.

Simone: ...where everything has a tag, "Yale Graphic Design." Sometimes with your name, other times not.

Nilas: Most of the time without a name.

Laurel: There are good things and bad things about that blog. We've talked among ourselves about it as perpetuating an image-heavy reputation of Yale.

Also, if you are someone like Nilas—who's not going to put an image of himself out there in the world—other people will. And when you Google "Nilas Andersen," the second or third result will be the Yale Graphic Design Tumblr, which could be cool, depending on how you look at it. But is that the way you want to be defined? Personally, I've flip-flopped on this so much. But at the end of the day, I decided, "Well, no one so far is making a Wikipedia page for Laurel Schwulst, so I'm going to just put the image I want right now so I can steer my course. People can see where I'm going and work with that vision."

Dan: I was going to say the same thing. That you would think the best response in 2017 to these reputation issues on the internet is additive.

Ayham: Fight back.

Dan: Yeah, to put more compelling content online.

Laurel: I think Kanye West said something like, "I am going to call myself a creative genius because no one else is going to."

Bryce: Reminds me of the artist Jeremy Bailey, who started calling himself a "famous new media artist" as an identity exploration.

Nate: I wonder, too, about being artists, designers, cultural producers, people who are putting things out into the world for other people to react to or look at... I was really enjoying the David Bennewith presentation. He does a lot of work that has some sort of historical reference—specifically mining or pulling from this history. Inevitably, when that work is disseminated, that history does not get shipped along with it. But it does gain new meaning, and it's malleable in that way that it becomes richer for the willingness to put it out there without context.

Ayham: It's a very optimistic way to look at publishing work. I think there is some value to it, in approaching it that way, if you're okay with the meaning changing and adjusting.

In these last few examples, I think we are still talking about images of work, or if the work is an image. In discussing this discrepancy between medium and content (primary and secondary), is there a way that a poster can exist as a poster in the world, but if you are sharing it, can you represent it differently—as content—rather than just the image of that poster?

I know that's a big question, and that's not to say that's what your work is about, but I'm using that as an example to think about archiving and making public the content rather than the medium or the image.

Dan: Or the event. Not the event that's described in the poster, but the event that the poster was hung, for example. You can document that the context is the content.

Laurel: We talked about this artist in my class last year. Who is the artist that did the Guggenheim *Kiss* piece?

Rosa McElheny: Tino Sehgal.

Laurel: Yeah, Tino Sehgal. He's all about "no documentation." It's all about what people tell each other.

Ayham: There's a mythology in it.

Laurel: Yeah, there's a mythology. If you're not about distributing your images, like Tino, you are balancing it with something else that gets distributed, like stories. Because as a creative practitioner... I think an important goal is to have an audience, right?

Audience

Dan: I wanted to mention that. This is an issue for the famous struggle for fine arts students. It's so tempting just to stay in your studio. But are you really an artist if you never show your work? You'd think that for graphic designers, that question would be heightened, since your work is communication and distribution.

What are we doing if we're not communicating and distributing? I can also see how the question is more fraught for graphic design, where "This is my one chance not to distribute." It's distribution from here on out!

Nilas: There's a big difference between the thing you make and put out in the world and the documentation of it. So, the poster is the actual thing, that and the image of the poster that I put online as the documentation to show on my portfolio. We make things that are public all of the time. I'm not saying that you shouldn't have graphic design portfolios, but there's a big difference there. Is my poster about being public globally, or is it about being public in the context that it was made for?

Dan: True. Assuming that it's a poster that actually had a context. Because we do also make work here that has an even narrower context. You could say, "Well, the context is the critique or my peer group around the school, the atrium, the sculpture building, or something."

Bryce: I see what you mean. I tailor my output to what I think will work in a critique space. I don't think that's necessarily good, but I do it.

Ayham: It is part of the culture here.

Bryce: If I'm making a video, it's not going to be 15 minutes. It's going to be 2 minutes, because I'm going to show it in a 45 minute review. I don't do a lot of performance work, but I see people's performance work suffer because, even if it was a great performance, it's not documented very well, and then the discussion becomes about how it was documented.

Nilas: Exactly.

Dan: It's a strength of the program that it establishes a community and has powerful common spaces, and a relatively externalized faculty and critics and stuff like that. But this idea of your audience being the Yale community is problematic and certainly has its limits. It's like the strongest point in the program, in a certain way.

Ayham: Personally, I think the students are the primary audience. I think it's set up that way on purpose, that they are more so than faculty that are coming in from the outside. I think that community is comprised of the peers that are sitting around you.

So far, we've been talking about documentation of work. But we're also trying to be specifically concerned with interactive work, which is probably meant to be public in the first place. To your point, much of the interactive work is for the audience of the school but they also need to be public and online.

Dan: And with interactive work, we often don't have the skills or resources to scale it.

Ayham: To speculate about the audience.

Dan: I don't focus in my classes on cross-browser compatibility. If a student wants to make an instructions page for their website, I might say, "Well, maybe that's not the thing you should really focus on." Nor do we do user research, or any of the other things before launching a website to the public. Their works exist in this gray area where the IP address might be public and some students do distribute their work, but the context is poorly defined.

Ayham: You do emphasize in your class the documentation of the website—that it is typically a screenshot. It's more so a screenshot than documenting the code, right?

When I took the class, I thought that it was interesting that there was significant time spent on presenting the website through a series of screenshots and walking through it. We asked questions like, "How do you describe it to someone who's not necessarily clicking around?" as part of that documentation strategy.

Distribution, Publishing, and Narrative

Dan: Yeah. The reason I emphasize hands-on programming in Networks and Transactions and actually building this thing is not primarily for distribution. It's so you can test the project. That's a word I sort of learned from Paul Elliman. That if you just make a mock-up, like we do in Mobile Computing (the class after Networks and Transactions), you would never really know whether your content management system or your social network has the potential to grow. At least by testing it with yourself or with some peers, you have some chance of evaluating and iterating on your design with some measure of success or failure. But that doesn't mean that your peer is necessarily the intended audience—they're just the test group. Or, they could be the intended audience, and for a lot of projects, they clearly are. Maybe you're making a pantry in the atrium, or something like that, and it's clearly for these 30 people. But my intention is also that these 30 people are also the test subjects for a potentially larger audience.

My expectation is also that the code is not going to work forever. Browsers might change. Whatever hosting set up you had might go away. You might not pay for it. It might go out of business. Furthermore, the people that you might want to show it to in the future—yourself, your colleagues, your biographer—might not have the time or the necessary guidance to move through the system and repeat that test. They also might not have the 30 people who are needed to actually test this thing. If we built a chat program, you need two people at least to see what it does, to experience it all. What happens if one person wants to know what you made? Documenting it in a secondary way—not just archiving the code and not just making sure that your server host runs forever (which, maybe you should also do)—but taking some pictures of it or taking a moving screen capture or making a book or slideshow or fictionalized short story or novel about it—could be good. These can be important ways to tell these stories.

That also loops back to this issue, "Just because you made an archive doesn't mean anyone can actually access it." Even if they can literally access it, like the Internet Archive, which is totally available to everybody, that doesn't mean you can actually work effectively with it.

Ayham: You're emphasizing story. It's engaging to interact with because there's some narrative involved to the documentation.

Dan: Right. It may be an analogy for the context that Nilas is talking about. It's essential to fill that in, when your work in some way deals with user experience. It's an even bigger problem with interaction design or experience design than it is in poster design. It's a clearer problem, at least.

Have you guys approached this yet? How do you document the digital? When you make a project that lives online, is interactive, or changes over time... what are your strategies?

Simone: Video.

Nilas: I think almost all the websites I've made personally, not for class, I still have on my server.

Dan: You just keep it running?

Nilas: Yeah. They don't even have a password or anything. It's only me who has the URL. But for client work, that's definitely a different thing.

Dan: Yeah. It's going to be hard to put these things out. As you guys develop design practices that last for years and have a bigger and bigger output per month, that question becomes pretty intense. That and back-up hygiene. For example, Dropbox is probably a pretty good solution for one person. But it's definitely not cool at our company when individual staff use their own Dropoxes for back-up. It's a sort of institutional issue. Not because of ownership or something like that, but because if they move on, where are their files?

We recently got the first version of whitney.org booted up again. At the time, they were running it and, as we designed it to do, it was evolving gradually over time. We were still screen capturing it when we remembered to. For example, when there was a cool thing on the homepage, we would screen capture it. So, there's this vague documentation. Then at some point, they asked us to replace it with a new version and to replace the code.

So, we re-designed it again. Over the years, I've gone through a range of attitudes towards this kind of change and replacement—of staff turnover, of different design approaches in the studio. Everybody would always ask, "Weren't you sad to lose that design?" We really liked that first version of the design that we did for the Whitney Museum. So, isn't there a sense of loss when we have to delete it and replace it with something else? And there was. But pretty quickly it was also like, yeah, this is part of life. It's part of our whole attitude about the first version of the Whitney site: that it would evolve and change. This is like another level of evolution.

Understanding our studio as a change engine in the same way that our CMS's are change engines has been interesting. We still have the code of the first version and a sanitized copy of the version of the database content from some arbitrary point in time. Recently I realized we didn't have good documentation of a particular feature that we had done—this membership feature that worked particularly well. It was particularly interesting, and I wanted to be able to talk about it. To get it back up and running, I had to get the code out of storage—which was not on a DVD—it was in GitHub. That was fine, but it also meant rolling back all of the software frameworks that were necessary to run that code, like older versions of the Ruby

interpreter, older versions of ImageMagick, and all of the complexities of finding the exact sweet spot of versions that would actually work together—older versions of the MySQL database. And we don't even use MySQL anymore...

Finally, after a day of work, we got it running so we could retrospectively make those screen captures of this one interaction. There is kind of a nostalgia to the complexity of it.

Ayham: Yes, and that's linked to the archive that is constantly changing. Especially with your studio, you set up these systems that change over time. It always implies incremental change. Subtle things are happening, and it's growing at a certain rate.

Dan: There are probably moments of bigger change, as well.

Ayham: But that change is huge. How do you represent that jump? If you say, "I'm going to do a screenshot at noon every day," that's not going to document anything at all.

Dan: I've tried that a little bit, actually.

Laurel: Maybe I can bring up the Cuban internet now?

Ayham: We should close on that.

Moments of Punctuation

Laurel: Just to cut to this chase—there's a great exhibition up at the Queens Museum. Everyone should visit. It's called *El Paquete Semanal*. It's a collaboration between two artists, American artist Julia Weist and Cuban artist Nestor Siré. Basically, in Cuba there's a huge lack of internet. It's banned in private homes, and there are only a few public WiFi spots. So since 2007, there's been this underground internet, this "paquete," that circles around. The paquete is a one terabyte bundle of files—well, a lot of folders that contain content. According to the rules of the paquete, the content can't be pornographic and can't contain political messages. So, it has stuff like sports, soap operas, anime—all sorts of stuff. This paquete is distributed once a week. And what's super interesting is that it's distributed physically, so with hard drives, from person to person.

So getting back to the actual exhibition. These two artists started a once-a-month "art folder." So, through the guise of art, they were able to kind of get into some politics—that was their idea. The exhibition shows some of their art folder as well as an entire year of the Cuban internet, or 52 folders for the 52 weeks of the year, which you can take with you if you bring your own USB or hard drive.

I think the project brings up the idea of what happens when there isn't this never ending stream of information. You must go to the finite publication model.

Dan: There are moments of punctuation. I'm glad to end with that, because it links to this idea we discuss in Mobile Computing. This idea of this hard drive that's physically moving around this network. I think it's interesting that several of the readings in Mobile Computing this semester—which is a class that really

deals with the front-end interface choices, even more, where as networks is the class that's more explicitly focused on these systems of change. But even in Mobile Computing, where we're focused on front-end choices, a lot of our readings have really emphasized the axis of time. Whether that's persistence of vision and the way that scan lines move down a screen, like Bill Viola talked about, or the persistence of history that might have formed the vernacular or material choices that you would make. Or, migration itself as a change agent, and a literal journey that takes time to complete a network just like the Cuban hard drives are, and one which also involves issues of trust. How do you know that the person on the other end of this network is describing truthful conditions or will take care of your information when they receive it or will pay it forward like they're supposed to?

Maybe, to also conclude on one other note. Nilas said that after Yale, you might develop further. You will, right? This is a certainty, so I think a question that you guys have to ask yourselves is, "How do you frame these moments of punctuation?" Or how do you make a plan or model for yourself? So that even with the knowledge that you're never fully developed, and even with the healthy resistance that you have to creating a condition of complete transparency—which would be awful—how do you nevertheless make a periodic framing, or periodic publication that can put you out in the world and give you a chance to test things? And give you something that you can look back at, if not other people look back at? Because there's obviously not going to be a moment when you realize, "I'm done, this is it. Let's take a picture."

It may also be good to be changing the way you even frame your work. Changing your strategy towards punctuation.

Ayham: Yeah, I think that's a great place to end, because it segues into the next one about attention and ubiquity and social networks.

Laurel: The never ending stream.

Ayham: The never ending stream.

Dan: The never ending stream.

Laurel: Cool.

Dan: Thanks, guys.

Ayham: Thank you.