SCIENCE OF THE NOOSPHERE

Risker/Anne Clin

with

David Sloan Wilson

David Sloan Wilson: Well, hello Anne Clin, aka Risker. I am so happy to be talking to you about Wikipedia, so thank you for joining me.

Risker/Anne Clin: Well, thank you very much for having me.

DSW: Wikipedia is just the shining example of a form of social organization which has risen in the Internet, which is often called self organizing. And we'll discuss exactly what that means, but it's definitely a distributed form of governance resulting in something which is absolutely magnificent. I want to say, first of all, I support it financially and I encourage everyone listening to do the same. And I used it at least three or four times today just in my work before this conversation, and I use it every day. So it is awesome really to contemplate it, and that's why I'm so eager to have this conversation. You are not as I understand it high up in any kind of Wikipedia hierarchy, if there is such a thing. But you are very engaged with it and tell us your story as to basically who you are as a person, how you became involved in Wikipedia and your current degree of engagement, because I think that says a lot about Wikipedia.

R/AC: Well, like you, I started off on Wikipedia by reading it, and I'm a little bit of a grammar nut. And so I would read articles and there'd be grammar or spelling mistakes in them and they would bother me. So one day I just thought maybe I would actually click that edit button and see what happened if I tried to fix a mistake and it worked and then I saved it, and all of a sudden it dawned on me that I had just taken a step that had changed the Internet. I had changed this for everybody else who read the article after me. And that felt very powerful. And I enjoyed that feeling and I continued doing that as an unregistered user for a little while, and then one day I had an article where I had to be a registered user to edit it. So I created an account, I'd been sort of reading around the Wikipedia site and learning things like that.

And then I moved on and I created my account and started participating more fully, had more opportunities to do things, went on to become an administrator, went on to become a member of one of the major dispute resolution body on English Wikipedia, which is called the Arbitration Committee, picked up some extra user rights along the way and just kept going. And since then I've worked more and more with what we call our meta level or our global level, where I take on roles on various committees that work across the multiple Wikipedia and Wikimedia sites. We have over 800 sites and we have sites in hundreds of languages. So having that opportunity has meant an awful lot to me.

DSW: Well, and this is entirely voluntary, Anne?

R/AC: Entirely voluntary.

DSW: Tell us more about yourself as a person. What do you do professionally? Or just a little bit more about you as a person please?

R/AC: Well, I'm retired now but before that I worked in healthcare administration. I'm from Canada, I live near Toronto. I have a family and I do Wikipedia instead of doing things like watching television or stuff like that. This is how I use my volunteer time. My husband jokingly says that, it's certainly a much healthier midlife crisis than buying a red Ferrari or something like that.

DSW: Yeah. Exactly, exactly, what we do with our spare time. So how much of the Wikipedia workforce is like that? I mean, as opposed to a paid staff?

R/AC: Almost all of it. On a weekly basis I believe we have over 30,000 volunteers editing some part of one or more sites. The Wikimedia foundation has roughly 500 staff and of all of the employees for all of the support areas, we have several chapters in different countries and some of them have employees. I would say there's probably less than a thousand people who are paid to work on the system. At least, they're mainly doing development, software development or user support, or administrative background work, but they're not actually editing the project with those accounts.They'll still communicate using their official Wikimedia or whatever account to communicate, but they will not actually be editing articles with those accounts.

DSW: Right. So there is a small paid staff proportionally it's quite small, very small but you made it sound like it might be a one to 30 ratio of volunteer work versus paid work, is that a rough ballpark?

R/AC: Oh, easily . When I say 30,000 that's the number of people who are doing five or more edits a month. There's an awful lot more people who are editing less frequently or are not registered users, and who edit frequently.

DSW: Okay, so there's motivational part of this and a governance part of this. Let's begin with motivation, why is it so meaningful? That makes this so worthwhile? It's not financial capital it's something else, but it's really sustaining for some people such as yourself. So what is it that gives it such a meaning for you that keeps you doing it?

R/AC: I think the knowledge that we do make a difference in sharing information across the world is very important to a lot of people. For some people it's important to share a very limited section of information. They may focus completely on trains or they may focus on politicians or they may focus on some other aspect. For some people it's being able to share information about their native country or their local region. And I have sometimes worked with an editor who writes extensively about the history of early Quebec, for example, and the families that were involved, the towns that existed at the time, and how it has impacted Quebec as it has developed over the years. And I've worked with people who are starting to bring out more information about African countries and figuring out how to fit that information in, to an English Wikipedia that is primarily written by Westerners. So we want to make sure that we integrate that information.

DSW: I think of this as a very democratic form of scholarship. And let me just say you a little bit on scholarship, because I'm a scholar and a scientist. And I have a reverential attitude towards scholarship, this community of people that are just really assiduous about getting the facts right. And I attribute almost like a sacredness to knowledge and scholarship, but of course, so much of it takes place in universities, inside the proverbial ivory tower. And is therefore very biased in its own way and very restricted and so on. And so Wikipedia, it seems, offers an opportunity for people from anywhere, any walk of life to contribute to scholarly knowledge like the early history of Quebec, you don't necessarily have to be a professor to do that. Is that part of the motivation here? I mean, people want to talk about trains or their nation in Africa or the early history of Quebec is that they're basically eager to function as scholars, no matter what their day job?

R/AC: I think that's definitely part of it. And there are a lot of people who enjoy reading and researching and having hobbies outside of Wikipedia, that they are then able to share on Wikipedia. Share that knowledge that they've gained about their various hobbies or their various personal interests. I think that's really important because it does have some effect. You'd also be surprised at how many universities participate in Wikipedia.

DSW: Oh, yeah. I'm not surprised at that.

R/AC: Literally...

DSW: Yeah, yeah.

R/AC: There are literally hundreds of professors who create Wikipedia classes and bring their students and require them to participate on Wikipedia. And they'll often contribute in areas where scholarly expertise is really important. I will use the example of something that we ran into during the last United States election, where some Internet meme decided that Benford's Law, which is a very esoteric mathematical theorem would show that, the results of the US election were false and they started editing this article. And I can assure you that 99.98% of Wikipedians don't understand math at that level to be able to edit the article. However, we do have a whole core group of mathematicians and we just sort of said, come and check this out, figure out whether not this makes sense. And they, cleaned up the article made sense of it and got rid of all of the nonsense from the Internet memes.

DSW: Yeah, we're going to get to that, governance, we're going to spend a long time on governance. And I just wanted to say, I have a colleague who teaches classes just that way. The student projects are to create Wikipedia pages for an organism or something like that. That's definitely the case. I also wanted to mention and I've forgotten the reference so bad on me as a scholar, but what the article said was, "In the first place, if you're a professor and you're writing something, you never actually reference a Wikipedia article", it's just like it's not good enough. You have to reference an academic article, but what the study showed is that where do they find those academic articles? Wikipedia. And actually Wikipedia has become as in my case, just the go to place for information.

And then when you cite something, you cite something that's cited in the Wikipedia article. So it's kind of like a silent source for academics and I think that almost everyone is using Wikipedia in that way. 12:30

Anne, I wanted to ask how much recognition, status, prestige, recognition, within this circle figures as part of the motivation that not only are you contributing to this knowledge, but in some ways you're becoming known for it? That's a very basic human motivation, nothing to be ashamed of that you have some standing and in a community. And I wonder how does that figure in yourself, and in others that you know within this community?

R/AC: There are many ways to be recognized. Some of it is simply a little, what we call a Wiki-love or a Wiki-note that somebody leaves on the user's talk page, where they would leave messages for somebody saying, "Geez! You did a great job on this article or I've seen your work and here's a cookie". And those sorts of things, at the base level that's where it starts for editors who've worked on more complicated or more complete articles. I mean, a lot of our articles are okay, but they're very basic. And for people who've worked on articles that have received a certain amount of recognition, their name is directly tied to that article's recognition as well. And they receive a notice. In the page history, we actually have a way of saying this article became a good article on this date, this version, and it usually will have the username of the person who promoted it and developed it. And the same thing for what we call our featured articles, the articles that run on the front page of Wikipedia.

Those are much more complicated, they have to follow very precise requirements, they have to have incredible sourcing. Those sources are all double checked, quite often by scholars who specialize in that area. And then all of the images have to meet our certain criteria and so on. And they are formally recognized as the promoter of that feature article. They will receive formal recognition of that. And so that is certainly, from the content side, that's one way of recognizing people. Other ways of recognizing people are to provide them with additional user rights or user permissions. Somebody who has demonstrated some ability in assessing new articles, will be given a particular user permission to be able to continue to do that without being overseen. Editors who have developed skills in identifying people who run multiple accounts, may get special authorizations or special permissions to do that in a more formal and more complex way that involves private information.

DSW: So there's a ladder to climb. You described that for yourself, that you're able to do more and more and more and get access to more permissions and so on. And so, of course I could imagine that being

very motivating, just like a video game when you want to climb the levels of a video game. Is there a there some public recognition of that? That you become more widely known? And that may or may not be important to you or anyone else, but I'm just really quite eager, as someone who thinks a lot about social systems and how they work, just to know how much that you gain a kind of a reputation for what you do.

There's the private satisfaction of accomplishment, and then the public part, and how much of that is built into the digital platform? So that if you want to praise somebody give them a cookie, I think you just said that there's a way to do it. That would have to be built into a digital platform, just for someone to say thank you would have to actually be built in. Otherwise, it wouldn't be possible, so more on that please.

R/AC: Well, definitely it is built in, we actually have two tools. The first one is that, anybody can thank an individual editor for a specific edit they've made. You go to the page history and you see the username and it says at the end of it, "Do you want to thank this person?" And you can click yes, and that thanks goes directly to them. So they know that somebody appreciated what they said or what they edited in that particular edit. It could be removing vandalism, it could be making a very erudite statement on a talk page or in a discussion. These are all very important things and it's immediate recognition. As soon as you click that button, they get a notice saying, you have been thanked by so and so.

DSW: How many thanks do you get on an average day?

R/AC: Oh, I'll get a couple a week maybe.

DSW: Okay.

R/AC: Depends on how much work I'm doing on English Wikipedia that week.

DSW: Right, right.

R/AC: And that is a dependent thing. A lot of the work that I do is either behind the scenes or on one of the other projects that we have, so I may not get as many as some people, but certainly a lot of thanks go out. And again, the message that gives somebody a cookie, we call them Wiki-love messages believe it or not, is a software link that you just click and you choose which photo you want to use and exactly what thing you want to say to them. And then you just save it to their talk page, it's very easy to do.

DSW: How many of those do you get couple a week?

R/AC: Maybe a couple of a month.

DSW: How many do you give?

R/AC: I'll thank people probably several times a month.

DSW: Okay.

R/AC: Yeah. It's very individualistic.

DSW: Yeah, yeah. How social is it? And I hope you don't... You can see how interested I am in this. In some sense it seems like it's a solitary activity you're there and at your computer, but how many social interactions are there of any kind on a given day? Are you actually interacting with another person in a way that's fulfilling? The way we do when we say hi to a friend or just with someone or so on. How many people do you actually interact with on a given day? So that this could actually become a fairly rich social life?

R/AC: It's definitely a very significant aspect for a lot of people. I can tell you right now that I can personally think of at least 20 couples who have gotten married, who met on Wikipedia. So clearly, there is a social element. Many, many friendships have developed over the years. And it depends on the level

that the individual wants to have that social interaction as well, whether they want to limit it to just talking about articles and stuff like that, whether they want to include some external friendships and so on. Quite often we'll go offline with that we know or who's whose work we've enjoyed and say, hey, how are you? And a lot of background work is done offline, where it's not necessarily visible. And those committees become very close, and the people in those committees tend to get very close.

We also have external in person meetings for a lot of things or online meetings for various things. Everything had to go online due to the pandemic, but it certainly has reminded us of how easy it is for us to just get together and have these conversations with each other. But we have regular in person sessions together, whether they're local, we can meet in New York City, whether they're regional, the Central and Eastern Europe group has an annual conference, or whether they're global. Our annual Wikimania events conferences, which usually attract about a thousand people from around the world. They're all very useful and they have to build the connections that are used for continuing to develop the projects. Having gone to several of the Wikimanias I've been able to develop friendships and working relationships with people from all over the globe. I have friends in Africa and it is a fantastic portal.

DSW: And it's all enveloped by an ethos of dedication to knowledge basically. I mean, the whole cause of it is something which is very prosocial and intellectual and so on. So that you're really working on something that has real value and that everyone shares that value. And so, we're going to get to the Ostrom core design principles in a minute, but strong sense of identity and purpose is the first thing that's needed for any group to function well, is a strong sense of identity and purpose. And here's something that anyone can join anywhere in the world, any culture, any level of expertise and then they're welcomed into that world. And so, I think that that is really very, very interesting.

 R/AC: I think one of the biggest challenges that we face, especially as we are spreading our wings and making a point of trying to develop editing groups in areas outside of the Western world, is that there are a lot of areas where it is financially or socially very costly for people to participate in these things. They have to have an Internet connection, they have to have the hardware to actually connect to the Internet and to participate, they have to have access to some information sources, and that can be very, very expensive in some parts of the world. So that's one of the areas where we're looking at trying to figure out how we can support people to participate from those areas. We've got lots of ways now for people to make use of our knowledge in those areas, we have offline Wikipedias and special software that can be built off of Raspberry Pi, which is an incredibly inexpensive piece of technology.

DSW: What is that? That is a little bit more I'm unfamiliar with that, Anne, what is that?

R/AC: It's called a Raspberry Pi. It's a kind of... Well, it's like a PC, except it's incredibly inexpensive has very limited capacity and it can be used to hold or store a large amount of information. So quite often what we'll do is we'll have an offline Wikipedia built into those Raspberry Pis. And Pi is spelled P-I. You could probably find out more about it the Wikipedia article about Raspberry Pi.

DSW: That's where I'll go.

R/AC: It makes our information more usable, but we also need to have those people contributing so we can work against the inherent biases of the Western worldview or the North American continental worldview, or the European worldview. A lot of the things that we mess up are not because we intended to mess it up, it's because we simply don't have enough knowledge to be able to identify things. For example, understanding what the best reference sources are amongst Nigeria media is not something that's somebody in New York city is going to know, unless they came from Nigeria.

DSW: Yeah, there's an acronym and I wonder if you've encountered it White Educated Industrial Rich and Democratic that's WEIRD, WEIRD, White Educated Industrial Rich and Democratic. Have you encountered that acronym?

R/AC: I haven't, but I fully understand what it means.

DSW: Yeah, and so it's a huge challenge to basically to first recognize how peculiar WEIRD cultures are. And yet of course, almost everything that we call scholarly or technological, it comes from those WEIRD cultures. And so the need to appreciate non-WEIRD societies and to include them in everything, including an enterprise like Wikipedia is like first and foremost, that's what you've got to do once you appreciate how peculiar we are. And Joseph Henrich, is the scholar, he's a professor at Harvard University, good colleague of mine is the person who coined it, and has a beautiful book called The WEIRDest People in the World, that lays all this out. I mean, it's just amazing when you think of it, our entire conception of reality, it needs to be broadened out.

Well, let's get to governance here Anne. Two great challenges as I'm sure you know, one is a challenge of coordination, even if everyone is willing. And then there's the challenge of conflicts of interest where people actually are not on the same page.

And so how does Wikipedia deal with these two great challenges of coordination and conflicts of interest and where does your checklist come in? Because you are known for Risker's checklist. And I also wanted to say, is there significance to usernames the fact that people have a username, which is different than their real name? Is that an important feature?

R/AC: People choose their usernames for various reasons. At the time that I was joining Wikipedia, registering my account in 2005, there had been some very negative encounters. Some women editors had been quite seriously harassed by a few people and 2005 was a long time ago and I really had have always and very cautious about what I put out there on the Internet about myself. And I felt it was a little bit risky to join Wikipedia. So I called myself Risker. The interesting side effect is that, many people, even today, still feel that my username sounds very masculine and are often surprised to find out that, when they're on a video call, they're talking to somebody small. So that's very interesting to me, but on the whole, I would say that it's not really... People choose their usernames for reasons that makes sense to them. We do have a fair number of people who edit under their real names and many people who choose a username, but also linked to their real names. So it's very much a user choice thing.

DSW: So what you've revealed here, Anne is that Wikipedia is not immune from all of the pathologies that we associate with the Internet, such as trolling and harassment and predatory activities of various sorts. Not to speak of subverting information. I mean, everything we've talk about with fake news is something that's... I mean, some people must be dying to get their spin on things into Wikipedia for that to become the reality of seeing through the lens of Wikipedia. So we're back to coordination and conflict. And so back to you on how Wikipedia can accomplish these governance issues.

R/AC: We do a lot of things. And we have to keep in mind, this is a 20 year old website. So we've learned a lot of things over time. And the lessons that we've learned on English Wikipedia are shared with our colleagues on Hungarian Wikipedia and Igbo Wikipedia and Bengali Wikisource and all of our other projects. So they have access to that information as well. And the software tools that we've developed. We're working on making sure that they're able to be flexible enough to help people. So there's a sharing of knowledge and experience that is useful, not just within our own project, but to our many other projects as well. Some of it can be transported and some of it can't. Some of it becomes part of the hardcore software that runs the entire Wikimedia movement. And some of it is just very localized because it's a local problem that they're trying to address. So we have a lot of mitigation tools that we have developed over the years and this is where the coordination comes in. It is all self coordinated.

People will say, "Hey, I can do this," or look for other people who are willing to work with them on something. So that's how our featured articles started developing was that people who were interested in having the highest quality of work on our main page got together. And they just said, "Hey, let's establish some standards. Let's help each other build those articles." And that's how that particular little

area developed. For a long time, and it's not as prevalent now because we have created, again, mainly by users, we have created software that we call bots, and I'm sure you've seen bots all over the Internet doing various things. Ours will quite often work on anti-vandalism. They'll automatically revert something that they've been programmed to take that edit out, to back it up. They don't formally delete anything. They just revert it to the previous version of the article.

DSW: Yeah, that's part of this is, is this fossil record is basically nothing gets deleted. You have an amazing, amazing fossil record of everything that ever gets done on Wikipedia, right?

R/AC: Yes. Wikipedia is quite a cache. And there are a few exceptions to those rules, but generally speaking, yes. You can go back to an article and read every single version of it all the way to the beginning, in most cases.

DSW: Just to clarify, you have bots that recognize vandalism, that there's some algorithm that recognizes, and vandalism is somebody that just comes in and messes up a piece just for the fun of it or what?

R/AC: Oh, it can be all kinds of things. It could be a test edit. You know, somebody who tries to edit something realizes they don't know what they did and saves instead of backing out.

DSW:Yeah. Just junk. Degradation. Yeah. I mean, it's not mal-intent. It's just, it's what happens. I mean it's entropy basically.

R/AC: Well, that's it exactly. And we have bots that will help with a lot of that. We also have something called a special screen that we call recent changes, which literally lists every single edit as it's happening. And people watch that recent changes list and will assess whether or not they need to look further at a specific edit to decide whether or not it's appropriate. And many of the editors who are working on Wikipedia today started off doing recent changes patrol. It's a very common entry point for our editors. People just start doing these things. It's amazing the things that people will just sort of fall into, or they'll notice that somebody else is doing it. And they'll say, "Hey, can I join you?" Or they'll just start doing it too. And it just sort of becomes.

DSW: How much apprenticeship is there. You say, "Hey, can I join you?" So if you wanted to get into this, you could do it solo, but you just said, you could actually attach yourself to somebody and be an apprentice. "Hey, can I join you?" Could you elaborate a little bit on that?

R/AC: We do have some users who will act as mentors to new editors in various ways, whether actually doing some editing training with people. We have courses and what we call edit-a-thons or project similar to that, where we help people to learn some of the background, some of the little tweaks and things that they can do to be able to integrate themselves into the project. Something as simple as how do you format a heading, or how do you save your changes? What should you say in an edit summary, those sorts of things. So it can be very basic or it can be very complex.

For example, when we are dealing with some of our more high level user rights, we'll want to actually provide a structured training course and a person practically to hold the hand of a new person in that area to walk them through the entire process, because it may be a complex process or a lot of steps that happen. And a lot of it you just sort of observe and you watch things happening as well. This is a culture where trying something is accepted. If you try something, it can always be reverted back.

DSW: Yeah. I mean, that's one of the great things, it's safe to try. There's a phrase, safe to try, and then you could always go back and you could do something else. So it's inherently evolutionary, in my way of thinking. Variation and selection, variation and selection, in a way that's safe, because you could always go back, which is not always true in the real world, but in this case it is. How soon when a person needs help, do they connect to get connected to a real person? As opposed to something like a frequently asked question, disembodied frequently asked questions list?

R/AC: They can actually put a help notice on their user talk page and someone will come and help them. It may take a little while. I mean there aren't always people who specialize in helping people who are online or are available at that precise moment, but they're going to get an answer sooner or later, usually within 24 hours. The other thing is that Wikipedia is based on eventualism. Not everything has to be done right this minute. There are exceptions to that quite often, when we are dealing with a breaking news story that is getting a lot of observation and review, and everybody is coming to Wikipedia to see what's going on.

Those articles are sort of, or areas are dealt with a little differently, and they will be very, very highly watched and very carefully monitored and edited. But for, the article on, I don't know, Madonna, there are always going to be some people who are watching it as somebody asks a question on the talk page, there they'll get an answer. It may take a couple of days, but there are probably, I don't know, 1,000 editors who have that on their watch list and will notice that a question was asked. So it takes a little while.

DSW: So what happens if somebody's identified as a kind of a bad actor, that's not really operating in the interest of the community. What happens to them? What's the response?

R/AC: Over time, we have developed a lot of mitigation practices and they sort of fall into two categories. One is to manage a problem with an article. And the other one is to manage a problem with an editor. And sometimes they interchange, they cross over, but we have dispute resolution systems that are involved. There are some what I would call bright lines that if people cross, they're not going to be allowed to continue. We will shut down their account. We will block their accounts. Really harassing content, adding a lot of harmful information, undisclosed paid editing will usually result in having an account blocked, repeatedly damaging articles will get an account blocked. We do those sorts of things, very routinely.

DSW: How common is that? Does that happen all the time, or just only infrequently?

R/AC: All the time, all the time. During the course of our interview today, which would be what an hour and a half, we will probably block 50 editors or accounts. I won't be doing it personally, but it will happen. We also block the IP addresses of VPNs and similar processes, similar Internet access processes as open proxies. And that is because, so that we have a better control on being able to link users to each other. And to be able to block those users, we have found over the course of many, many years, that most of our problem editors come from those sorts of editing or online processes. And we really have found that it works to our advantage to just say, no, sorry, no VPNs. And then we wind up having to exempt people from those because we have certain countries where the way to get to Wikipedia is through a VPN. It is the pretty much the only way. So we have a balancing act to do there too.

Bad players exist. We know that they exist. On English Wikipedia, we're not very tolerant of bad players. Other projects have taken different approaches or have just done other things that prevent bad players from getting to them. For example, some projects only allow people with registered accounts to edit. It's something of an experiment, but it's very important to them. Or they have something called flag revisions process where anybody can edit, but the publicly viewing version of the article will remain with the last edit of a registered user until somebody reviews what the unregistered user has done first.

DSW: Yeah. Yeah. So this is so very interesting to me. Do you think of it like an immune system? I mean, you and I have immune systems do to help keep diseases away. And does anyone actually use that metaphor that Wikipedia needs an immune system for bad actors at all?

R/AC: Oh yes definitely. Definitely. We've used that metaphor. That very specific metaphor. We will never be completely immune to it.

DSW: No immune system is. No immune system is. Always vigilant, often challenged, sometimes overcome. That's the way our immune systems are.

R/AC: One of the major reasons for our success is keeping ourselves open, making ourselves available, allowing ourselves to be edited, our projects to be edited by people whose motivations are completely unknown to us. And that's how we exist. We need to have that input coming in all the time or else we just become, some other site on the Internet that falls out of its currency and its usefulness.

DSW: Absolutely. I mean, for an organism to exist at all with all of its amazing physiological processes is just amazing and it's always being subject to disruptive forces. Forces of entropy forces of disruption, conflicts of interest and so on. And there's a selection process that's required in order to maintain order. And in the absence of that process, then disorder results. And so, it's so interesting. I could talk with you all day, Anne, but I think that I want to make sure we cover two things. One is your checklist because I think that's part of the immune system is your checklist. So I'd like to know, first of all, the story of how you proposed it and how it became widely used and what it is. And then I want to run through Elinor Ostrom's core design principles and see how well they kind of fit what's evolved over there at Wikipedia. So, first your checklist, what is the story of your checklist?

R/AC: Risker's checklist is a checklist for software developers. It's not for editors. It was developed because I had good connections with the software developers from the Wikimedia Foundation. I count many of them amongst my friends, and they kept creating all kinds of neat bits of software, what we call extensions and then they would ask me to test it because I was somebody who was willing to test new software. And I had all of these advanced permissions, so I knew what I was looking for because one of my positions was that I have to be able to use my advanced permissions for everything that's publicly viewable. And I kept running into the same problems over and over and over again. And I just got frustrated one day and just wrote the checklist and then linked over to a couple of developers and said, is this of any use to you guys?

And they said, "Oh my God, somebody finally wrote this." They were very thrilled to have it, and it was written from the point of view of somebody who was experienced and running into new software that was applied to Wikipedia, or one of the other projects that we couldn't take care of from the perspective of the community. We were not able to moderate it properly and that's sort of a core principle, is that the community has to be able to moderate it because the foundation has 500 staff, and they shouldn't be moderating content. And starting to tell people, these are the kinds of things that you could wind up with if you don't give us the moderation tools built right into the software. And so I wrote that checklist and then, passed it on to a few people, asked their opinion and the head of engineering at the time was somebody I was working with on something else. And I said, "Oh, take a look at this. Is this is this useful." And he said, "I'm going to print this out and post it on everybody's desk, so that they know when they're developing something."

DSW: What are some of the items on the checklist?

R/AC: The checklist says that everything that creates a publicly visible version of Wikipedia, if it can be seen by the public, then the editing community has to be able to moderate it. We have to be able to delete it. We have to be able to edit it. We have to be able to find other things to do with it. We should be able to revert it. We have to make sure that we can do something called suppression, which is removing even from the view of administrators, certain content. And we do that with content such as, very personal medical information or telephone numbers, things like that, very personal information normally.

DSW: So privacy, I mean, there's so much, we haven't even gone there, Anne, the use of personal information and the protection of it. So actually maybe we should, but please continue with the checklist.

R/AC: So we talked about that and then we say, "We have to be able to track those edits as well." So we need edits to show up in recent changes and we need them to show up in various tables that we would look at and things like that. And that has actually become a major design principle. And even when they're writing in software, that isn't going to directly go onto Wikipedia or isn't the base software for Wikipedia, they do their very best to match up as closely as possible. I've been working with the group who is developing a project where we can put all our bots, sort of host all of our bots, from all of the different projects and people can see what else each other has. And it's written on slightly different software, but they've used exactly the same principles as mentioned in the checklist. And we often find that if people are not following the checklist or are not using it for interpretation, that problems ensue.

DSW: You have a do no harm clause, talk about that.

R/AC: This is really important, and that in particular came from a very well intentioned, but extremely controversial software decision that was made, I don't know, around 2012 or so. A new editing software was being developed, which we call visual editor. And it was very early in its development. And a decision was made for whatever reasons to make it the primary editing focus for English Wikipedia and many other projects. And the problem was that it didn't work very well, because it was very new software. And more importantly, about 30% of the edits that were made with this software were actually inserting information that was harmful, damaging somehow to the visual appeal of the article. It was taking things out that was supposed to be left in. If you tried to enter, you would get all kinds of strange characters going on.

And it took a very long time and an awful lot of arguments with the Wikimedia Foundation who had put this software in to withdraw it. And we were actually at the point where we were about to do something that could potentially have been very harmful to the project just to protect the project from this software. And they finally, agreed that, "Geez, maybe this is not working as well as we thought." We actually call this the snowman example, because one of the things that this software did was it would put little tiny snowman characters all over the place, in the middle of a sentence in the middle of a word. And this wasn't even a character that we had on any of our character sets. So we had no idea where this was coming from.

DSW: But it wasn't and malicious, right?

R/AC: No.

DSW: Not malicious in this case.

R/AC: That's it exactly. It was not malicious. They were trying to improve things very quickly but the fact of the matter was it was just too much for this project. For a project that gets, thousands of edits a minute, or tens of thousands in an hour. We were busy fixing the mistakes constantly just of that. We couldn't build the encyclopedia because we were too busy cleaning up after these projects. And it was really, that was the doing no harm. That was definitely harming the project.

And we learned, both from the foundation end and the software developer end and from the user end that we had to be a lot more accepting of, some changes, but at the same time saying, "You know what, it's okay if it doesn't work." And developers quite often have this idea of move fast and break things, or we'll just upload it and then, we can fix it from there. And the fact of the matter is this is a live site. It's being used by millions of people a day. It's an international resource. We have to try our best, not to mess it up too badly. And we have other ways of doing a lot of those things. So backing it out and then working again. It's resulted in things that what we call our development train, where they try a new version on a couple of projects that are willing to go through and do a lot of testing.

DSW: Yeah, there's got to be something like A/B testing or whatever. I mean, you must have refined that to a fine art. I would hope.

R/AC: Yes. And certainly this particular problem with visual editor, which is now, and I will tell you quite honestly is an excellent editing tool, several years later and improvements later. And I use it all the time, was something that was unusable when it was first there, but it's a whole different ball game now. It's a very different project and a very different editing tool.

DSW: So what does the do no harm clause item of your checklist cause someone to do. Basically to try to anticipate unforeseen consequences or something, and just basically think about the systemic impact of what they're doing, and then to have that view in mind, is that what happens with the do no harm clause?

R/AC: That's part of it, so taking care of things in advance, the slow progression of application of revised software or updated software. So they start on a couple of wikis where people... those particular projects have said, "Yeah, we want to be testers." And they have people who actually spends a lot of time testing out all of the new changes to make sure that it'll work properly. And they also do something called revert... they will revert their changes as well. And it depends on the nature of the harm that's being done. So if it's something that makes a site unreadable, obviously they to revert a lot faster because they need to have the site readable. That's a primary organizational goal. If it does something that really harms something or makes something very difficult to use, un-editable for example, they will revert their software change just as we would revert a bad edit or a problem edit.

And they've gotten a lot more willing to do that. And they've gotten a lot better at doing things step by step, so that before it gets to English Wikipedia, they've fixed a lot of the problems before it gets to us. We're usually the last site that they upload software to, out of the hundreds that we have, 800 or so that we have. And that's simply because it's the most heavily used, and if something goes wrong, you want to take care of everything that you possibly can before you hit your number one site, the one that's getting all the hits and is bringing in the readers from around the world. But as I say, we're one of 800 sites, so they've got a lot of sites where people are testing things and finding things out and letting software developers know if there's a problem.

DSW: I asked if you use the immune system metaphor, and you said that you do very much, are there any other organismic metaphors that you use to think about Wikipedia as some kind of superorganism with an anatomy and a physiology and a nervous system or as there more use of the organism metaphor in addition to the immune system?

R/AC: I think probably one of the metaphors that we use, has to do with the levels of development. So as I say, English Wikipedia and several of our fellow projects, Spanish, Italian, German, French that have been around for a long time and have large editor bases, and a lot of articles and experience are the mature projects. We continue to grow and develop, but they're fairly mature projects. And then there are the middle sized ones that are still developing and still learning how to operate, and quite often we try where we can, and through different channels to help those projects to grow and to support themselves to become the next level of mature project.

DSW: Okay. So it's a parental care sort of a thing?

R/AC: Yeah. Sort of. The very young and small organizations and projects get a lot of support in helping them to develop. We actually have an incubator project, which is used for very, very young projects where we only have three or four users in a particular language, particular type of project so that they can get to a certain point before they get on the list of the official Wikipedias or the official Wiki sources or whatever. So they have enough content to actually be usable. So we do have that hierarchy of projects.

And the key is trying to learn from each other and to learn from where others have been before. And it applies also to some of our social groups, our chapters, and our other affiliates, our youth user groups, where we have levels that they are expected to meet, to come into certain opportunities, shall we say.

An annual grant only goes to a chapter that has formal recognition and has certain financial stability and so on, and special grants will go to user groups who are going to hold special projects.

DSW: So financial resources. So much is based on volunteer. But now I've just heard that if you're doing a project, there might actually be some funding available, even if it's modest funding. And so tell us a little bit more about the financial resourcing of some of these projects.

R/AC: We have to keep in mind that... As I said, it is volunteer based entirely. There are about, around the world, about a thousand people who work for Wikimedia Foundation or one of our affiliated chapters or similar organizations who are being paid a salary. I mean, if this is their job, they should be paid a proper salary. And that's fair. I think that's something that everybody would agree to. If you were being hired to do this for eight hours a day or whatever, you should get a proper salary.

They probably don't get the biggest salaries in the world, but they do get salaries. And whatever is required in their country for additional support, depending on where they are. So for the groups that actually hire people, they have to have some kind of funding. Some of it is raised locally, and some of it comes from the general pool of funding that is raised on the Wikipedia and Wikimedia sites. We are hitting December 1st. We're about to see on English Wikipedia, our biggest fundraising kick of the year. So you will see those, if you don't have a registered account, you're going to see that the next time or in the next few days, when you log in. And that's one of our biggest fundraising processes.

DSW: And that gets distributed then in this fashion. So then throughout the system, basically, so you could apply, there's some application process or grant application process and things like that?

R/AC: Yes. And I mean, the applications need to be related to Wikimedia obviously. Some aspect of our motivation, our mission. So for example, there'll be money for prizes. For our Wiki Loves Monuments competition. There will be prizes for photos of the year competitions, Wiki Loves Africa.

DSW: Now, a little more. Do keep going. I can't help myself. So the competitions you have, competitions with prizes. Talk about that a little bit.

R/AC: A lot of these are based on improving either the content of a project. Quite often, these competitions will be to create or improve an article on various projects or in certain languages. It may be illustrating articles about a certain topic. It could be taking photos and who has the nicest photos. It could be focusing on a particular type of content that we want to improve. So for example, we may very well have a competition on writing articles about women scientists. We could have a competition on improving articles about Ghana.

DSW: So let's take the first of those. Writing articles on women scientists. So there's a competition, and first of all, what are the prizes and what's the response? I mean, you get dozens of articles? Hundreds of articles? Is there a single winner? Is the prize distributed? How many articles does that result in? These are all questions that rush to my mind.

R/AC: Well, a lot of it depends on how the individual competition would be built. So right now we have a competition going on English Wikipedia for improving the opening paragraphs of articles. Because when you look on Google quite often, you'll see the opening paragraph of a Wikipedia article. So we want to improve those, make sure that they're good and they're consistent. And what will happen is that the competition is how many did you do and you're awarded certain number of points. How many did you do? How many bytes of information did you add? Did you add a photo to the information box? All of these. So there'll be various points assigned to various tasks. And then the competition runs for a certain period. And then at the end of it somebody will win. And the prizes are usually relatively small. They could be money towards buying a resource, a book that you want or something like that. Or they could be a t-shirts, or stickers or...

DSW: Small change, small change.

R/AC: They're usually small time. I mean, it's unlikely that... I don't think we've ever seen a price that was worth more than a $100 US.

DSW: You're getting a lot out of that. I've got to get to Ostrom's core design principles. So to set the stage for our listeners, Elinor Ostrom was a political scientist, and she became famous for studying the famous tragedy of the commons, the tendency of people to overuse natural resources. And that term of course, was coined by the ecologist Garrett Hardin in an article published in science magazine in 1968. And the received wisdom was, was that the tragedy would always occur unless you privatized the resource or regulated it in some top down fashion. And what Ostrom did, Lin Ostrom, was actually study common pool resource groups around the world. And she showed that some of them were able to avoid the tragedy of the commons, to regulate, self-regulate their resources, but only if they implemented certain what she called core design principles. If they didn't implement these core design principles, the tragedy did in fact occur.

And so she won the Nobel prize in economics for that in 2009. And I was blessed to work with her for three years, prior to her death in 2012, to generalize the core design principles and to show that these principles are required basically for all forms of cooperation at all scales. And so there's just tremendous utility in these core design principles.

So I'm going to list them and then to ask you how much they're implemented, how relevant they are to Wikipedia and some we've already covered. And so I think that as I list them, we'll see that we've already talked about these, but it's very useful to bring them to light. And so the first one, and the most important one, is a shared identity and purpose, a strong sense of identity and purpose, that you have to know that you're a part of this group, that what it does is important, who's a member and what they're supposed to do. So to what extent is a shared sense of identity and purpose represented in Wikipedia? I think we've already talked about this a lot, but maybe you could just summarize that.

R/AC: I think, this is probably the easiest one to answer because we actually have this is our mission statement. We are here to share education to everybody in the world, and that's what we're here for. There's no question about it. It is why you're here, why you use it, why you participate in creating it. And if you can't track what you're doing to that, then you're probably not quite on the, people will say, "If you're not doing it for that purpose, maybe you don't need to be here." The companies who hire people to try and create or edit articles about them. Those editors are told, "You're not here for the right reason. You're not going to be here anymore." If they don't have that philosophy as they're coming in to participate, they're not tremendously welcome. Sometimes we will be able to turn people around, but that isn't our goal.

DSW: Mostly they have to leave. Yeah. And so we'll actually get there, that's some of the other principles. Number two Anne is equitable distribution of contributions and benefits. Not sustainable for some members of the group to get the benefits and others to do all the work. And you can see how that would work in a common pool of resource group. If you're managing a forest or a lake or something like that. Wikipedia, I think, it's really interesting to reflect upon this because so much is done on a voluntary basis and people choose their level of effort. So what are your thoughts about this idea that the benefits and the workload and so on has to be fairly distributed? So how does that relate to Wikipedia?

R/AC: As you point out, on Wikipedia, because individuals get to choose what they want to focus their time on, where they want to focus their time and how much time they want to put into the project, whether it's a huge amount or it's tiny little bits. The distribution works out pretty well. Sometimes people are pressured to consider doing certain tasks or invited to think about doing certain tasks that may not look particularly appealing in the first place. But quite often, those tasks come with a fair amount of internal prestige. For example, our arbitration committee on English Wikipedia comes with a fair amount of prestige, but it's a really hard job. And it takes people away from a lot of the other things

that they like to do, because they're basically dealing with disputes all the time, of various nature, of various kinds. And that can be hard.

DSW: Well, is there a free-riding problem? Is there some sense in which you can be a slacker, that you could be part of the community and not doing much, but getting something from it despite not contributing? Is there even a danger of that, or is it what you get so well aligned with what you give that slacking is not a problem?

R/AC: Slacking isn't really a problem because there's no requirement that people do a certain amount of work. How much respected authority and responsibility you get is to your choosing. There is a correlation, if you're only making five edits a month, you are probably not going to get named administrator of the year, but you're not going to build a feature article if you're doing that. But at the same time, those five edits may be really valuable.

DSW: Yeah. Yeah. So we actually do that in other groups. We contextualize it basically. What are you in a position to give and what do you want from this? And then as long as we understand that, then that's fine. We've basically looked at it and we've agreed upon it, and thanks for the contribution to the degree that you can do. So I think that that is very interesting.

Okay. Number three is fair and inclusive decision making. Not sustainable for some individuals to call the shots and for others to have decisions made for them without their consent or participation. Does not have to be a strict consensus, but there needs to be some sense in which decision making is fair and inclusive. How well does Wikipedia measure up on that?

R/AC: Almost everybody is permitted to participate in discussions about decisions, at any level, whether it's how we spell Gaddafi's name, and we have a big discussion. That's not a minor point, I have to tell you. How we spell that person's name and have a big discussion on a talk page. And as many people as want to participate in that discussion, are going to participate. And then a decision gets made. It may be reviewed by somebody else, or it may be obvious as we go through what the answer is going to be, but decisions, just like any other organization, decisions are made by those who show up. And to some extent, if you don't show up, you're not going to get to change that decision, at least not right away. Because we have to at least try the new decision.

DSW: Yeah. So it has to be efficient. That's the great trade off. The great trade off for decision making is basically participation and efficiency, but there's no closed doors, it sounds like. It's up to you to show up, but you're not prevented from showing up. I mean, you have to have a certain access and status, I'm sure.

R/AC: Well, not even necessarily. With a few exceptions, there may be sometimes where we had decision making processes that are closed off to unregistered users or closed off to people who don't have a certain number of edits, but those edit numbers are usually low, like 10 edits in four days or something like that. But that is the main limit is that once a decision is made, it's made. We don't want to be revisiting those decisions right away. There may be times where we have to change something very quickly. When we don't have time to have an extensive discussion, but a lot of decisions are very simple and very straightforward. Do we use ABC or NBC as the reference source? "Hey, let's use both of them. Why not?" Those sorts of things.

DSW: Have you evolved a more deliberative procedure for the important decisions? Almost like your checklist, for the more important decisions?

R/AC: Yes. We have various processes for deciding whether or not somebody is suitable for being an administrator. Administrators are people who have authority to block other users or to delete material. We have a process called request for administration. The candidate goes through a process where

they're reviewed by members of the community and asked questions. And at the end of it, they are either granted or not granted administrator status.

The arbitration committee that I've mentioned before is a dispute resolution body. Its formal decisions that go there can only be modified by the arbitration committee. Those decisions are final. The community has to follow them. And they are user based as opposed to content based. They're based on user behavior. We have a notice board called administrators' notice board incidents, or as we call it ANI, where people will come with issues or concerns and decisions will be made as to whether or not, there's some disciplinary issue that needs to be dealt with. We have what we call, request for comment, where we have a question usually about article content or a policy content, which will be open for a given length of time, to have a discussion about do we want to do A, B, C. What are the advantages and disadvantages of doing each of these things? And it's a community discussion. And then at the end of it, it's usually solidified.

DSW: Yeah. So a lot of structure there.

R/AC: There's a lot of structures and we use the structure that's right for the situation.

DSW: Yeah. I can see that's highly evolved. Number four, Anne, we've commented on extensively. Monitoring agreed behaviors, monitoring agreed upon behaviors. And our entire conversation has been shot through with monitoring. If you don't know what's happening, then forget about it. And so your checklist is all about monitoring and so I'm not sure, is there anything more you want to say about monitoring or is it just like we've said it throughout this conversation?

R/AC: It is so inherent to the Wikipedia model that I don't think we have anything more to say at this stage.

DSW: Sometimes monitoring becomes invasive and people feel like their big brother is watching or a little brother is watching. Does monitoring ever become problematic in the sense that there's over-monitoring or some kind of inappropriate monitoring?

R/AC: Sometimes we've run into situations where we have somebody who's developed a history of manifesting a certain kind of behavior. For example, adding material that violates copyright into articles or similarly, creating a whole series of articles from a boiler plate and then not updating the information to match the title of the article or something like that.

And these people can sometimes be very proliferate. And if one person is going through all those edits, article by article, it can feel very harassing. And we have to try and find ways to balance that. Because, I mean, we have problem content and a problem editor, but we also don't want to create a sense of a harassment. So finding that balance can be very tricky sometimes.

DSW: Okay. Next is graduated responding to helpful and unhelpful behavior. Let me repeat that. Graduated responding to helpful and unhelpful behavior. We've already talked about positive reward for good behavior. Now, when it comes to misbehavior, then the graduated part is important. According to Ostrom, it need not start out harsh, it starts out friendly. And I have to tell a story, Anne. Her favorite example was the lobster gangs of Maine. And so the bays of Maine are owned by groups of lobster fishermen. And they're the only ones that have access to the bay. And if somebody else comes in with their lobster pots, you know it, because those colorful buoys that you know are emblematic of the state of Maine. Those actually identify the lobstermen. And so the lobstermen know when somebody's come in and is inappropriately fishing in their bay, and what's the first thing they do?

And Lin loved to tell the story. They tie a bow around the buoy, they tie a bow. And she used to laugh and say, these big burly lobstermen, tying a bow around the buoy. So that was the friendly part. But you know if that guy didn't get out of there, what would happen next. And so, starting out friendly, but with the capacity to escalate and you've already said, Anne, in this conversation. That escalation part in the

case of Wikipedia happens pretty fast. So, there's a point at which you don't mess around, if somebody's misbehaving, presumably they get some kind of warning, but if they don't respond, then it escalates pretty fast. Did I get that right from our conversation?

R/AC: Yes. I'll clarify this a little bit. We actually have a series of warnings. Generally speaking, a new editor who is doing something comparatively minor like a little bit of vandalism, or doing minor things that change content and somebody has to fix it, will get four warnings before they get blocked, up to four warnings. Somebody who is doing something really bad, like coming on, creating an article saying, "Professor Sloan is blahdy, blahdy, blah, and there are certain things that we will simply block immediately, accusations of pedophilia, those sorts of things, really, really bad stuff, is going to get an immediate block.

We're not going to mess around with a warning there. We're going to go straight to the heavy duty stuff. But if it's somebody who just doesn't understand that we have British spellings and Canadian spellings and American spellings in different articles and they don't know that you don't change the British spelling on the article about Buckingham Palace, they're just going to get a minor warning. They're just going to get a minor warning, and we're going to work from there.

DSW: But it's sensitive. It sounds very sensitive basically that if something goes wrong, then it's kind of like that, that something happens.

R/AC: And sometimes we won't use our official warning templates. We'll just drop a nice little message, a handwritten message from somebody saying, "Hi, welcome to Wikipedia. We noticed that you did this." We actually have welcome messages, and we actually have warnings that have a welcome message built in.

DSW: Okay, okay, you've got that down. Yeah, this is perfect, this is perfect.

R/AC: Yeah, we want to make sure that people who are there in good faith are not going to get scared off just because they change manoeuvre to maneuver.

DSW: Yeah. Okay, number six is fast and fair conflict resolution. We've also talked quite a bit about resolving conflicts. An important point there is to have respect for both parties because in a dispute, most parties think they have a point of view. So say a little bit more if you like, or maybe we've already covered it on conflict resolution mechanisms.

R/AC: In most of our conflict resolution processes, there's a relative degree of fairness. It's not always going to be perfectly fair. And again, it depends on who shows up to have that conversation and participate in that dispute. I can't say that all of our dispute resolution is fast. Some of it is intentionally not fast, and some of it doesn't necessarily work out the way people expect. We often jokingly say that the disputes that the arbitration committee is working on are interpersonal disputes, in most cases. But at the end of the day, the primary customer is the encyclopedia as opposed to the people. So they have to make a decision that is based on maintaining the encyclopedia, not making the people happy. It won't always work that way.

DSW: And I think by fast, I think the meaning of that is fast to initiate. So things don't fester, and then how long it takes.

R/AC: Initiating can go pretty quickly. Yeah.

DSW: So number seven is authority to self-govern, because if members of a group don't have the elbow room to manage their own affairs, then all bets are off, if they're being bossed around from the outside. And I think it seems from everything we've said and the whole nature of Wikipedia is that it is to have authority to govern itself, or perhaps not. I don't know. Maybe there's aspects of the larger world that impinge upon it. So we're now shifting basically, with the seventh and eighth design principles. We're

shifting from internal processes within the group to the relationship between the group and other groups in a multi-group population of some sort. So speak to that, authority to self-govern. How does Wikipedia fare there?

R/AC: And as you mentioned, this is something that goes a little bit outside of the individual groups. Now, as I've mentioned before, we have a lot of different projects. We have about 800 of them. We also have, I think, 120 or so what we call affiliates, they're user groups or chapters in geographically specific regions. And overall, each of those groups self-manages. The affiliates, the projects themselves, they self-manage. They decide where they're going to focus their attention, they decide who their primary consumer is going to be, or who their client is, to some extent. But there can come a point where the larger group, the movement group, as we call it, or the larger overarching community of all the projects and all the affiliates may have to say, "You're losing the plot here, guys. You're not following the rules."

There are certain limited rules that you're expected to follow you. You can't have neo-Nazis running one of the sites. It's that simple. We're not going to allow it. We're not going to grant this particular group authority because we already know they're infiltrated by your government, those sorts of things. It's really hard within our movement to get to that point, but there are times where we've definitely had to do it, where projects have been closed because of inappropriateness, where users have had to be removed from them because of their behavior, because the project itself can't handle or manage their issues.

And sometimes there has to be a way for a project to step out of itself and say, "Hey, we've got a really big problem, and we need some help here." So that can be an issue too. Certainly, in a large project that has input coming in from a lot of parts of the world, those are not commonly seen, those kinds of issues are not commonly seen. But for a smaller project or a medium-sized project where almost all of the editing is done in a very small geographic area, it can be prone to capture, and we have to be able to prevent that from happening. So, on the whole, yes, our projects are self-governing, but there are some guardrails.

DSW: Yeah, well, that actually gets to the last design principle of collaborative relationships with other groups. The Catholics have this principle of subsidiarity, the lower level unit has authority until there's some problem up the line, and then that requires some top-down attention. Do you actually think about subsidiarity at all, or do you have the equivalent? Do you ever use that term or?

R/AC: We have just gone through a big process right now of looking at our long-term strategy for the entire Wikimedia movement. And one of the very core principles that we have included in our strategic proposals is subsidiarity. We've had very extensive discussions about it. And it is pretty widely agreed that subsidiarity is really important and really valuable for us, and that it's actually one of our better features.

DSW: That's great. And so basically, it looks like this eighth core design principle, basically governing intergroup relations within Wikipedia, it sounds like you do pretty well on that. But now, if we think of Wikipedia in a still larger ecosystem, which is of course a market capitalistic ecosystem. Well, you're worldwide. So Wikipedia is attempting to survive in every kind of political background. So it's almost like a natural experiment that you have this amazing social organization and it's attempting to grow in every kind of political environment, authoritarian, democratic, capitalistic, social democratic, socialist. And so talk about the ecosystem at that level where Wikipedia is an agent within this still larger ecosystem, which is much less in its control. I mean, beyond its control. So what are some of the challenges of Wikipedia surviving and thriving in these very different sociopolitical cultural environments?

R/AC: There is no doubt that these are challenges. At various times, Wikipedia has been blocked in entire countries. There was a very long blockade by Turkey. China has blocked Wikipedia on and off intermittently for almost as long as I've been editing. Other countries do it. Other countries will narrow

what they block to specific articles if they can, or have threatened to block. We've had countries who have threatened to cause harm to various members of our editing community or our Wikimedia community, our local communities there.

And we have to be sensitive to protecting those individuals and not putting them in positions where this is a real danger for them. So, for example, we have certain countries where people who are residents of certain countries are not allowed to hold certain kinds of permissions so that they cannot be seized by the government and coerced into abusing those permissions. This is not necessarily always authoritarian countries. It happened to somebody from France, where somebody in the French military wanted an article taken down and a Wikipedia administrator was arrested and told to delete this. So this is not just authoritarian regimes. This can happen in the Western countries too.

DSW: Well, yeah, western countries could become authoritarian. And so there's that, which is frightening enough. But then there's the problem of commercialization, just basically in a highly capitalistic country. What are the dangers from that end of things in a laissez-faire market economy? What are the dangers on that side?

R/AC: There are two dangers. And the first one is people using our content without giving proper credit. It would be like, plagiarism, basically. It is possible to plagiarize Wikipedia as crazy as it sounds, because we have a certain licensing requirement that says, if you're going to use our content, you've got to tell us, say that you're using our content. You've got to attribute it. I know very well that one article that I worked on quite extensively was practically quoted verbatim in a number of news media sources afterwards. And when I say verbatim, I mean literally they picked up the paragraph and they put it right into their articles.

DSW: This wasn't some college student. This was some news source.

R/AC: No, this was a supposedly reliable source publication. That does still happen, but there's an awful lot more recognition from media that this is a bad thing because it started happening to them too. So they realized that they've got to start doing this. For example, we used to have a lot of problems with images coming from Wikimedia Commons being used in news reports without credit. But I'll bet you couldn't open up a news site right now without finding on their front page someplace a Wikimedia Commons image that is actually attributed to Wikimedia Commons. It may not be right down to the very photographer, but it is attributed to Wikimedia Commons. So we're getting there. That's improving.

The other end, of course, is companies trying to weasel their way into articles. Some companies behave quite legitimately, and they'll have somebody, Joe Blow PR of ABC corporation with a username that says this and his user page says, "I work for such and such, ABC corporation." And they'll comment on the top page of the article, and they'll say, "We have some information here that you might want to include in the article, or we're a little bit concerned about such and such." And then they have a discussion with the community and it's then worked out.

DSW: They're responsible, basically. They're agents of the company. They're responsible agents. Yeah.

R/AC: They're being responsible. Yeah. That's it. They're being responsible. There are some companies who are not behaving that responsibly. They tend, not all the time, but they tend to try and hire out of certain sites and hire people to do this stuff, and that's hard to do because the quality quite often doesn't come up to standards and the article will be deleted because it's junk, as far as we're concerned, or it's a really, really bad article. So a lot of it, we'll take one look at it, we'll say that's spam, it's junk and it's gone. And quite often the account will get blocked at the same time.

And sometimes there's middle grounds, where they're just adding little bits and pieces, or where somebody who may or may not be hired is trying to influence an article in a certain direction. We don't know whether or not they're paid to do it. It may simply be that they really love that particular product

and they want to support it, or that particular company. But we do have ways of dealing with that. Now, on a big project, it's not too hard to catch those things. And different projects have had a few different ways of dealing with that.

On German Wikipedia, they've actually experimented with having an official account for some companies to work on, to do that kind of editing as opposed to having a specific individual, but having accounts for the company that are only allowed to edit top pages. They're actually prevented from editing anything else. Special kind of account. I don't know how well it's worked because I haven't really talked to my German colleagues about that, but I know other projects have had issues with this. And for small projects, it can be very challenging to try and keep that kind of stuff out, especially some of our projects may only have 15 or 20 regular editors.

DSW: Oh, I can easily see how it would become overwhelming. This might be my final question, Anne. We have now, back to WEIRD societies and problems with colonialism and where the people providing content are just not of the cultures that they're writing about, and so a recognition of that problem and then doing something about it. How does Wikipedia, first of all, I believe it has acknowledged that and is making an effort, but how do you go about that, where basically you're challenging the authority structure and then you're trying to create a more of a balance in just who counts as the authority on a given topic?

R/AC: Exactly. It is one of our biggest challenges. Definitely we recognize that this is a challenge. And it's one of those challenges that cannot just be resolved by one or two processes, or by doing everything at once. A lot of this is very piecemeal, but at the same time it tries to respond to the individual communities that we're trying to encourage to participate. A good example here is that in the Province of Quebec here in Canada, we have several editors from Wikimedia Canada, a recognized chapter, who work with the Inuit of James Bay who are helping them to develop their native language Wikipedia and dictionary and all of these projects. They're providing a lot of the support, the how-to, the training of how to use a Wikipedia, the kinds of things that will help them with sourcing.

And it's very difficult sometimes for some communities, especially indigenous communities that may not have a written language to participate in some of these. So we're looking at, are there some kinds of different projects that are not Wikipedias that we can capture a lot of this knowledge in because we want Wikipedias to be a certain thing. But can we capture a lot of this knowledge in a different way? Can you imagine trying to capture all of the legends? To us, this is incredible cultural information. We'd love to do this. So we are trying to look at that.

DSW: Yeah, but it would be an oral history. But you've reminded me that's what anthropologists have done forever. Ever since there's been a field of anthropology, is people have gone and they've learned enough about the culture very respectfully. They've translated the culture to their own readership, to the best of their ability, and then they've provided as much opportunity as possible for the people of the culture that they're studying to speak in their own voice.

And now, what we're doing is we're adding a technological dimension to that, which might be Wikipedia, that's primarily print, for which you need a written language, which might not exist in some cases. And if not, then something else, an oral archive, or images, or so on and so forth. In which basically there's the core design principles, the kind of respect and moral equality that we hope for. And so I think that's quite optimistic. And to see that Wikipedia is playing a role in that is wonderful. But that's doable, I think, with appropriate sensitivity.

So, Anne, this project is part of a series of conversations that are built around the concept of the noosphere by Pierre Teilhard de Chardin, a kind of a thinking, brain-like entity, which can expand to the entire globe. Do you think at all, and your brethren there at Wikipedia about Wikipedia as being something like the memory of a global brain or something like that? Is that part of the conversation?

R/AC: Well, certainly that's part of our objective, our mission, is to be one of the information centers of the world, the globe. We aren't all the way there yet. We continue to develop. We know that we have some parts that are well-developed and some parts that are just in their infancy. But yes, this is part of our goal. So we do see ourselves as part of the information base that the world will use.

DSW: So, Anne, Wikipedia stands in such contrast to other major social media sites like Facebook and so on. Are there lessons to be learned there, that how other social media sites that are so rampant and so pathological can learn from Wikipedia?

R/AC: We're fundamentally different from them. They operate under a profit motive. Somebody's making a lot of money from them. So their motivation is about money, not information exchange. They have a completely different motivation. I can't think of a social media site that isn't for profit. And I think the reason that Wikipedia works and is more balanced than most of these sites is that we have no motivation to keep you from reading the article on Senkaku Islands, which would be motivating if we were a Chinese company because we don't want you to know the Senkaku Islands exist. Those sorts of things.

We don't have a motivation to show you articles about the heroes of some war because we're going to generate more advertising that way. We don't advertise. And that is probably the biggest change and the biggest difference is that because it's volunteer-driven and it's not monetarily focused and it's not trying to make money for anybody, it's just trying to keep itself running like the Internet Archive. All those externalities that make websites like Facebook, like Twitter, like Parler—whatever they're calling themselves now—operate, just isn't a motivation for us.

DSW: Right. And it's interesting, Anne, that you mentioned in your reply much more than financial motivation. So there's a profit motive, but there's also might be a political motive, there might be an ideological motive, all kinds of motives that basically tear away at the truth. So you have a motive, Wikipedia has a motive. It's a motive to provide accurate information. That's its motive. It goes to say that unless that's your motive, then don't expect any other motive to lead to a repository of accurate information. You get what you aim for.

And so that, I think, is the fundamental message there. We have to have generally prosocial motives, in this case, accurate information. And if you don't have a prosocial target, then there's no invisible hand that's going to get you there. So that resonates very deeply with me for all things prosocial and accurate information is one of those prosocial things. So that's awesome.