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## **Social Science, Social Media, and Understanding Large-scale Interaction**

**Cliff Lampe (@clifflampe), University of Michigan**

>> So my name is Cliff. I am an assistant professor at the University of Michigan. I was at Michigan State University for six years. Before that, I did my grad degree at the University of Michigan. And before that, I was an undergrad at Michigan. [Laughter] And before that, I was born in Michigan. [Inaudible Remarks] So it's not so much that Michigan will get rid of me. It's just that no other state will have me. [Laughter] It is a kind of the way it's been going. So what I do is I study basically large scale what I call socio-technical systems and a few other people call them that too. And I look at--let's see some questions. Well, what Marc [phonetic] asked me to do today is talk to you in a kind of a different level. I'm not going to present you with any results, really. What I'm going to do instead is talk about how do I kind of come up with a research agenda, how do I come up with questions that I find compelling, how do I fit those all together when I'm pursuing multiple kind of research projects, how do I see them connecting together, and how do I turn that into a cohesive narrative which is going to be important for me, come tenure time, to be able to say like this is what I'm about, right? Because at the end of the day, you know, you guys are already working towards your tenure cases if you're destined for academia. And what you want to be able to do at the end of that tenure cases, for everybody in the world to say, "Oh, that's, you know, Katy Pete [phonetic]. This is what she does," though she's not going to the academia 'cause she's a chicken shit. [Laughter]

>> Boo!

>> Oh, what? [Laughter] Noticing that academia is hard, that's all. So in defining a couple of terms--I just picking on Katy, she's--so, in defining a couple of terms, I've used the term socio-technical systems before. We often hear the term social media. We hear the term social computing many times. In Michigan, we're a particular friend of that brand of term. If you're bold, you will have heard the term online community or virtual community [laughter] a couple of times. What's the difference between all these things? I think you could get into great beer-laden discussions, splitting hairs about some of the differences between each of these terms and what they mean and I don't think they matter at all, those differences. So let me explain what I'm talking about, what class of kind of human interactions that I find super compelling. Or, I'll just skip one. So, my central question, the thing that drives my research, entice together everything that I do is basically how can social technical systems be used to facilitate pro-social collaboration and then I'll add--especially at large scale, right? So, let's talk a little bit about that. So when I talk about pro-social collaboration, I'm really talking about kind of a very diverse set of activities, most of which we talked about at least in the last couple of days I've been sitting in the room in various ways and forms, right? So when we talk about what is pro-social collaboration, what is it that we're trying to facilitate in terms of humans working together, there are a few kind of really common things that we all care about, right? So, shared contact creation. A lot of us in the room think that Wikipedia is a good thing for humanity making data and information openly available to people is a good thing and the processes behind that are inherently part of the story that I'm trying to tell here. Coordinating online--offline activity. So Zayed has done some really incredible work looking at how social media played a role in fostering protests in Tahrir Square during the Egyptian Revolution. There has been a lot of other work that's shown what role social media plays in things like the Wisconsin riots or in the Occupy movement or in the Tea Party movement. So independent of kind of political platform, it's clear that these information communication technologies are hugely brought in for helping us to coordinate all sorts of offline activities. Providing social supports for individual [inaudible] change here, right? And I know a lot of you guys are interested in this. How do we use this kind of ICT social

tools to get you to be less fat, right? People have for a long time wanted me to be less fat so I'll keep working on that. But, you know, how do we use Google or Facebook or any of these other tools help me to be less fat? How do we get you to use less energy? How do we get people in general to use less energy? So there is this whole range of persuasive technology stuff that leverages these tools to try to get people to change their behavior in one way or another. Facilitate social relationships, right? Work that I have done with a couple of obscure graduate students and now assistant professors like Jessica Vitak [laughter] amongst others has shown that like, you know, Facebook can play this great role in helping to foster these kinds of social relationships, right? They can really help us to maintain maybe this much more diverse spread out network of people over time. And then there are things like deliberation, right? And this is I think actually, ironically, an understudy area right now because there is this huge raft to this stuff in the early '90s and it kind of died out, but how are people basically talking to one another and coming up with policy decisions, coming up with coordinated action, how are they using all these other systems in which to basically have conversations that lead to [inaudible] events, right? So, you know, I'm sure I'm missing a few things that you guys could add in here. But this is the type of thing that we're trying to encourage with these types of ICT. And I think this also central to what TMSP is really about, right? So we talk about social participation, a lot of these are kind of inherent classes of activity within that social participation, [inaudible] in TMSP. So a couple of propositions for you guys. One is that communication is social and is essential for cooperation. I am, at heart, a positivist. So I think, for instance, that a lot of our social behavior stems actually from evolutionary psychological causes. We as private hunters worked in packs and--so some sort of communication was actually part of our evolutionary process to survive on the planes of the Serengeti. And it's consequently built in to our very DNA. We look at kind of modern theories of language development. You look at what John Medina has talked about and go further back into some scholars of kind of why we develop language. A lot of them think that social interaction is kind of our crucial difference as species, right? The fact that we have sociality is what really--you know, other species of course have social interactions, but the ability to communicate in our advanced communication really sets us apart. I will say though that I think also that technical system shape communication, right? I'll talk a little bit more about this moving forward. So this is basically the socio-technical perspective, right? That social system and technical systems overlap and the intersection of those overlaps really create kind of new forms of communication, right? This is the inherit premise behind a lot of more traditional media scholar study. So when you look at people who study of what was the effect of radio, television, and telephone, people's patterns of behaviors and things like that, those were kind of built in to this model, right? The technology wasn't networked computer technology, but it was still mediating technology that affected how we communicate. And now, we have turned the computer into another type of communication device and use the network to really foster communication between people in different forms. So--and I think probably realistically, these two circles are actually much closer together. And I have them painted here. I just did for legibility's sake. And so, I don't want to give pick down for my slides in the Twitter backchannel. [Laughter] So--'cause it already have--you guys are already picking on my slides [inaudible].

>> We're watching Lady Gaga.

>> Oh I see. [Laughter] [Inaudible] that might [inaudible]. So, you know, we have all these issues of the social systems. We have what we know about technical systems. And then I think something that's commonly included in this model is test dependency, right? So for instance, there's lots--in organization studies, there's lots of people who study the organization of the hospital. There are people who study the organization of education, the organization of X or Y. I think because we understand that these types of test dependencies change how social processes happen, they will also change how socio-technical processes happening. And we get into this conversation a lot when we say, "Well, it depends so much on what you're trying to accomplish," right? And that's a fairly intuitive thing for us. So in my early grad school days, there are few people who really affected my thinking on this matter, right? One was my adviser, Paul Resnick who's speaking to you guys tomorrow. This is an obscenely young picture of Paul, I put it up there [laughter]

just so, you know, just to pick on. I mean, he's not in here though. And then, you know, you guys recognize Lawrence Lessig, I'm sure, who talked about code as architecture, right? He made this big argument in his 1996 book about code being a way of shaping people's behavior in these network systems. And then Jim Hollan and--oh, what is it, Steve Stornetta? [Multiple Speakers] Scott Stornetta had this great article about "Beyond being there," right? And that's been followed up by Barry Wellman and by Paul and a few other people to show like, you know, how do these technologies have affordances that shape how we can change communication and what types of new social interactions are possible as a result of these communications. So consequently, TMSP compounds the range of issues, all of which are hard enough in their individual buckets, social systems and the whole range of things you know about social systems. The whole range of things you know about the design of effective technological affordances, right, the user interface, user experience, literature and things like that. And then also, of course, how task dependencies affect all of that. Each one of these boxes in itself is an incredible authority, difficult problem and we have had the [inaudible] to go through and add them together and see if we can make them even more difficult as a people [inaudible]. All right, so I had in grad school in [inaudible]. When I started at the University of Michigan at the School of Information, I was actually studying the preservation of digital software, right? I was looking at emulators and looking at how we could preserve these things over a long period of time and I was really interested in the usability of emulators and things like that. But, I became very interested in two sites. One was Slashdot. Anybody here a Slashdot user?

>> User [inaudible], just reader.

>> Reader, reader [laughter], yeah. Used to be, I hear that a lot. And another site was I [inaudible] Everything2 which was an online user generated encyclopedia which sounds very familiar, right, but was actually built about three years before Wikipedia. And of course, was nowhere near the success as most of you have never heard of it unless you've read one of the research papers we've written about it. So, you know, why did I have this Holloway [phonetic]? Was it because I suddenly had this flash of wisdom? It was because I was friends from my hometown with these two guys, Commander Taco and Jeff "Hemos" Bates who had found Slashdot and had gone on with Nate Oostendorp to found Everything2. So because I was friends with them, I would go out and we would get drinks and [laughter]--I mean, right, that's how you drink. [Laughter] And we were talking about all this cool stuff they were doing and, oh, like--they we saw like they were taking these principles of open source and like, "We can apply open source to everything, man," and how [laughter]--

>> Pass the chips. [Laughter]

>> Right, pass the chips. [Laughter] "[Inaudible] Doritos, man. Open source those Doritos." [Laughter] And [laughter]--and they're both like really responsible dads now, so I should [inaudible]. But--so, you know, they were doing is very cool stuff and I thought, "Wow, this is really cool," and then I thought, "Wow, we could really change the world of this. I really do want to change the world." And so, that was what was driving me when I saw all this really cool engaging stuff and this was just before the big--the first big .com boom and burst, so there's all these like promise and hope in the air. So I totally abandoned this area, software emulation as it is--as a preservation practice and it seems to have done fine without me and went in to this area of how can we use these tools that we have access to, to do really cool things in terms of making software and making social change. So as an example of this thing, I want to talk about one example--you're right, [inaudible] you saw these examples. I'm sorry. But Karen Klein, who knows who Karen Klein is? Right, [inaudible] probably does. This is Karen Kelin. She is a 60 something bus driver in Upstate, New York. [Inaudible Remarks] Right? She is the unfortunate woman who got teased by a bunch of really ducky 13-year-old boys which is probably not a repetition statement [inaudible] like that, and cried and then became this big internet media sensation and got posted to Reddit. Reddit picked up the story and it got huge attention, right? Reddit is the way now that we've kind of drive attention to other social media

sites in this framework. Got picked up by YouTube. Somebody, I think when these kids have the inherent and internal wisdom to post the video of them making this nice lady cry [laughter] on YouTube, and that got picked up. There are tons of response videos. The videos got picked up by Reddit again. So there's this like kind of crossover between these media. And then somebody started up a crowd funding campaign to raise a few bucks for Karen, right? They said like, "Look, let's raise 5,000 dollars for Karen in order to send her on a nice vacation for having suffered such kind of a dreadful thing." People who were now really responding to this not only through the social media channels, but had been picked up by Good Morning America and the Today Show and all these things, flooded the campaign and really gave her, as you can see, a little bit more than 5,000 dollars, right? So--and this one's all happened basically in about five days. [Laughter] So, you know, some lessons from Karen that we can take from this example. One is that bullying sucks, don't bully people. However, in terms of what we study, this occur over multiple channels both social media and mass media in an incredibly rapid and constrained piece of space. And this is probably due to the affordances of the tech tools both on the mass and social media side, right? Because it's so easy to find these things and share them with your friends and share these videos, how many of you saw this video originally pop up on your like Facebook feed or your Twitter feed? Right? We now have ways of managing this attention in kind of a network way that's a new type of communication practice. What was also really interesting about this is that once the genie was out of the bottle, once this attention was directed towards Karen and the boys who had bullied her, nobody could stop it, right? There are many people including the Greece [phonetic], I think the town called Greece, Police Department were like, "Hey, how don't we not threaten to kill 13-year-old kids, they did a bad thing?" but that's probably not the right reaction. And Karen herself was overwhelmed of the response. And you can see how overwhelmed she was six days into this thing. Nobody had any control over this response which is another kind of characteristic of a medium [inaudible]. So I'm really interested in stories like this in when can we take something, some pro-social goal, in this case, shedding a light on the bullying that can occur, helping Karen kind of overcome some of the pain she suffered, and can we turn that into a large-scale social practice. So in my research area, I've done this into two main ways, right? One is that I studied existing social media sites, social computing, TMSP, whatever you're going to call those sites. The others that occasionally and foolishly, I have made new sites to try to get people to do things, right? So some example of studying existing social technical sites and this really has worked at--mostly of [inaudible] and Vitak and Rebecca Gray and Nicole Ellison and Alcides Velasquez and Tor Bjornrud and a ton of people have done. I--you know, I don't have their names in here and I should because they've really done the majority of this. But we look first at participation in online communities. I still like the term online communities 'cause I think it is a little bit different than social media. It's a little more specific term in some ways. You know, what drives people to participate? So we studied Everything2. Now, an interesting side note here is when I was a PhD student, I had this choice, kind of, about my dissertation. I wanted to study Everything2 'cause I thought that was a much more compelling story, but I had also access to all the Slashdot data. Paul gave me advise to do the Slashdot study for my dissertation because Slashdot was much more well known site and I would be much more well known for having done a Slashdot study than Everything2 study. It turned out to be have been great advice, right? And it also allowed me the freedom to get a job [inaudible], and to use that freedom to study Everything2 later. You know, you could put a pin in a research project and pursue it five, six years later and that's fine usually. So I got a nice [inaudible] to study Everything2 which is still ongoing, still the same if you want to check it out. Be careful when you check it out. Some of the contents are little--but it's a site that, you know, gives us access to server log data, gives us access to surveys of users. We've done interviews. We've explored habits on the site. We've explored motivations to use the site. We've explored lurkers on the site and how they use the differently and the heterogeneity in the lurkers, you know. So we've done--we've been able to push and poke and pull a lot of the site and now at other sites to this. So we're doing some work with Washington Post coming up looking at how people are motivated to share news in Social Reader. How many of you see the Social Reader in your Facebook feed, the Washington Post Social Reader? How many of you actually hate it? Yeah, right. So they're realized that. They're not stupid people over at the Washington Post. They're actually quite clutter. And so, they want to see what's going on here, right? Why do people

hate this thing? Another kind of [inaudible] research that we've done in the past years is looking at social network sites, particularly Facebook, we've done a few things with other social network sites, and looking at what are the outcomes of use of those sites, right? How--what happens when people use sites like Facebook and Twitter, and LinkedIn and Google Plus, for those two people using Google Plus and [laughter]-I'm just kidding. [Laughter] I was kidding [inaudible] but I had to say it. [Laughter] Actually, I wanted to ask you question. The question I was going to ask you was Larry Page has recent called Google Plus as the social spine of a lot of Google products. And I thought that was really evocative metaphor because it has a very different connotation for how you would use set up that system to understand use that a social network site, but, we'll talk about that later. So, you know, how do social network sites, you know, how do the outcomes happen for different people? What do things like context collapse and privacy mean in terms of why people interact in certain ways on social network sites? So there were a lot of work in this area and we've had some measure of fun doing that work. I think there are two main things we've looked at. One is kind of these outcomes of use. So we've used the social capital framework which are basically standardized survey scales to look at perceived benefits people get from their network, as do Facebook. But we've also look at things like, you know, managing classroom behavior, coordinating events, the role of social games, play in helping people feel connected to their friends. We've looked at political campaign. Vitak, I think you're the first author on that political paper we did, right? You know, so--you know, how do people for instance express their political views on Facebook which is something very salient right now, of course, as more and more my Facebook feed at least is expressing their political views one way or the other in this election. You know, so what are these types of ways that people are using the site? And then we also look at the factors that affect why and how people use the site. So for instance, in the political use, how many of you think that it's totally appropriate and very cool to use Facebook for political uses? A couple of you. How many of you would never do that? [Inaudible Remark & Laughter] So that's one of the consistent findings is that perceptions of appropriate use for Facebook, for instance, is massively heterogeneous between people, right? So people have very different believes of what is normative about Facebook use, which of course, is where you're run into the real fun as my normative use runs into your non normative use and you consider [inaudible]. The [inaudible] psychosocial effects. What are self-esteem affects on Facebook use? How much do you--are you worried about privacy? For instance, I intend to have a hard time with privacy research 'cause I'm not concerned at all about privacy. So, you know, I have a hard time getting it. What are norms? What are technological affordances of the site that affect how people are using different tools and services? So, you know, we've explored a lot of this and we've used different methods to explore this. And the main thrust of my story here in terms of this agenda, so the--so you can see hopefully how these two lines of work kind of dovetail, all right? So the Facebook stuff--so with E2 and the Slashdot and kind of studying these existing social network sites is really getting at in a persistent ongoing online community where social structures are emergent, what are people doing and how does that change the story in terms of how and why we think we use a particular socio-technical system. In the social network site, it's about what are the outcomes and individual and social factors that [inaudible]? Now in terms of how we studied this, I feel that we've use fairly much every method we can think of. We haven't done the MRI testing yet, right? And I'm anxious to do that. We have a kind of colleague at [inaudible] who does that. So I think I can work at it in within the next year, do an MRI test of somebody using Facebook, which I assume will just show like a blank area. [Laughter] Just kidding. So we've use--surveys have been primary our method and Esther [phonetic] gave a really good talk, I heard, about what's survey methods are and how you pursue that goal. So surveys have been something we've really leaned on heavily and we use a lot of surveys in both these kinds of research. We've done a lot of interviews. We did a lot of interviews with users to see kind of add context and get more information on the type of surveys. We do content analysis. Right now, two grad students are going through quite a few public status updates that you can get through from the interfacing site to look at instances of people mobilizing action from the networks. We do--we have done screen scrape. Now be careful about this. We did screen scraping in the fall of 2005 before there was--there was still actually in terms of use against it at that point. But we actually wrote and we got permission from Facebook in the fall of 2005 to do it. But then by the winter of 2005, they've become a big deal and

[inaudible] that permission. We haven't screen scraped since then. But in general, with E2 and Slashdot, we've done some screen scraping. Screen scraping is a method, pretty common, for doing this type of work. Application use. We used Bernie Hogan's NameGen web to download information and get social network structures out of E2. We've done [inaudible]. Server log analysis in the case of the E2 and Slashdot studies, right? So, you know, we're basically in these teams being massively multi-methodological in how we try to approach the questions that we ask. Another genre I think that I try to do sometimes is create a site. So, you know, you feel pretty cocky after awhile. You're like, "Look, I've been studying these things for good long time. I know how Facebook works. I know how E2 works. I know how Wikipedia works. Now, I'm going to build something and see if I can get people do something pro-social." So I've done that. Probably, this--my most successful of these projects, I did was some journalist at Michigan State University. Great Lakes Echo is--you can tell is just a WordPress. There's nothing technologically amazing about any of this. But it uses student journalist to create environmental news which is sadly underreported in the Great Lakes Region about the Great Lake's issues. And we get lots of interaction and we've had some success there. In opposition, this is the network neighborhoods for eco-conservation online. Awesome naming practices, never let biologists or ecologists name in you're tools, let me tell you [laughter] which has been a massive failure. I mean, not really massive failure but it's, you know, not received much adoption. Spartan Connect, we've created to help students connect to each other in their first year at a university. Michigan State has something like 40,000 undergrads and it's a big place, it can be overwhelming for students, so we're trying to use this tools to help them connect to one another. michEEN which is the Michigan Energy Efficiency Network was done with State of Michigan to get people who own large buildings to think about energy conservation and share tips and tricks with one another. The Great Place Network was about regional place making and jobs development in Michigan. It was basically a site where people who were public, what's the word, organizers and public planners to get together and come up with ways of sharing resources and view things like that which is a big deal in government right now, is kind of research sharing across different regions especially in a broke government like Michigan. There's also open education stuff. We had to build another Gates Foundation grant to create shared resources about master students doing veterinary science training in four countries in Africa. So we created a [inaudible] on that. And then we also got some of our money to install computers in something like 20,000--to add 20,000 different computers to Michigan libraries a couple of years ago and update the software and new things of that. So we got like 12 million dollars to basically airdrop the ton of computers all across the State of Michigan and have some plans for pre-post studies to see how new broadband access change how people are able to access them. So, in each of these studies, these are--I guess, these are kind of widely divergent test dependencies, right? You know, students, job creation, energy efficiency, environmental news, a lot of times, I feel like what I study is socio-technical systems for X, where X, I'm--as long as it's pro-social, and long it's not completely evil, I don't care that much about [laughs], right? I feel like the task dependencyless has an obvious affect on the socio and the technical. We shouldn't be able to plug almost anything into X and accomplish the goals as long as if we can tell how that task dependency shapes the other two things. Now, many of you have read a couple of our Facebook papers or might have read an E2 paper. Very few of you have probably read any of the research resulting from these efforts, right? And this was a ton of work as you can imagine to do. I think I'm a total failure at getting work out of this kind of action-based projects in communities, right? And it's largely because the people funding this, it comes from government grants, they're not willing to spend a lot of money on research part of this. They will spend a lot of money on the practitioner part of this, but not a lot--willing to spend a lot of money on the research part. And consequently, it's hard to get pre-post plans. And it's also sometimes, and very often in the lifecycles of these projects, comes a time when you have to choose between the success of the project and the success of the research plan. And your moral obligation to the funders is always the success of the project, right? So, you know, that's a choice you have to make at a certain point. So--and most of these, you know, we've gotten some research out of this and there's research I actually [inaudible] of this in terms of what makes these things successful or not. But it's to the nail. It is so much easier to generate a survey of whatever population than to create the site and build in the hoax pre-post to this site. And Katy is laughing 'cause they do this professionally over at University of

Minnesota. The community management between a maintenance coordinating with teams to make these things successful. All of that is a lot of work. So I would encourage you to never ever, ever do it. Give me a second. It's a very worthwhile stuff too. [Laughter] So the pros and cons of mixed method research, right? So you can tell that we've done a lot of mixed methods in the crew. And when I first came to Michigan State, I started working a lot of Nicole Ellison and she was primarily a qualitative researcher and I was primarily a quantitative research doing surveys and stats. My main training, if I had to pick a main training that I went through in grad school was survey methods. I worked for Institute for Social Research and kind of quantitative analysis to look at survey tools, survey questionnaire development et cetera, et cetera. But, you know, we blend it over the years of our interaction and different--still questions I had require different methods and it wasn't always possible to pursue the question I wanted to with just surveys. And so, we became multi-methodological. And I think that there's some pros and cons to this thing and she have some--so that I think--and the conversation I had in back channel and from what I heard about you guys, one of the caveats you get and it's a true caveat is that you can't become an expert in all methods, right? It's pretty impossible becoming expert in every single method that's out there. So what are you going to do? Do you become--you have basically kind of that three choices that you can pursue, right? You can become an expert in one method and collaborate with people who are experts on other methods. This is really cool except that collaboration has lot of coordination costs. It can be really difficult. It slows down the life of a project if you have to collaborate and come to common ground basically to understand other people's methods. So it's not an entirely effort-free preposition to just find a survey expert if you are the tech person and work with them. There's actually quite a bit of work that's inherent on that. You can become sort of okay at a bunch of different methods, right, and be broker between different people on a research team. This is actually what a lot of the information schools train people to do to one extent or the other. We train people to basically learn two or three methods pretty well or at least well enough to pass master and then those methods become kind of something that you can help to translate between different people on a research team, right? So I know a little bit of technology and I know quite a bit about surveys. So when I'm working with engineers and I'm working with real survey researchers, because I'm definitely not a real survey researcher, I can act as a translator between those two groups and help facilitate the types of interactions they do have, right? So that broker role is awesome and it's intellectually rewarding and it's cool and it always makes you the second author on every paper [laughter], right, which is the danger there. What it means is that the person who is the domain or methods expert becomes the first author 'cause they're driving the paper and you for your very helpful role give relegated to 17th author of the paper which can be uncomfortable. So the other one is to become like T-shaped person, so you become really good and really deep in one method, and then not embarrassing in three or four other methods [laughter], right? And that's actually probably method many of us will follow, right? This is an interdisciplinary group. We tend not to have kind of the very kind of set discipline of some of our methods in other disciplines. So if you're com [phonetic] researcher, how many of you guys are com researchers [inaudible]? Yeah, they're --I think the primary method is either surveys or experiments, right? And it's lab experiments, not field experiments, per se. So there is kind of--because that field has coalesced around kind of this very set data sources, there's a lot of expertise on what's a good method and what's not, et cetera, et cetera. As interdisciplinary researchers, we often to have that luxury, so we have to make a decision basically about which of these paths we want to follow in becoming mixed methods researchers. Another issue with using mixed methods in your research is who will assess your papers, right? I think [inaudible] has used mixed methods as one his--one time or the another where you get a review or who knows the survey stuff pretty well but totally fails on your server log analysis or machine learning algorithm, or vice versa, right? So the more method you use within a paper, the more dangerous it can become to find some other mixed method jerk who is as good as you are in evaluating the experiments. What methods do you include and why, right? Why are you picking a certain method to use? What level of expertise do you feel comfortable with? I framed kind of two different levels, right? Not embarrassing, adequate, and a third one, expert, right? So which of those do you feel like you need to be at in order to put your name on a paper with the method that you use. That's kind of a personal researcher decision that you have to make. So putting in more mixed methods and having mixed

methods in your paper can be really awesome too though, right? Like I think Dave [inaudible] like Google Plus paper has a lot of depth and richness to it that would not be there had they only used one of the methods of the three, I think you guys have that paper, methods that they used in that paper, right? It adds and makes a more complete compelling story of what we know to be a really complex and compelling thing. I talked about how the socio-technical systems blend three really complicated things and using mixed methods helps us to pull apart what is really a very integrated and thorough story. You know, it can leverage different skills of co-authors. When you have a research team, often, that research team will have things that they're good at in different place and can leverage those different things. And then, in our field for--if you--even if you publish an ICA, if you are reviewing papers for your--especially for Kai, CSCW or ICWSM or Media Psychology or New Media Society or any of these journals that are out there, often, the more methods that you feel confident in, the better reviewer you are because you're going to get mixed methods papers in and you'll be able to, I think, have a wider range of papers in your field which is important. All right, so a couple of thoughts in terms of both how do you pick a topic to study and how do you--Marc, that's Justin Bieber. He is a popular music artist. [Laughter] Yes.

[ Inaudible Remark & Laughter ]

Right, yeah, John is what I was going to say. [Laughter] So both in terms of methods and in terms of research topics that you follow, I think defining what you're interested in is a hugely important thing, right? So for me, I know that what I'm interested in is pro-social task dependencies, right? I'm mostly interested in human endeavor that leads to a better world, right, which means that there are certain things I'm not that interested in. Emergent social structure. I'm interested in how these technologies support social structures which means that they need to be persistent enough to have social structures emerge. So there's some--and I have it in here in the next slides. So pure cloud sourcing for instance doesn't allow for a lot of social structure to emerge a lot of times. There's very interesting things in cloud sourcing, but I'll leave that to better--other people who are more interested in that though. Social architecture, large scale. These are things that I know drive me as a researcher. So what are the things that I'm not interested in, right? And they tend to be the reverse of what I am interested in. So I'm not that interested in individual outcomes. I don't necessarily--I'm not that interested in self-presentation strategies and things like that, except is how it affects those larger scale issues that I am interested in. I'm not interested in small group collaboration, except that large groups tend to be comprised with smaller groups. So how these things affect the question I am interested in can really change--you know, I might spend some time looking at individual effects, but only in the context of those things that I really am interested in, right? Chick-fil-A, anybody a fan? [Laughter] It's not because their stance and whatever, I just--I'm not--I don't like their sandwiches. I think KFC all the way, of course. [Laughter]

>> Is that a Michigan thing?

>> It's a Michigan thing. [Laughter] Some thoughts, so--you know, and during the table conversations and thinking about what you guys are here for and what you're trying to do, some things I've learned the hard way or the [inaudible] years I thought I would show of you guys is in the research projects to figure out what you're good at, right? You're not going to be good at everything that is part of the complicated task of putting together a good research paper. I have several things I'm not good at as Vitak and Yvette will tell in, you know, to nod so empathically. Like, you know, for me, writing, I struggle it writing. You know, my first draft of anything usually sucks. I struggle sometimes with attention detail. I struggle with, you know, sometimes what certain types of stats or with, you know, reference mining or things like that. What I'm good at, you know, and I feel like I am good at is telling a story. Like I know how to look a set of results and pull the narrative out of that. And eventually it would help if I tell a story in a clear way. You know, so--you know, just figure out what you are good at on a paper and really lean in to it, right? If you are really good at writing, you know, that's a huge skill. If you're really good at data analysis or you're really good at clever



manipulations that lead to field experiments, also that, you know, you really want to be able to identify in yourself as early as possible which means being hypocritical about yourself. You really do need to say what you're not good at in fact. Figure out what you care about, right? Sometimes that's as easy for me to do. I get lost in the minutia and daily grind of the academic or research, in general, job market, right? There are deadlines. There's [inaudible] to happens, in CSCW that's happening and students interested in papers and committee meetings and all these things. So take the time to step back and say, what--why did I get into this job in the first place, right? What am I really interested in figuring out and am I doing that? right, am I really driving that agenda right now? And I think for most people I know, they do that, and they--the people who do, do that I think are much happier with their research and happier as academics and researchers more general. Work with people you like. And this seem pretty obvious but it's amazing how often you feel like you don't have a choice to work with people you like. And sometimes you, in a weak moment, well, decide, "Yes, I'll do this paper with you and even though like, you know, I know we've had interpersonal conflict in the past, you know, sure, I'll work on this incredibly hard, frustrating thing with you. Even though we don't get along, I think it's a great idea for us to be locked in a room together writing and dependent on each other for job success. That sounds cool." [Laughter] Don't do that, right? Like this--the job has few rewards both in terms--and I'm not sure David could speak to this in terms of the industry. I'll assume it's about the same. But you have a lot of choice about who you work with as an academic. Take that choice. You know, this is one of the benefits of this particular pathway is you get to say no to some things, you get to say yes to others. And that's, you know, leverage that. Research is a social practice, I think. And I'm a huge believer in events like this. I think an event like this helps you to build your invisible college. Does anybody ever heard the term invisible college? [inaudible] not heard it. It's basically, you know, your set of colleagues who you can call on the future. This group of people is going to be hugely important for you in the future when you need reviewers for papers that you're editing or when you need people to take a look at something you're thinking of sending in, when you want co-authors, when you want somebody to go in on a grant with you, when you are moving between jobs and you want somebody to help you get a foot into some place. That invisible college and understanding kind of how your social structure can affect your researches a huge deal. All right. So in terms of some questions about--

>> Is that you?

>> That is me [laughter], last week. [Laughter] It's a cosplay thing. You know, I cosplay as angry babies. [Laughter] So how many of you do not know what cosplay is? [Inaudible Remarks] All right, I'm not going to tell you. [Laughter] I'm not--but don't Google it. Don't Google it. All right, so I've painted this picture of, you know, we have this big bucket of methods and we can apply this methods [inaudible] interesting questions and I painted like an inherent to me and I think to TMSP is this really big desire to take these tools and to make the world a better place by finding people who are interested in social participation and enabling them to work together using the tools to reduce transaction cost, to accomplish task, et cetera, et cetera, right? But why don't we do--why doesn't this work more often, right? We have very few examples of really successful large scale projects. And I think--so we said yesterday that Wikipedia was largest successful 'cause it was early. I think Bernie said that or something or maybe you said it in your talk, but like--you know Wikipedia, could Wikipedia restart today? Probably not. And Wikipedia is in some trouble because of editors moving on and dying off, et cetera, et cetera. So what are the inherent barriers to studying TMSP? Do we have a goal as researchers, and of course we have heterogeneous goals, maybe we have both of these, do we want to make these systems, you know, and are we the right people to make these systems? Or do we just want to study them? Is it enough to study them and to basically do butterfly collecting of different social media sites and different social computing sites and try to assemble a big case book of these things? Or do we need to develop integrated theories of these things? Or do we need to take currently existing theories and show how those theories are shaped by technological affordances in different ways? You know, how do we drive this wheel forward? A big criticism in Kai and CSCW as researcher fields has always been that each year feels like it doesn't build of year as previous, right, that there's two little

integration across multiple years in that field and that consequently what you get is kind of lots of one of studies about these sites with little integration across time that leads to kind of true change of human knowledge. It is what I've been talking about and is what we're studying in terms of the socio-technical systems really just this hodge-podge of social science theories that we find convenient to use with this crispy coating of technological affordances layered over it. And if that's true, does that matter, right? Are we really just kind of lazy social scientists who know a little bit about technology? That's my provocative question. And what is successful of it? Well, okay, so what is our Large Hadron Collider model, right? This is something that Ben often raised as a question. And it's interesting. I think a lot of people have answer that question with data, right? A lot of people talk about that that question with data. But when I think about the Large Hadron Collider, it's not the actual machine that's interesting, per se, and it's not the data that it collects that's interesting. It's the social structures and people collected around the practices to get those things that becomes really interesting. So we focus a lot on our field on the end result of what makes the Hadron Collider so interesting, but we're not focused on the social practices that lead to that production, right? So how--what's--for me, what our Large Hadron Collider looks like is a research institute or an industry shop or a department where you have this great mix of people with different abilities to address this question who are getting to gather with the resources necessary to accomplish their goals, right? And it could be that we have that somewhere. I know lots of people here are really actively trying to build that, but I don't think we're there yet. And then finally, what does success look like? If we could really nail this TMSP thing, if we do really nail the socio-technical systems with techno--or task dependencies, what would we be able to do, right? For us, success often I think looks at the micro level. We look at the next paper at the big conference or journal that we're interested in or we look at the next kind of funding stream and we have to be focused on those types of success too, both--as a field, you know, what would we know, right? The LHC knows what success looks like. They have definite criteria of what a successful outcome for them is. And that drives a lot of the social practice around what they do. For us, do we have that? And if so, what it is? What it is? What is it? All right, so bonus picture of me in curlers just to wake you up a little bit [inaudible]. [Laughter] It's lost in the pixilation, but the bonus details is that there's a pregnancy test in that little--

>> Is this something you do on weekend? [Laughter]

>> Weekends, Tuesdays, whatever. All right, so that's what I have. There's still a little bit of time for questions before we move on to your main act for this evening. Tip your waitresses and let's have some questions outside of Twitter [laughter] or discussion, whatever. Clap for me by the way.

[ Applause ]

[Inaudible] my health. That is empty hole that needs external approval, don't you understand? [Laughter]

>> [Inaudible] want him the back, right? [Laughter] Yeah.

>> You mentioned the difficulty in submitting mixed methods [inaudible] person you have reviewers. What's your advice or lessons from that?

>> I think is that to treat every paper as an opportunity to educate your research community about a method, right? So I think when I've seen this done well, what happen is that people will really clearly explain the method that they use, whether it be a new statistic like I had a paper recently where we use mutual information which is not a statistical method that's very common in our field, right, but it's common in other. We took that as a great opportunity to say, "Look, this is not common in Kai or CSCW, but here is what this means and here's what mutual information." So it's--we had add--and we had to add basically a

section really describing that and why that was an appropriate method to use and that's great because that allows the next person to use that too and see what it is common in others.

>> I would say that's a great--

>> We took that as a great opportunity to say look--

>> --[inaudible] methods and some humility of what are your choices.

>> Right, yeah. That's good.

>> As we [inaudible] students, we always have to answer the question as to why is it valuable to study whatever you're studying. Who cares?

>> Yeah.

>> And the second part to that question was--oh, I'm going to the question to you and the part [inaudible] thinks about is things that technology is changing at such a rapid pace. I mean, what you studied is already--

>> Yeah.

>> --not [inaudible] anymore. So [laughter] with the [inaudible] thing--

>> Well, I've had Facebook papers that became irrelevant before we can get it out into the press, right? Like it's just the technologies and the environment--technologies can really change really rapid, which is why I think my personal answer to some of the questions I raised previously was we need to be developing frameworks, theories, whatever term you want to call it that is independent of particular platforms at particular time. We have to stop butterfly collecting, right? There's good reasons why we butterfly collections because Wikipedia and Twitter and Usenet are available to us. But, there is a lot of stuff going on. There's a rich environment information of college where people are doing this things and we're barely scratching it right now.

>> But maybe it's more like--oh, sorry.

>> No, it's okay.

>> Yeah, yeah.

>> Go ahead.

>> Maybe it's more like at core sampling where how are we going to create a theory of these things if we don't kind of have a sample of what's going on a way to collect all these things and a way we can share that information maybe in a less hodge-podge publication manner.

>> Well, that was true in the butterfly collectors back in the day too, right? Butterfly collecting was actually essential for development of kind of speciation theories and things like that, biology in college.

>> I mean I have to say naturalism predates Starling [phonetic].

>> Yeah, absolutely. You're right, so--

>> We have to have a large data set before we can notice that--

>> Yup.

>> --the included movies are actually evolving.

>> Yup.

>> Yeah.

>> So is that the stage we're in though? So that we got--the question becomes, is that stage or field is in where we are doing the essential butterfly collecting necessary for the next--

>> Get going.

>> So I want to just support the, you know, work with people that you think you're going to be fun to work with.

>> Yeah.

>> I mean early on in my career, I had senior people kind of harassing me 'cause I was working with people who I thought would be fun to work with. They happen to be senior people who [inaudible]. And it's just-- it's--I mean it's more fun to just to have fun. I mean that's--

>> Yup.

>> --the bottom line. And in some cases, I would pick a problem that maybe isn't a problem that I'm in love with 'cause I thought the person would be fun to work with and I would learn something on it, right?

>> Yeah.

>> I mean--and that's--sort of the essence of [inaudible] an intellectual endeavor is that you learn something out of it. And so, oh yeah, that's totally fun. Then the one being locked in a room with someone who you're not sure you can work with. It's because you know what, maybe my impression is wrong.

>> Right.

>> Maybe this personally--and what actually kind of points to is every now and then, you do up to take a risk--

>> Yup.

>> --even if that risk is, "Well, I'm not, I'm not quite sure that I can work with this person, but now maybe." And I'll just say it in at least two occasions I didn't like that. [Laughter]

>> Well the about--you make the decision about that risk in less than 30 seconds and are stuck with that decision for six months to three years.

>> Yeah, yeah, yeah. So if you're going to take that risk, really think about it.

>> Yeah.

>> Yeah.

>> Just like if you're going to start to date somebody immediate, like commit to dating them for six months, as soon as they hi at the bar kind of thing, right? Like--

>> [Inaudible] question from Twitter.

>> Yes.

>> What exactly are you in this picture?

>> I am Armageddon Jones, techno barbarian from the 23rd century.

>> Thank you. [Laughter]

>> I'm getting warmer.

>> Are there question? We got a minute or two. Yeah.

>> Comment and a question. So about your findings and if they get outdated, so I went to Slashdot [inaudible] and Slashdot--what's--I mean, it's still alone but when it was not relevant anymore and still I though their findings are still relevant, so I really think if you focus on the people rather than technology, this finding stay put.

>> Yeah, and that's the thing. We're studying, you know, one of the criticisms of big data sometimes is that it abstracts away the people too much. And Slashdot was an early big data paper in some ways, right? And where the things Paul really tried to keep us focused on was what are the people actually doing? How does this actually really to practice? And how can we generalize this and make this more relevant later? Yeah, 'cause especially once you start living two or three cycles of technology, you know, curves, you don't understand every thing, it's temporary except somehow for RIC. That still lives.

>> And this [inaudible] gets the last.

>> Yeah, for--I'm thinking a lot about [inaudible] I have to take the field [inaudible] too. And one thing that came up earlier that you said like Kai and CSCW, there's a lot of wild papers.

>> Right.

>> I was [inaudible]. We had the same thing. There's a lot of--

>> Yeah.

>> --that. And I'm probably thinking this is because the social science people and the computer science people are collaborating 'cause the research is on the question material, the research is a lot of what I got my hands on this data--

>> Right.

>> --[inaudible]. Whereas if you had more question driven research, then people would be building, whereas people seem to be doing a lot of I have this data, what could I probably answer with this data.

>> Yeah.

>> And then they do something. But then it's really hard to find it too. Sometimes I'm looking for a question, and I can't find the paper.

>> Sure.

>> So it's not just languages. That's my thought about collaborate with not just [inaudible] but beneath--

>> Yeah.

>> --interdisciplinary--I mean not just interdisciplinary and the, you know, we meet once a month, but--  
[Multiple Speakers]

>> Right, right. I'm all for interdisciplinary teams but you should not in anyway underestimate the amount of work that it takes for a successful interdisciplinary team to happen. [Inaudible Remark] [Inaudible] and that's what CERN [phonetic] is, right? CERN is an interdisciplinary social practice.

>> That's what we heard before is that interdisciplinary teams are hard to arrange. But when they do, the results have high impact.

>> Absolutely, very powerful.

>> I just want to underline also the importance of Jimmy Lin who, sorry, couldn't join us here but he spent two years of [inaudible] Twitter and does a lot of thinks analysis. And so, you know, he's very strongly against the kind of descriptive statistics paper that you're describing and just analyzing data, let's tell you the numbers of what we find. And, you know, he even got the strong word of calling it info porn and that is, you know, just sort of--doesn't really help. And that the research guided question and having some sort of driving issue that you're trying to resolve is really the essence of, you know, the blended--not so much interdisciplinary, but the idea of not just data analysis, but actually the goal of making it better of interventions of succeeding and moving the technology forward by a meaningful--