00:00	**Otherwise, it's so just like looking things. Can you tell me a little bit about what you do?**
	Sure. I'm all kinds of stuff, so I'm primarily interested in plant evolution and relationships. So systematics is kind of like how these things are related to one another and. You can use that information to sell your to your industry.
	OK, great. So what is what is overall the goal of your work?
00:27	So the eye to the biggest picture overall is to figure out how different species of plants are related to one another. But I'm also interested in using that information to figure out where things evolved, the relationships between species. And that's what we're talking about asking right now, where things have been four times, how they've moved around the planet. So we do like biogeographic and data analysis to try to figure out where things have been. They moved around the city potentially back to their work.
00:57	So it's sort of fundamental science. So it's like basic research. And so a lot of it is just like understanding biodiversity and understanding how, you know, the things that are around us and that we depend on for all our resources how they're related to one another. So I primarily want curtains. And there have been some art that have been used in like cancer treatments and stuff like that. So these plants do have the potential to order medicines and things like that.
01:25	And so that's not the direct focus of my work. But obviously, the more we know about my privacy, the greater the chance.
	OK, and the reason I ask is because the audience of my work is not very familiar with Internet has to do with science, so they always get really, really curious.
	So what does this have to do with anything?
	I'm sorry to ask you some questions about collaboration. And I forgot to mention there's a point where I ask you a question and answer right now.
	OK, OK.
01:55	**I'm not trying to make you feel like you're on the spot or something like that. OK, so what can you give me on average? How many collaborators do you work with on a given project?**
	So I have some collaborations that are just like one primary collaborator. I'd say the largest I have is one that was like you came there were like ten primary institutions which had one or two people each and then a bunch of secondary institutions.
02:30	So there were like three people together, probably like a dozen or 15 primary people. But on average, I'd say I mean, I'd say the most probably are one or two people average size with two to three. I have a few that are like three people. I think this is about.
	Go for.
02:57	**But I'm just trying to establish context for the rest of your questions, if I may ask you, so I'll be asking you questions like I just said. Well, let me ask you some questions that are highly specific. OK, so on your current research, your service project you're working on, how many collaborators are you working with?**
	Well, I have like half a dozen.
	OK.
03:23	OK. I'm sorry.
	OK, how about OK? That's why we're so used to say that's what if I forgot what you're talking about.
	So I say for that one, there are three primary people, so there's many of them to others.
	So in general, what role do you play, what roles you and your collaborators play on these projects?
03:54	So I would say things like experimental design and so for my work, that usually includes things like picking species that we're going to include figuring out where we're going to find those and how we're

going to collect and things like that. Actually, to switch to this, it happens, it has more collaborators and it's probably like one you're one with first, so that that's one that has in the experimental one portion is going to be the same answer. So this one, there are five corner his.

04:24   And then we have. Crosstalk and three graduate students at the moment, so it's a little bit bigger and that's actually my I this could go fly and OK, so that one another I'm here with.

OK.

So the five main pieces, one of them is primarily to work with education.

04:48   So their outreach and education goals and broader activities and then of the other three of us were focused on the external design side. So again, like I just said, that sort of figuring out if you support a sample, contacting other collaborators and like a broader network of people who are going to be contributing samples to us for the project. There's a company that we're working with that's going to be doing a lot of DNA sequencing work or so communicating with that company.

05:18   **Are these the kinds of things that you're hoping for?**

OK, yeah. So I'm focusing on collaboration and I say projects and projects where I live, a highly multidisciplinary. Typically people who are like biologists who are working like huge amounts of data and or working with other types of scientists for analyzing that data or working with other people or establishing a broader impact application.

05:47   And it is my belief that there are challenges to collaboration that are unique to these type of projects because of the fact that they are multidisciplinary and because of the goals being different then. So there's a whole field of research here, support collaborative work that looks and to support collaboration technology. And they mostly focus on software engineers, mostly at.

06:19   Convenient sample. And I don't think that those findings necessarily apply as well.

OK, so that does sound like this.

Yeah, this is I'd say this is appropriate for that. So I think the like the biggest sort of like interdisciplinary aspect that we have is of our five inches, all of us are scientists because we're all scientists, but four of them are really biologists.

06:46   And the fifth one is in education college here at <redacted>. And so, yes. So that's been interesting, trying to like to learn how to speak the same language so that he can develop the broader impacts for the grant. So the basic idea is like the grant is all about like building phylogeny, which are essentially family trees. Organisms figure out all these things related to each other and collect a bunch of data that can then be attached to those organisms that are used to study their evolutionary history and the primary broader impact for the brain is this thing called the plant phylogeny voyageur that we're going to be building.

07:22   That is a teaching tool. It's going to be a website essentially that has teaching tools and like units that people can use in classrooms and teachers can use in classrooms to teach about biodiversity using the data that you've collected. And so our collaborator in the college education is going to be developing that website. And so, like new research is pedagogy and put it on people's heads to bring it to you. You know, like we really want to make sure that we're building most effective tools possible.

07:53   And so that's the most interdisciplinary part of this project. Like we know all the data about trees and all the language and terminology to deal with the phylogeny, but we need to translate that for him so that we can translate it to teachers and students who are familiar with the nitty gritty of the science that we want to be able to have them use these data in these learning activities.

Can you tell me a little bit more about how you're working to develop and develop that language that you're communicating with?

08:22   So at this point, it's nice because he's on campus here. And so we've been meeting regularly, kind of all of us as a whole group in person and talking about just it's basically just sort of update with project updates. And so as the more biologists people talk about samples and what he enjoys, we're getting

samples for all this kind of stuff. The education folks kind of chime in and say, like, what does that mean? Can you explain that?

OK.

08:50   And they have started to develop like a structure for the website that like and how it might look. So we talk about that a little bit just to see just to share ideas.

OK, is there any point where you are working with them, where you were able to speak in person?

So far we haven't had that issue. We do have some other collaborators at the <redacted> Museum. We're also going to be really involved in the education component because obviously this field museum runs over there.

09:18   So there are biologists as well that they have a lot of experience doing like citizen science and outreach. And I think and so at some point they are we're also going to have to be able to bring them into this conversation that we have in that challenge. And that's something we will have to be able to communicate regularly with them.

Has there been a project in the past where you've had that kind of a challenge?

09:44   So there is one other like big grant opening program where we submitted this proposal last fall and that that was the one I was talking about where there were like 10 primary pieces and we were distributed across a whole bunch of different functions. So in that case, we used Skype and we Skype like every few weeks, basically with as many people as we could get on this flight connection before it crashed. So that's better for you. So it's not there's nothing is better.

10:12   **OK, OK, but you're kind of starting to say that quite make it.**

They say I was sensing that there is a little bit of some rather technical difficulties, difficulties or Skype is I mean, I don't know, like it's great. But, you know, there's always like people have echoing issues in their offices. And sometimes for some reason I can hear my own voice like repeating and the other person like. So it's just, you know, there's just I don't know if that's the fault of Skype or supportive like computers in general.

10:42   I don't know. And then when there are like 10 people and you've got all these kind of you know, and then like, if you add in connection issues like that happens. You want to be really an Internet. You're obviously. But if you had two people who were like on laptops, on Wi-Fi and stuff like that, then it gets even dicier. So it was obnoxious, I would say, to have to deal with trying to hear 10 people whose connections were all different quality, things like that.

OK, so I'm hearing that there's all these issues with regard to connection and how that is impacting your experience.

11:16   **But are there other issues like fundamental to, I don't know, the fact that you're not speaking to somebody in person or like any differences with that are not technical with using Skype versus speaking to somebody in person.**

Yeah. I mean, I feel like those discussions were more much more like there was an agenda and we had like we wanted to just like get through that list and there wasn't as much opportunity for just sort of like free discussion, like this other project where we're meeting in person.

11:52   Usually those meetings we might come in with, like we have three things to talk about and you take ten minutes, but we usually end up filling the space up like we had an hour scheduled and we thought it was going to take. And usually those means entertaining an hour because you just find other things to talk about and it sort of just comes naturally. And I feel like with Skype meetings, I'm always kind of like anxious to get out of them. But I feel like I'm always anxious that there is going to be some kind of connection issue or somebody is going to drop out or whatever.

12:21   And so I kind of just want to, like, get through it as quickly as possible to talk about the agenda before somebody connection craps out, you know, so it's not like I want those meetings to go faster. It's more like an anxiety that I want them to be like I want to do the business as quickly as possible. And that just

it just makes it such that there's not as much kind of like just free discussion, you know, whereas the meetings in the in-person meetings are almost more just like, hey, we've all walked out on our let's just hang out talk for an hour and see what comes up and get the agenda items out of the way.

12:53   But just sort of see where the discussion takes us. So there's not that kind of pressure of, like, something's going to happen. We've got to make sure we talk about these things before that.

OK.

I've never really thought about this before, actually, but now I'm thinking about it. There's like I definitely have that feeling about skype meetings in general.

Have you ever experienced any difficulty with trying to establish a language with somebody who's in a different field over Skype or over email or since this is.

13:22   Really, although I was just trying to get some people in <redacted> and that was interesting because there was a little bit of a like having to try to interpret their accent because they have accents or speaking English. But you see the language and I thought I, you know, very literal sense. And one of them had a really bad connection and it made it frustrating. So I don't think it's going to impact our relationship or anything like that. But that was a challenge.

13:50   **OK, for sure. Yeah, thank you. So I pull this a little bit back to you. So our. Are there with this with this project that you're working with, people just kind of ask you in general disadvantages or problems associated with working with people who are geographically dispersed?**

I think that I mean, to me, the only real issue is finding a time that works for us.

14:20   **OK.**

And that's the biggest. That's the biggest thing that I think is kind of annoying. So for this, one of them was actually in <redacted> that he was in <redacted>. So we were 12 hours apart. So that was a little bit challenging at the time. We've work for both of us. Other than that, I don't really I don't like the geographical separation. That challenging, other than the fact that, like Skype kind of has this baggage of anxiety that is attached to it for me.

14:50   In fact, there are something I actually kind of like about it is that often like I'll try to, like, turn off my email during the day all lot of time to, like, keep my email closed, but actually concentrate on my work. And it's kind of nice, like having collaborators in Europe. They're offset by a time where like it just like it. Just nice that I know they're not going to be e-mailing me during the day, but I can go home at night and I'll find sometimes like emails that like they've sent first thing in the morning. And I don't know, it's actually kind of nice.

15:17   Like Europe is like a nice time difference from us, that it actually has a sort of offsetting and like I kind of like it. It's weird, but it's not at all. Are there any other advantages to working with people who are geographically far? Other than just sort of like it's nice to have diversity of, you know, like people involved, and so when you have people in other countries, that's really nice.

15:47   But other than that, I wouldn't say there are any particular advantages to it. OK, so one other disadvantages. So like for that big like 10 percent and with all the sniping, so the primary institution on that one and that maybe this is just like this is just a grants commission thing. But the primary institution was in California and we were going to have to like so he had like, you know, proposals to five p.m. and we were like, well, actually five p.m. on the East Coast, it's 2:00 p.m. your time.

16:13   And so he had to make sure that we knew and all his people knew and Grant was there that they couldn't submit it at 5:00 p.m. because they had to do it at 2:00 p.m. Pacific. So that's just a random thing. But that can be like an obnoxious aspect of dealing with people who are like in different time zones in the US if anything stands up.

OK, so this is like a really similar question. So please forgive me if seems you love it, but what about working at people, at other institutions?

Yeah, that could be a challenge that yeah, that that is.

16:44	Yeah, you're right, it's kind of similar, but also really different. So that can be challenging because I mean, institutions are all different. And I've got obviously and I have like one collaborator who's that like a small liberal arts school. And so, like dealing with knowing how things kind of operate at their school or set up can be a challenge and can be something you have to figure out. And particularly I'm thinking about grant proposals because like here, I've got to get approvals from the department and then I have to get approvals from like the research office and I have from all these different people.
17:19	And at his institution, there was like just one person. So, like, for him it's like, oh, 700 is easy. There's one great person and like, you know, it's a small school. So it's not like there's 50 different things. And it is usually like you can just call it person and be like, hey, can you do this for me? And like, sometimes my colleagues were tools like that. Don't realize that, like three migrants people do you have 50 at a time. And I have to give them like a week of lead time.
17:46	And so that can be something different where like if the institution sizes are different and just kind of like the bureaucracy is different, like getting people to kind of understand that, like, I can't just call them the day before the grant is due and say, hey, can you do this? Like, I'm actually, like, required by the university to give a week of lead time for them to, like, process everything so that to be able to tell. Getting people understand I can't just do what I want, my own schedule, you know, that like there's other people that are involved. How did you navigate this into.
18:16	I mean, in that case, and I've submitted a couple of warrants with that individual and then with that individual and two other individuals to other institutions and in both cases, like we're friends. And so I could just say, like this schedule, this is how we're going to have to do this and just kept reminding him. Basically, I'm just making sure that this is okay.
	Yeah. Oh, yeah. Yeah.
18:41	So, yeah, I mean, just kind of like explaining that then making sure that when we're having a conversation you're on the phone on Skype, it's like, OK, so the deadline is the stage being like, like I have to make sure I remember like no actually existing systems so that he remembers that it's actually going or whatever.
	OK, OK. Are there any other, like, work culture differences with working with people in other institutions and what is your work culture, not just a theocracy, but also when you're when it comes to running experiments or using data from somebody else's experiment?
19:20	It's so I mean, we're all fairly similar in. I was going to say that, look, what we do is all fairly similar, so we kind of all understand going in that kind of thing. But he's an ecologist and I'm a systemic risk. And so we're actually pretty different.
19:44	But I feel like in that case, we just have a lot of mutual respect that like I know that he knows what he's doing for his part of the project, and I trust him to trust me that I know what I'm doing. So, I mean, I can think of one instance where, like I word like a concept arose sort of because. I got feedback on a proposal we were writing and I made a bunch of changes to respond to that feedback, and this guy was like, yeah, great job.
20:16	You did all this hard work. It's a lot better than other colleague. Like read what I had done. He didn't really, like, read the feedback process, why I made all these changes and responded instead, like, this is all I write. And this other I was like, why did you do all this? I don't understand this. I don't like the direction it's going. And I got really upset. I put a huge amount of time and it was clear that he just like reductively, hadn't thought about it, hadn't really tried to process it and just kind of reacted and like that was a shitty experience.
20:46	And then I ended up crying on the phone to the one guy who, like, understood and got it and like, could acknowledge it in the morning. And then I suspect that all these interactions I suspect that he told the other guy, like, you need to apologize and praise her is like a few hours later I got an email from the other guy saying, like, I'm really sorry. Now I've thought about it more. I grew over and then to be fine and ended up being like we went in that direction.

21:15   But yeah, that was an interesting sort of like email and phone call. And that somehow mediated in a way, I don't know.

So do you think it would have been different, perhaps, if you were using a different way to communicate?

Yeah, we have been I think in that case, like so we were we were working in a Google doc and I do most of my collaborative writing, Google Drive.

OK.

Which I really like. So I generally use Dropbox for sharing documents.

21:44   But then when it comes to actually writing things, well, for the most part, all my friends and switch to Google Apps, it's so not because mostly because is it saves everything which is which if you have Dropbox Pro does that now too. But obviously Google Drive is not. It's all summer files. So.

Right.

So we were we were writing in Google Drive, but the version that I had gotten the feedback from was like I didn't have that somebody up to someone else. They did comment on it and sent it back to me.

22:09   So like the guy who criticism didn't have access directly to the email that nobody had read it know, so just kind of wasn't like the commentary wasn't in with all the other stuff. And so I suppose I could have sent the Google Drive link to the person I wanted comments from. But like, you know, I didn't I didn't want to give him editing access. Right. Because I wasn't I was looking for feedback. I didn't want someone else at that point other than like the three of us to be able to directly edit it.

22:42   So I guess I can imagine like a situation where if I had if there were some, you know, shared collaborative writing thing where you could like, I guess, just give you access or something like that, but then make those comments as everyone that maybe would have mitigated the situation if it it's like if my other colleague had been able to see very directly the comments and my response to that could have made the situation better. It's a very interesting, interesting answer.

23:11   **So I just put it I I'm sure you mentioned this, but I'm sitting here and listen to everything that you say and should remember all the things that the direct paths I can go.**

Yeah, I'm sure.

Could you remind me what the person who is getting your feedback, what their role was in the project, your relationship to the project.

So it was just another faculty member whose opinion I stopped a lot and who I am, who got a lot of grants and things like that. So externals but just another aliquot feedback from OK, given his expertise.

23:41   **Thank you. I just wanted to.**

Yeah, yeah, sure.

OK, so all right. So I'm going to jump back here a little bit. Are there any disadvantages or advantages to working with on a project where everybody's co-located, looking at the same university as you?

We also have disadvantages on both, I mean, advantages, I feel like it's just easier to be sort of like.

24:17   It's easier to be more. Synergistic with this kind of uses word. I think it's just easier in general, so I do have another collaboration where it's me and a guy in work and we share a graduate student and so and then there's a few other people on campus. I mean, I guess in a way like we probably don't like in practice, we probably don't actually meet any more frequently than I do with any other snipers every couple of weeks and these guys every couple of weeks.

24:45   So I feel like it seems to me like, oh, it's much easier we meet whenever we want, like in practice we probably actually all these things, we get the same degree of frequency. So I mean, it is really nice that in that case we've been able to do things like shared lab meetings. And for a while every spring we were doing a of shared sort of reading group in the spring. So that was really nice. And also being in

one place makes it a lot easier to involve students just because you can kind of say like, oh, we're going to have this meeting.

25:17   Why don't all the students whereas for like a project 10 guys all doing Skype would be kind of foolish to be like, why don't you have your graduate students all sit in the background and listen to a conversation like it's another I guess another example. We're like it's really kind of the same thing, like the graduate students are in the industry, maybe just going to all be sitting around anyway. But it just feels weird to be like, hey, come sit and listen to my Skype conversation. That's another just like kind of like sort of weird thing about Skype.

25:47   I guess it's like it's not really different, but. Because it's hype, it feels different, and so you behave differently. So, yeah, I'd say involving students involved other people is more technical or it's easier for them to learn more about the distributed. I mean, this is a very practical thing, but like for the person like you has to find funding sources available for if you have collaborators on campus that are like in between colleges, like I said, Grantly, that's just available to like projects that are multi college at <redacted>.

26:25   So that's really nice.

Yes, everything else oh, OK, yeah, for sure. Yeah, I curiosity ever felt like your perception of your collaborators, like work involvement, like have you ever felt like your perception has been different for projects where everybody's located or with collaborators who are looking with you versus collaborators who are located somewhere else?

27:03   I say no, but I'm think about these projects and I'm trying to piece out whether my perceptions of the work that people are doing were more a function of like the projects themselves being different versus the way we were communicating is an ugly question. Do I get what you mean? But it just like if all the projects were equal, I feel like I can answer really easily.

27:31   The projects themselves are so different with our projects where everybody's on campus, where like I feel like, you know, something like not going away necessarily. And then others on canvas were like, everybody's doing exactly what they need to be doing.

OK.

So it's that's what I feel like, that I feel like the amount of work someone is going to be brought up of their personality out of the things by which we're communicating. So what do you do in those situations where you feel like somebody isn't pulling their weight or my personality is just to do it myself, kind of.

28:02   **OK.**

We're just like, you know, work with other collaborators to make sure that the work is getting done. I mean, I feel like it's always kind of obvious, like everybody is. That is the situation. And I mean, we're all really busy, too. So I feel like just like offering some understanding and just like, you know, not blaming somebody, you're happy to see a particular auger or something like that, but feel like it's always, always, usually pretty obvious to everybody if like one or two people kind of are doing what they should be doing that week. So then it's just, you know, like. He's sort of something figured out amongst the other people that that person gets herself sorted out.

28:34   **So, OK, know, yeah, that sounds like what they need to know. Is there anything that could help you with this or anything that can make this better other than a brand new collaborators?**

Yeah. Yeah. Yeah, I mean, I guess if you had, like. I'm trying to think of how to be like a non confrontational with someone you like, you're supposed to be doing X Y.

29:02   **I mean, again, I feel like you have some kind of like you like I like to do.**

You know, I like the reminders. I constantly have things like popping up on my devices, telling me stuff. And if there was some, like, sort of like shared thing, I mean, I guess we could all share who I hate, who was actually I was only. But I could see, like sharing like calendar sharing to do list that was going to like

hot reminders that everybody because then you would at least know unless they turned off their reminders, you would know that like people are like everybody supposed to be getting a reminder about this one.

29:35   But I don't know sort of that kind of micromanaging people's like devices and calendars and notifications they're getting. I mean, I think that might help, or at least they would know that they were supposed to be doing the things that they were dropping the ball on, but. I can't really think of anything that would help other than an intervention to say, like, you need to shave off or something like that.

So this is this is unrelated to all the questions, everything.

30:04   **But just as a suggestion, you ever heard of Trello? It is. So it is a is a system is primarily used for software development, but basically what it is like to do lists and then you assign tasks to people and then you have multiple columns for things that have yet to be done, things that are in progress, school and things that are done.**

Sure.

30:29   **And I there is a biologist in Boston who first mentioned that to me, and I'm trying it with a project that it seems like that might help a little bit because then you have the to do list, you know, what everybody's supposed to do and whether or not it's appropriate and all of that like that. So do you only like sort of project management software that is slack?**

OK, and we've we started it for the <redacted> project, which is like on campus.

30:57   What we hope for was the worst in education. We haven't really used it much. And I feel like the reason the reason I mean, I know I think I know the reason is that it's just like it's another website to open it, like all of these things that are like my calendars and my reminders or like they're kind of constantly there and they're integrated by phone by watching. So they're always kind of like going up and slack, just like if I remember to go to that website once a month and look at it and like maybe it would be helping.

31:26   **So I get the feeling that the last thing you need is another thing that's like beeping at you. But there are desktop applications for slack and mobile applications just as an FYI. But you seem like the kind of person who's already overwhelmed by people, like constantly wanting your attention. So maybe that's not something that's going to be helpful. I mean, I feel like the nature.**

Yeah, I hear you're on the right actions. Like part of me is like I actually kind of feel like I love that. Like my watch my phone telling me you've got a meeting like <redacted> going to show up.

31:57   **I like that kind of thing. But yeah, I feel like if I was getting notifications every single time, something like it was the slack that would be obnoxious. But I wonder if you are just like, I don't want to be like paycheck's like, you know, like, hey, you've got messages on this line like rather than every single time that came through, like it's like it's like a daily you know, I think I can do that with.**

32:23   **I use all the time I do like I use it for individual projects and I have one for my lab and then I have like a joint lab, so I have one for all of the students, which is like 20 people or something like that. Anyway, I try I like popping all over the place here. So we talked a little bit about projects with working with people of multiple disciplines.**

32:52   **What are like some of the advantages to this project?**

I mean, it's just really cool to see how other people process things and think about problems. The other thing I think is really good for me, like this experience of working with these education folks is just like it's so easy to get so far down the rabbit hole or whatever my specialty is.

33:17   And then, you know, we should all be like doing science outreach and communication right at the top, don't do our specialties. And so it's really nice to have that kind of like pull us back and be like…

Wait a minute, you said what? What does that mean?

So, you know, and realize that like to communicate more broadly, you to think carefully about your words and stuff like that. So it's been really nice to have the opportunity to interact with them regularly just to have these kind of like these chats and these sort of frequent discussions with someone who's just close to the.

33:51   Yeah, so I would say that and then you're just like me learning to just learning, like, you know, what's exciting in other disciplines like water, like the technologies that they're working with, something that is really interesting. Learning about things like I never even knew existed and then thinking like, oh, maybe, you know, I had sort of had like a vision of what this project was going to be. And they start talking about other things. They can do things like, oh, maybe we could be doing this thing that I had never even thought about before. So, yeah.

34:18   And again, I feel like those just like ability to, like, hang out and chat and talk, you get more of that benefits the like just going through a checklist and talk about all the things we're going talking about other than struggling to find a common language.

Are there any other issues or difficulties with working with multidisciplinary groups?

34:46   And I guess trying to figure out the degree to which you really need to understand what the other party is doing, because I feel like a scientist, we have this tendency to want to always know and explain everything to me. It's like in some cases it's really not necessary, you know, like it's not necessary that I know all the details and they're like, you know, sensors on the head type stuff, you know? So like, this may sound strange, but like knowing what it's like for my own curiosity, because it's not like forwarding the goals of the project as a whole.

35:13   You know, just like I just I'm curious and I want to know. And it's like. Well, we actually do have something like that down the road in that.

OK. Yeah, and like I said, it'd be quite a few people, so sometimes, like I ask these questions, you're like, no problem. I've heard horror stories and serials or letter talk to somebody else. Then there's a problem here, you know? So that's why I've got quite a few topics, potential topics to talk about.

35:45   So, um, well, I guess actually I would just add then in that scene, so like the ten person <redacted> project, like half of us kind of work on, like one sort of thing, the other half work on kind of another. And they're very closely related. But like in that situation and like sometimes people in that group would like start going into a lot of detail. And I'm sitting there like, I know that I'm a dockery's and you don't need to know, you know. So we also obviously want to talk about ourselves, work a lot.

36:16   **Right.**

So I haven't had that experience in, like the in person. And maybe that's because, like, it's easier to read, like, body language cues in person potentially, or like, you know, so maybe like if they start to like go down at it or I start to talk a lot, you kind of like, oh, you can read subtle cues from your friends. They don't care. And that's right. And like you got ten videos that you're trying to look at, but there were definitely some different scenarios. And then sometimes that road was just like we're like an hour and forty five minutes into an hour long meeting, like, shut up or I don't care.

36:46   And how do you not understand that what you're talking about doesn't matter if you're like, what are you supposed to talk about today? You know, so and it's in direct contrast to what I was saying about like it's nice to just have these free flowing discussion sometimes, like, just shut up already. So. Well, it seems like the and these nice free flowing conversations are happening in situations where you can see the body image.

Yeah, yeah. Sure, yeah. Yeah.

There's at least one time where I can tell it, like half the people in the videos were like, you know, like I'm leaning on your hands falling asleep and I'm like, how a person talking, how do you not see that you're going to die so.

37:22   So that can definitely happen.

OK, so this is like totally out of the blue, but have you ever experienced people that even all, especially in a larger collaboration, but in a smaller one as well, kind of like silently dropping out?

Yeah, actually, that can happen. I mean, definitely, like people will pick up their phones and sort of play on their phones, and that's obnoxious. And that's definitely like I mean, that can happen.

37:51   I feel like it's more noticeable in person because like if somebody is like on their phone or on their laptop and you clearly tell when they're not doing what they're supposed to be doing, it's more difficult to tell that it's like this was like I mean, I'll be honest, I've usually got the window open with like twenty 48. I'm like playing a game like, you know, like have something to look at staring into space. So I feel like with Skype, like you never really know what someone's like really paying attention to you versus of doing something in some other window.

38:21   So yeah. I mean I feel like a lot of the times when people kind of dropped out and I been like, you know, where are you talking? Like paying attention or not. And it's with Skype. It's hard to tell that if they put something up there and start looking at their phone, it's easier to tell that in person.

OK, what about just kind of quietly leading the project or.

I've have people who, like me, emailed to ask if they want part of it. They never responded with the same.

38:49   **I know, OK.**

Yeah, it is a little weird. Somebody mentioned that that happened. And I was like, well, I wonder if that's, you know, or if I just thought that just sort of happen.

OK, so I have to like this semi structured interviews with them, like on my favorite place here. So I have a question with regards to data sharing and trust.

39:19   **Have you ever. OK, so if you have ever worked on a project involving collaborators who had different preferences or methods of dealing with data sharing.**

Yes.

OK. Can you tell me.

So, yeah, this is another that's actually sort of ongoing. So there's a big project in kind of the plant science for the last few years where they basically, like you, had to know someone and there was someone and their uncle to get access to this data.

39:50   And it was just it was awful. And they were not funded by any major like and circle of separate those. I'm actually not even sure where the money came from. I think it was like I think it was like a corporation or something like that. And the. Part of it is just as a very tight knit community and a lot of very antiquated approach to data sharing, and I don't like that go on for open access, unlike public available data, that kind of thing.

40:24   So that has been a real challenge. So, yeah, I mean, I came into that kind of as like an outsider who knew some of the participants and I wanted access to data. So I was able to get access to people. And when I wanted to share those data further, I just ask for their permission and generally got it. And they're willing to give permission. But like, you shouldn't have to ask a question. You should be able to go to a website, download that. I can talk to someone.

Right.

40:53   So that was a frustrating experience in the project with the four people on the education person. That one, we're going to be generating a ton of data that we are making public. And we have a bunch of I think I said earlier, but the plants so we're sequencing all these plants and we're getting that material for like a network of like dozens to hopefully at some point will be like hundreds potentially of collaborators.

41:17   And what we've done is write up like a very clear policy where those people will have for whatever samples they give us, they're going to have access to their data for a year already access. And then

after that year, it goes public. So they've got a year to write their papers to do whatever they want because of their data. And then after that, it's public access and anyone can come and get it. And so in this case, like we agreed on that among ourselves, the biz, and then we basically just said like and that's been put in the grant.

41:48 And then we've just made that posted on the website. That would've made that policy very clear to anyone who's expressed interest in the project just to make sure that because the other the other thing is like the other one, I imagine the kind of horror story, like they never had any kind of like data, anything, you know, just kind of like I mean, I feel like I feel like it would have been better for, like, they would have done a better job potentially and not been so secretive if they had thought at all ever about like, oh, what's our data sharing policy going to be, you know, instead of just going at it from the perspective of like, oh, this data, you know?

42:20 So I don't think that they ever thought about how to share it online, to share it. And I think that's what led to their kind of draconian approach to it. So and then so then you did research with this and then you shared your data. So from that project, we haven't published anything yet.

OK, yeah.

So when we do publish it, I think, well, they're going to actually do the sequencing so they'll have all the data and I'm going to have to rely on them to give me access to it.

42:51 So, yeah. And even the parts of that that have been published, I'm not even actually sure where the data are published. So it's kind of a disaster, it's kind of like a worst case scenario, especially in this day and age, like we know so much about data sharing, how important it is.

OK, so excluding the idea that everybody just shares their data freely, what could help this situation? You mean like what could help?

43:21 Like, it can help with your interactions with these people who have data that you want and not wanting to share? I think if there were and I guess these things like I think this now, which is kind of like general guidelines on data sharing that provides that kind of thing. And so having that in a really accessible place and of mandates now that you have a data management plan, I mean, the competition rises like this project where it wasn't how was funded. The

43:51 so that made it a lot more challenging. But I think just I don't I don't know how you I was just getting everybody to be thinking about data management from an early stage. At least you can have a conversation.

OK.

So I think that's really important. You might come into it with all these people, have different preconceptions about it or have never thought about it. At least if you have a conversation, you can put all that stuff out on the table. But if you like, guidelines would be helpful and like best practices, I guess is what I mean by lines.

44:21 **OK. OK, that's really interesting because here is where we have our data. Doesn't we don't we don't have the same data. So yeah.**

Yeah. The issues are very. Yeah. I mean we don't have any privacy issues or anything like that, but it's not what people do or anything. Yeah. Well you know when it comes to privacy, but if your name is not even on the right, you know, so I to take your reporting, people who are millions who are going to help me do the transcription and even then all of that.

44:55 So we work really hard to make sure that data is private as much as possible from the get go.

But so one thing I kind of have not mentioned so, so much is are there any disadvantages or advantages to working with large groups versus smaller groups?

Yeah, I think I mean, large groups, you have the possibility of having like egos to contend with and people who are problematic or people who don't pull their own weight.

45:28	And I think it's a lot easier to not pull your weight in a larger group. So the I mean, the big project with all the skypan being towards the end of it, like we just needed people to go and write sections and just sit down and do it because there were 12 guys. You know, it was super easy to say, like, oh, I'm sure someone else is going to do it, you know? And so, like, ultimately, like I did, I went in eventually and did contribute to it. But the guy who was the main P.I.
45:57	that he really needed to just assign people to just say, you're responsible for this, you're responsible for this region, part of this, you need it. But I think he really didn't he didn't want to do that and he wanted to do it. And with the best intentions, I think, are going to need to be led and forced to do what they have to do. And that can have a lot more easily if you have a lot of people involved. And just like I mean, it can be great to have people with different perspectives. I mean, it's awesome because it can make the problem more than the sum of the parts.
46:27	But it can also be really challenging if you've got very different ideas for which direction it should go in. And that part of also like these two groups of people where like this kind of one thing and half of the other, I mean, we were lucky that we all sort of read the part of the project bringing these two communities together. But like there are some members of that other community, like there are a few people that I'm really glad we're not involved in this project. I know it would've been a nightmare if it happened because I would have just insisted that it was all down there.
	Right.
46:53	And like I mean, I think, like, the guy who was charged knew not to include people like that, you know, but like, what if you got someone who's kind of tone deaf and doesn't realize and invites those kinds of people. And I feel like that's just that's just more difficult and more the. So, yeah, I mean, I guess I would say I prefer to work with smaller groups and also just logistically, I mean, it's there's a vast amount of documents that need to be assembled. If you're putting together a proposal which like me, for the most part in like biology, like a lot of it's collaboration and I talk to you about it at one point or another.
47:27	Every single one of them involves a proposal that's just the way that things operate, because you can't do science of the type that I do without money. And so when it comes to pulling together all those documents and spending proposal, you need to know you can rely on people and that people are going to do things on time when they need to do it. You know it like there is no being late this evening. I would like to go in tonight and be a waste of time. So that's so much easier to deal with. A smaller group.
48:00	**OK, so you mentioned that is easier, get a larger group to pull your own weight. Could you elaborate on that?**
	Yeah, I mean, like the writing thing is a great example where, like, you can just said something like, you know, everybody just needs to, like, contribute general text, early introduction text or that kind of thing. That's like going to cover you know, you have like 10 people and there's like some portion of the pool where each of them is going to do their little paragraph.
48:26	Like, that's fine, you know, that everybody's going to like on fossils under the fossil. Right. And they know that. But for the text, that's like Generals', the entire thing, like the introduction in the background of the conclusion, who's going to write that? You know, and there's a sort of a general call in this case. There was just like everybody go in and like write like, no, of course not. Like, I didn't do it at first either. Like I did eventually when I saw it, nobody else was. I didn't want to leave. I get stuck with it. But I think that that's what I mean. Like being able to not pull your weight.
48:55	Is that kind of like when there is a tragedy of the Commons issue and like there's just subtask that anybody can do? It's easy for nobody to do it.
	So I'm just wrapping up. I have a couple of questions for you that are required to report, because I need to prove to my viewers that I did not just interview a bunch of 18 year old male. So just be sure

keeping convenient sample and computer science. And so I did look this up, but I want to make sure that I have it correct.

49:24   **What is your position, your faculty?**

I'm an assistant professor to pay you a tenure track number.

And your degrees are.

I have a B.A. in ecology and evolutionary biology.

OK, and then how old are you.

<redacted>.