

Pulled Up Short with Stanton Wortham

What is the complexity in simplicity?

Featuring Howard Gardner with Stanton Wortham (host) and Gabrielle Oliveira (commentator)

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Stanton Wortham 0:06

Welcome back to the second season of Pulled Up Short. We're excited to have you back with us for another set of episodes that challenge fundamental assumptions, leading us to question our positions on certain issues that we take for granted in everyday life. We're excited to start this season with Howard Gardner. We also have Ken Gergen on whether or not individuality is even possible; Anna Stetsenko on whether we should stop teaching in schools altogether, because teaching is a bad idea; Andy Hargreaves on social class; and Bill Damon on the concept of purpose. So we're very pleased to have you with us, and we hope that you enjoy.

Welcome to another episode of Pulled Up Short. Thanks very much for being with us. Today, we're thrilled to have Howard Gardner, a professor at Harvard, longtime leader of Project Zero, originator of multiple intelligences theory, and author of dozens of wonderful books. Howard, I understand, you're gonna talk to us a little bit about simplicity and science and how we think science is about discovering simple accounts of things, but it's not that simple.

Howard Gardner 1:17

Stanton, thanks for having me on this program. Your invitation got me to reflect more explicitly about something that I've come to learn the hard way over the last decades, and that is, basically simplicity is a good thing. We shouldn't make things more complicated than they are. Particularly if you're a scholar and trying to understand something, you want to be able to communicate it clearly to other people, and that certainly calls for a simple approach.

And yet, even when I developed what I'm best known for, the theory of multiple intelligences, and tried to put it forth in a straightforward and simple way, I discovered that this is extremely difficult to do. It was routinely misunderstood both by my colleagues, and by what we might call the general, educated public. I had to do continuous reformulations and different efforts to try to get the ideas which I thought were very simple across. While I don't want to give up, I now realize that simplicity is a very complicated matter, and that it's something you can never achieve completely. The only question is whether you should cease trying, and I've decided not to cease trying.

Stanton Wortham 2:40

Yeah, I hear you. It sounds as if you thought you were striving for what scientists are supposed to do, which is a simple, elegant account of the phenomena. And you thought you had succeeded in articulating that. But somehow, once the ideas got out into the world, the simplicity refused to stay put.

Howard Gardner 2:57

Right, well, let's get become concrete. About 45 years ago, I was given the opportunity to put together all of the work that I had done, and research done by hundreds of scholars all over the world, about the intellect. As a result of this five years of work, I wrote a 400-page book called *Frames of Mind: The Theory of Multiple Intelligences*. In that book, I tried to describe what led me to the conclusion that the human mind is better explained in terms of our having a number of relatively independent computers in our skull, rather than having a single one. This relates to intelligence, because if you think intelligence is a singular thing, that if a person is smart, he or she will be smarter in everything. If they're average, he or she would be average in everything. And if they don't do well in whatever measurements you have, then there'll be dumb in everything. That doesn't make much common sense because we all know people who are good at some things, average in others, and not good in third things. But what I did was pull together information from biology, genetics, brain science, anthropology, psychology, sociology, history, and wrote this 400-page book.

The good thing I thought, Stanton, was that I could summarize this 400 page book with hundreds and hundreds of footnotes in a few sentences, and here are the few sentences: Most people think intellect is singular, that we have a single computer in our skull; if that computer works well, you're all set no matter what you're doing, and if it doesn't work well, you're in big trouble, no matter what you're doing. I think the human mind, the human intellect, is better described as a number of several relatively independent computational devices. Think of them as a half a dozen or a dozen separate computers inside our skull. One works with language, another works with music, a third works with spatial orientation, the fourth with bodily movement, a fifth with understanding other people, and so on. As you see, this can be described quite easily seven or eight computers rather than one. End of discussion.

Yet, the book was published in 1983, and in the four decades since, I've spent thousands and thousands of hours trying to explain what it is that I meant, and trying to unexplain misapprehensions of the theory, both by scholars (who we might say should know better), by the general public (which can't really make a generalization there), and also by educators. Since the book has been taken up primarily by educators, even though it wasn't deliberately designed for that, a lot of the misunderstandings have taken place in education. So in sum, Stanton, simplicity turned out to be extremely complicated, and I still haven't worked my way through to the best solution to this conundrum.

Stanton Wortham 6:22

So it sounds as if there are two different levels at which simplicity and complexity are operating here. First, as a scientist, you took on the task, as many do of trying to articulate something in as simple terms as possible to capture the phenomenon you are after. Your summary there was quite clear and concise about there being multiple forms of intelligence, multiple different ways that people are able to reason and process their experience as relatively separate functions, as opposed to one core intelligence. I know, having read this book of yours and others - the first book of yours I read was *The Mind's New Science*, and it was an extraordinary work of bringing together such a diverse range of scientific research. You were able to articulate it very clearly, and so I know you're particularly good at this - creating simplicity out of complexity and summarizing how fields go. It must have been quite frustrating when you did this for this area of multiple intelligences, and then it was misinterpreted. So my sense is that at the level of science, you did your job really well. You articulated very simply the point that you wanted to make: the theory of what was going on in the human world. But then you're telling us there's a second domain that is also crucial: the domain of what happens to that elegant idea once it is released into the academic community and the larger public. And you're saying at that second level, simplicity is something that's not nearly as easy to control as it is in your own science, right?

Howard Gardner 7:59

Good point. I hadn't thought about this exactly the way you put it, but the problems with dealing with scientific colleagues are by and large, quite different than the problems dealing with the general public, or in this case, with educators who are a large part of the broader public. With scientists, they often have very strong views, which are in opposition to the view that you're putting forth. And rather than trying to listen and read carefully and see what you're trying to say, they immediately assume that you couldn't possibly be right. I mean, we have an IQ test. It's been used for 100 years. It classifies people pretty well in terms of how you're going to do in school. So what's the problem? And then the thing which I loathe is many scientists and scholars say, "Well, Gardner's study isn't empirical." The answer is it's 100% empirical. It's based on hundreds and hundreds of studies. It's not experimental because you can't do an experiment to prove the theory of multiple intelligences right or wrong. It's basically a synthesis of hundreds and hundreds of different studies. I get especially peeved, because often the people who make these criticisms haven't even bothered to read my book. They just assume, "Well, there couldn't be seven or eight intelligences because we have the IQ test and it works."

With the general public, the problems are quite different. For example, one frequent misinterpretation is that everybody is smart in one way, or everybody can be smart in one way. And life's not fair. We don't know. Assuming that theory is more or less true, we don't know how much of this is genetic, how much of it experiential, how much of it is cultural, how much is developmental. But nowhere do I ever claim, nor do I believe it's true, that everybody is strong in one thing. Educators often say, "Well, Gardner has shown there are seven intelligences, so we need to have seven classes. We need to teach in seven different ways. We need to put all the kids who are good with one intelligence together, or all the kids who are bad with one intelligence together, or let's mix them up." As a spectator, I think this experimentation is good, and rather than ever dictating the educational implications, I was very

happy to let a thousand flowers bloom. But I kept saying, "You know, I put forth a theory of how the mind operates and how its organized. I didn't put forth an educational theory, and we really have to let different experiments that people do all over the world or different demonstrations show us what might be useful application of MI theory and what might not be."

So I'm a bit of a juggler, in the sense that sometimes I'm dealing with colleagues who haven't read the work or have deliberately misunderstood it. Sometimes I'm dealing with people who are well-meaning, but have their very own strong points of view. What's a particular regret is obviously, I have some very thoughtful colleagues who have put forth reasonable critiques of the theory, and I'm very open to that. But all too often, people didn't pay attention to the way that I defined the intelligences, because the most important thing I did was to lay out eight criteria for what counts as an intelligence. These criteria came from different disciplines and different lines of research. The real way to engage with somebody who you don't agree with is to look at the criteria they use and argue with them. I think this is a particular critic of psychology and psychometrics. I can't believe that in physics or chemistry, if somebody puts forth a definition and operationalization, that people wouldn't engage that sort of thing. But having read probably 500 critical articles about my theory from world experts to people who just saw it mentioned in a cartoon, almost never do people say, "Well, these are the criteria that Gardner used and here's how they've been well applied and how they've been misapplied." So that's discouraging, but one reason for doing this podcast is to hope that when people do criticize other people, at least they look at what they did and try to get inside their head, rather than just dismissing it or assuming that they know what was done and why it was done.

Stanton Wortham 12:32

So I can see how you distinguish between scholarly reception of the theory and popular. In the scholarly world, as you say, people can misinterpret, but at least we have rules and norms for how we resolve those disputes, even though they get political sometimes. But with respect to the popular reception of your ideas, could you give us a couple of examples of the kinds of misunderstandings that you've run into and how you've dealt with them?

Howard Gardner 12:59

Sure. Well, the the most awful experience that I had was almost 30 years ago. I got an email from a colleague in Australia, who said, "Your ideas are being used here in very strange ways. What do you think?" And so the colleague sent me a whole bunch of materials. This was before the days of attachments, or at least before I knew how to download them. I found that there was an entire state in Australia - there are six states - and in the state, they set up a curriculum. And in the curriculum, they listed all the racial and ethnic groups in that particular state, indicated which intelligence they had and which intelligences they lacked. I was horrified. Because not only is assessment of intelligence is very difficult, but there wasn't a shred of evidence to claim that this particular group of Aborigines had this profile and so on. So I thought about it for a while, and then I agreed to go on a television program there. One was called a Sunday program. It's very much like 60 minutes in the United States, and I said, "You know, I don't know the motivation of people who did this. Maybe it was okay. But this is

pseudoscience. It has no foundation in reality, and it's very dangerous to stigmatize people in this way." Fortunately, other people also criticized it, other scholars, and the program was removed.

Another thing which is a bit more whimsical, but it happens every month: I get a message - usually it's from Asia. I won't mention the countries, but it's from all over Asia, saying, "We have a dermatoglyphic measure." This is a measure of fingerprints, and they will look at your fingerprints and tell you which intelligence you have, which ones you lack, and what your life goal is. Of course, I don't believe in fingerprint analysis in general, but even if it had something going for it, it has nothing to do with multiple intelligences whatsoever. So I have a standard note I send about this, and I have a standard note on my website, Multiple Intelligences Oasis. It's pretty clear to me that people who believe in fingerprint analysis are not going to take my demurral very seriously. And this raises the biggest question really, which I hope that the people who are listening to this podcast will think about: How much time and in what way do you address these misunderstandings and misapplications? I mean, at the extremes, you could say, "Look, I developed the idea. I'm not responsible for how it's used." Einstein might have said that in 1905, but when it came down to the atomic bomb, he couldn't wash his hands of it, and I'm certainly no Einstein. But you could say, the application to theory is somebody else's business. I have colleagues who won't even talk to the press. They've been stung, and they say, "I'm just not going to do that." On the other extreme, you could be like a fire brigade, and every time that somebody says something wrong or misleading, you could try to answer it. Then you get nothing else done, or worse, and thank God had never done this, you could monetize your ideas, and create a line product. Many people in the softer social sciences do that. Then of course, you have to tend the store, and every time anybody says something wrong, you sue them. I have no interest in doing that. So I've tried to walk a line between letting this overpower my life and saying, "Look, this is none of my business that people want to misapply. It's their problem. But it's hard to navigate, and I am always trying to decide what to do.

Stanton Wortham 17:00

I can see that that puts a scientist in a difficult position. So you have to deal with your colleagues and their reception of your ideas. But as I said, we have routines for how we adjudicate those kinds of disputes. But once your idea gets out into the public, it's a much more complex ecosystem. Those two cases you described were disturbing. You have people who have their own essentialist notions of ethnic groups or cultural groups, and they try to attach them to your ideas about multiple intelligences and use your theory for a pernicious social purpose. So I can see how that must have been very upsetting to you when you heard about that. I'm glad that you were able to get on to Australian TV and with your colleagues intervene and try to disrupt that program that we're creating there.

Howard Gardner 17:48

Let me let me add something, Stanton, for you and the audience. Right after that happened in 1993, I spent a year at a Research Center in California with two close colleagues, both psychologists whom you know: Bill Damon and Mihaly Csikszentmihalyi. In that year 1994-1995, we developed a project called The Good Work project. The goal of The Good Work project, as far as I was concerned, was to

try to encourage the accurate, positive, and constructive use of ideas, whether they come from the sciences, humanities, or the social sciences, because the problems I described are as true for people who do historical analyses or linguistic analyses, as it is for people who do physics or biology. We've worked on these ideas - Bill, Mike, and I - for almost 30 years. Good Work in a nutshell (again, a simplification, but it's been less misunderstood) consists of three E's. It's work that is technically excellent; it's work that is personally engaging; and it's work that's carried out in an ethical way. My concern, both as a scholar and as somebody who sees his or her ideas used, is to try to make sure that it's done in as ethical a way as possible. Of course, you never know for sure whether what you're doing will be ethical or not, so you have to build a lot of reflection into that - a lot of time to think, could I have done it differently? Could have done it better? But I think too many people - particularly students, and I was a student once - think that the goal is to do work that is excellent, original, and engaging (that people find interesting). But we don't spend any time thinking about how could this be misinterpreted, how could it be misused, and how, on the other hand, could we help to use it in a more positive way. This is not an exaggeration. I have a website called MultipleIntelligencesOasis.org, and I've written at least 200 blogs over the last five years trying to indicate ways in which these ideas can be used positively. Has it convinced other people? I hope it at least has convinced those who have read the blogs, but you can't force people to do the right thing. All you can do is to try to create conditions where it's more likely that they will understand what you're trying to do, not deliberately distort it. I'm sure everybody's thinking about the political realm, where the major industry now is to distort people's ideas: fake news, alternative realities, and so on. This just makes the job of anybody who's trying to do good work much, much more difficult. But I don't think we can abandon it. We have to just be clever and more intelligent, than the people who are trying to undo good work.

Stanton Wortham 21:01

So this story of yours has certainly brought me up short. I came into this with the expectation that I think most people have, which is that the world is really complicated. Scientists have a hard job, but their job is to cut into the world and articulate slices of it in maximally simple ways - as simple as the reality allows, as simple as we can get to try to capture some essence of an aspect of the world or our experience. It's clear that you agree with that, too. You've tried in a lot of your work to articulate simple ideas in order to capture something crucial about humans and how they function, with multiple intelligences being perhaps the most well known example of that work you've done.

But you've brought to our attention, this unknown, perhaps unwanted complexity where you can do your job perfectly and articulate a good simple idea. Then that idea released into the wild of the public - in your case, the public of educational folk theories and educational policy and practice - can be taken in all sorts of directions you didn't anticipate. It can be over simplified or connected to other ideas that really aren't appropriate. And now it's got me in a little bit of despair. So what should we be doing as aspiring scientists? Should we be giving up with this notion? Or should we just be trying to keep our ideas to ourselves? Or how should we think about this problem? You've given us?

Howard Gardner 22:28

A very good question, Stanton. I think that we need to understand that even though our goal is simplicity and elegance, and everybody who works in fields would agree with that, there inevitably be going to be complexities, not only in how we reach the simplicity, if we do, but in how people try to understand but often misunderstand what it is that we're trying to do. To the extent possible, when we're presenting, we should try to anticipate those misunderstandings. Ten years after I published my book, I put out an article, which is my most cited article, "Multiple intelligences: Myths and Messages." There, I explicitly laid out some of the things we were talking about: seven misunderstandings. I couldn't have done that in 1983. It took me ten years to understand the complexities. Maybe if I'd been cleverer, or given more talks beforehand, I would have been able to anticipate them.

I do think that we live in an age where there's so many media options available, not just the blogs that I talked about, but social media and so on, that there are opportunities to sort of nip a misunderstanding in the bud, which would have been less likely when I was trained many decades ago. I wouldn't want to deny the complexities, but I certainly wouldn't want to spend all my time as a firehouse dog running after them. You have to find a balance. In addition to the blogs and writings that I do, I have some colleagues, three in particular, who are experts in multiple intelligence theory. When I get an inquiry or when I get a question, I often ask them if they would like to take it on. One of them even publishes a newsletter - Tom Hoerr - on multiple intelligences. And similarly with Good Work, which is what I'm spending all my time on now, and Good Play, I have a whole team of people, some of whom, you know, like Lynn Barendsen and Wendy Fischman, who can help me with this. Now, scholars differ enormously on this dimension. Some scholars are very, very solitary, and they almost by definition don't have a single individual or group to turn to. Others have a large group of students, and of course, there, they can get a lot of help. I'm somewhere in between.

Stanton Wortham 25:13

So this is a very interesting account that you've given us of the afterlife of a scientific idea. Your last point was engaging. So you're saying you were able to articulate a clear and simple scientific idea, a theory. But now as you're dealing with the repercussions of it, as its interpreted and reinterpreted out in the world, you need a whole team of people in order to engage with it. So at this point, I'd like to bring in Gabi Oliveira, who is a professor at the Harvard Graduate School of Education, to ask Howard a couple of questions.

Gabrielle Oliveira 25:48

All right, thank you so much. I took so many notes! I feel like I'm in a class, which is awesome. It also makes me think about the Olympics in terms of how we evaluate things, and how it's only based on the end - the final routine - and not the process. So I'm making some parallels in my head. I was wondering about this idea that you were talking about, especially applied to more junior scholars. How can people think about what they're theorizing on, their field of study, to think about the limitations and anticipating what you say, building in their reflections of things that may come out from what they're putting out, without paralysis? How do you balance that idea that, "Yes, I have to

cover myself and figure out what could be the spots that I'm not paying attention to? But how do we make that not into a paralysis for folks who are just starting out to do this?

Howard Gardner 26:49

That's a very important and difficult question. Because as a teacher for many years and as a supervisor of dozens and dozens of doctoral students, I think that part of my job is to assess and gauge how much criticism a student can take and in what form. I'm going to make misjudgments, but you get better over time. It's equally bad to be the ultimate economist and to destroy a first year doctoral student, as it is, and sometimes at the school that you're going to teach at, to try to push everybody through no matter what. And then when they get through, you know, they fall flat on their face, because they haven't been subjected to hard criticism. I value very much what I call critical friends - people who I know and trust like Damon, Csikszentmihalyi, and my wife, Ellen, who won't be out to destroy me, but will tell me when I'm full of crap. And Ellen doesn't hesitate to do that. But at the same time, you know, they're on your side, and that you can only cultivate over time. Of course, nowadays, anybody who wants to be a scholar lives in the world of peer review, and peer review certainly doesn't err on the side of being kind. You know, you send a grant application to NIH, NSF, or OERI, and you don't feel very good after you read the comments. It's a line that you have to draw for yourself.

One interesting thing is when you're a young scholar, the way I was, people get a certain amount of prestige by giving you a boost. So when I wrote my early books, people say, "Oh, there's this interesting young scholar, and he doesn't have a university affiliation" because I didn't for a long time, and they boost you. Then when you get to be more of a target, you know, the fun comes from saying, "This is a MacArthur winner, who is a Harvard professor. Let's see if we can zap him." There's a certain justice in that. But, you know, I constantly have to tell myself, "I'm not as good as the praisers say, and I'm not as bad as the critics say." I'm lucky. I have a pretty strong ego about that. I think it's been harder traditionally, for women and minorities, who were less likely to get a pat on the back all the time for what they were doing. So it's a very complicated calculus.

Gabrielle Oliveira 29:23

Yeah. And I wonder about what you also said in the beginning. It was really nice to hear you saying that there is a struggle and this continued reformulation as you go - that that's also part of the discovery. When we think about that particular struggle to communicate, when we think about social media, what are the challenges that you have found? Because in social media, there's only sound bites, right? So folks can look at your 400-page book and just take a little excerpt, and then that gets reproduced on Twitter a million times or something. So what do you think is the ethical component for researchers in terms of social media use and abuse, in regard to 'sound bites' from research?

Howard Gardner 30:14

Well, I should probably toss the question back at you, because I don't eat sweets, and I don't go to social media. I do have a Twitter account, and my staff sometimes tweets something, but it's a big time sink. When somebody once posted something very nasty about me on Twitter and one of my

associates told me about it, I just ignored it. I think a more profound question is, "To what extent should people post their findings before they've been peer reviewed?" And when I first heard about this option ten years ago, I was very strong that I think it's a bad idea to post anything before it's been peer reviewed. I don't do much peer review anymore, so I don't have as a strong feeling about it. But I guess what I would say to both you and to Stanton is that there's lots of stuff that's wrong with our professions, and there's lots of stuff which is wrong with our institutions. But both our professions (and professor is a kind of profession, as is law, medicine, and journalism) and institutions (universities are institutions the way churches and museums are) have been built up over hundreds, if not thousands of years. They're very precious human creations. They're much easier to destroy than to rebuild. There's lots wrong with peer review, but if we got rid of it, then anything would go. So as an old person, and somebody who is conservative on these matters, I'm happy to see my grandchildren on FaceTime. But I don't think scholars should spend a lot of time trying to do serious work on these media. And I think if you're misunderstood it's probably better to ignore it, than to engage in discussion. In fact, you could say, "Look, if you want to engage in this seriously, let's do this in a form that suited for it, and not one where we're restricted to 180 characters."

Gabrielle Oliveira 32:32

It may be a generational piece, but there's so much pressure these days to also think about what a public intellectual is. So, we have to navigate this challenge of social media and the simplicity of the ways that you have to communicate. But then sometimes I personally feel the pressure of this idea of being very rigorous with my research. Sometimes the idea of being complex in the way that you communicate sometimes equates for some people as being rigorous, right? And so I'm always thinking about what is our role as researchers, professors, or intellectuals facing the public? Should we be contributing in a way that is not just the language in academia, but it's a language facing the public?

Howard Gardner 33:25

Okay, I would make one linguistic distinction there. 'Public intellectual' is a word that was very much used 50 years ago, and I could list a whole bunch of people, most of whom neither of you have heard of, who are public intellectuals. I would say, when it gets to public intellectuals now, I mean, the only person who I would consider seriously is as a public intellectual is Noam Chomsky who is probably known by everybody. What I hear you saying is, to what extent should we be a public figure and talk about what it is that our work is? I think for young scholars, you need to be careful about that because you end up being part of the issue, rather than your work. So I would say that for a young scholar, particularly one who wants to be in the academy and have tenure, it's much better to do work as well as you can, publish it, and get support into ways that the profession recognizes. And you certainly can talk to the press if they contact you, but I do it almost all by email, so you can't be misquoted. You know, if thereafter, when you've been more established, you want to write books and shoot your mouth off on Twitter, it's less risky. But I've tried not to shoot off my mouth and do Twitter. If other people who shall be remain nameless, but you and I know who they are. If they want to do that, that's fine. But I don't think it helps the profession or the institution to do it. And unless you're

independently wealthy and don't need to have a job, I think it's important to really focus on your work and to get it out as clearly as possible.

What I thought you were going to say is what people like my wife, Ellen and I lament, and that is the need for people to publish only certain kinds of articles and certain kinds of peer-reviewed journals, rather than to develop ideas, which are powerful and might have a longer half life. That's a tension, which nowadays, people feel much more strongly than they felt 70 years ago. I respect people who are young and who are pursuing their ideas, even if it doesn't result in big grants and lots of publication in the right journals. It's a risk you take, and probably it's one you should be prudent about. As we're talking, which is the end of July, there is a 2021 New Yorker article, which has gone viral about a woman who didn't get tenure at Harvard. I'm not going to speak about the merits of the case. I don't know them anyway, but it shows about the risk of becoming a public figure when you're young. So I would caution people unless they either are very wealthy, or they have a desire or at least a tolerance for being coming a public punching bag.

Gabrielle Oliveira 36:38

Yeah, that's a tricky point, because I felt that I had to restrain myself sometimes. For example, if people were debating a topic that I research, that I have knowledge in, and then I want to contribute, but then I walk that thin line of, "Yes, I want to participate in a discussion about public policy, something that is happening. I want to be part of this applied discussion, but what's my duty if I know that material and if I've been researching it for so long? Why shouldn't I be the person also to be at the table, you know, in that public matter?"

Howard Gardner 37:17

Right, but how you handle it and what you say is at least as important as to whether you are at the table. I'm going to close this out by looping it back to Stanton, because he was a student of, and I came to know very well, a scholar who was a 'scholar-scholar,' but who rarely published things. I think that was a mistake, because now people are trying to publish his stuff after he's gone. He went to the other extreme. But, you know, this is a judgment everybody has to make with themselves.

Stanton Wortham 37:48

Great. Well, thank you very much, Howard Gardner and Gabi Oliveira. We really appreciate the insights you brought to us today, and now we're going to have to think more seriously about what it means to articulate simple ideas in science. It's more complex than we thought.

Thanks for being with us for this first episode of our second season of Pulled Up Short. We hope you enjoyed it. This year, we're partnering with the American Anthropological Association, in our raising of issues central to their mission. We wanted to remind you that next month, November 17 to 21, the American Anthropological Association annual meeting is happening in Baltimore, available both in person and virtually. Hopefully, you'll have an opportunity to check out some of the cutting edge research that's being presented there. You can see it all at AmericanAnthro.org.

Next week, on *Pulled Up Short*, we're thrilled to have Ellen Winner with us discussing whether art and science are in fact, opposites. We have a tendency to attribute emotions and creativity to art, logic and reason to science, but Ellen's gonna argue that this dichotomy really doesn't hold up at all. Hope to see you then.