

Thanks so much for having me here today. I'm really excited to be here. And although I'm onstage, I wanna say thanks to the folks in the mixed-methods workshop yesterday, 'cause we had a great conversation, and we're gonna hopefully keep that conversation going.

And so what I'm gonna talk a little bit about today is some of the ways one can understand what people are up to with the Internet and some of the results of that. So I always like big numbers. Like anybody, it's like, "Whoa, 28.7 of the world's population is on the Internet as of a couple of months ago." And if you see from the March 2009 statistic, it's growing.

And I think we're all, especially in the Internet world, obsessed with how many people are doing this, how many people are online. And the opening talk this morning was talking about the view counts and how numbers are so important to us.

Here's how it starts to break down in terms of percentage of people online in numbers. And the reason I wanted to put this up is because I'm really interested, like many of the folks in the audience and the speakers, in particular cultural contexts for the uptake in use of the Internet. And I mean cultures by, like, nation cultures, but also personal cultures, like am I an adolescent, what's my demographic, what is it that I'm trying to do right now.

And I definitely – I'm of the opinion – I don't think many people would argue with this, but that we have many different faces that we put on for different people. And so I have a culture of work, where I have a particular presentation of self, and then there's the culture at home, where I have a different presentation of self. So I'm interested in that notion of culture more broadly.

And I just put up – I've bolded places where I've done ethnographic fieldwork and where I've actually done design work with excellent design teams: U.S., U.K., Spain, and Japan. And I think that the places that we work also inform and affect how we think about other people and our relationship to other people and to technologies, and how those technologies transform those relationships. So I'm very much of the opinion that we should get out and go out and see other things and really be observant about how other people are using things, because that changes the way we might view ourselves and think about design in the future.

So what are all these people doing? Now, I'm a psychologist originally, and so the large aggregate numbers are very exciting to me, but I cannot help but have the next question be: So who are they, and what are they up to? What are they doing, and why are they doing it? And what would they do differently if we gave them different tools, if they were in different circumstances?

So there are many different ways of understanding experience, and this group is more educated than most, I suspect, about some of these methods. We, as I say, had a great set of conversations, and I heard about whole new slew of methods that are being developed out there yesterday in the workshop.

But these are some of the things that my group at Yahoo do. We do field studies, and we do interviews in situ, but we actually do go and shadow people and run around after them. And I've just been working with a student to come up with a set of sensor-based technologies so we can kind of augment the person, more for fun right now, to see how we can get different kinds of data about what people are up to. That's in a study about how people go shopping. And we have an instrumented shopping bag so that we have the point of view of the shopping bag, to see how the shopping bag gets on the shopping exercise.

We have prototypes that we put out there, and those could be anything from mock-ups through to full-blown prototypes. I'm gonna show you a couple today. We do activity/love analysis, so instrumentation of those prototypes is paramount.

And one of the things I think that's really interesting is, when one is cast as someone in the design space, often one is put in the position of, like, where you do the front-end piece, and that's so not true, as I'm sure most of us know here. It's not just – and I use the word "just" specifically – the front-end piece. But also, if you actually want to do some real analysis of what's going on, we think very deeply about how you do an evaluation of what you've put out there.

So understanding the back end and how instrumentation works is absolutely crucial, and my team is very strong at thinking about that and working with engineers to say, what's gonna get started in the database? Will it slow down performance? How will I get those logs out? What am I gonna do with the analyses?

We do a lot of surveys, and we do a lot of data mining and visualization. I'm gonna show you an example of the data we gather.

We are what I called yesterday methodological mutts. We draw from psychology, anthropology, design research, sociology, computer science, to try and understand what are good new ways that we can develop, and old ways we can borrow and modify to understand what people are up to.

Here are some of the ways that people talk about people. Right? People: the users, their groups, their networks. And here are some of the methods that typically I talk about most days. Oh, unique visitors; page views; visits; return visits – I'm gonna go back to bounce rate – time spent per session; relevant actions taken, where relevance is often predetermined by what we think people should do or could do or would do; network centrality. We've heard about Twitter. We've been doing a lot of studies in my group about network centrality. Inbound links and outbound links.

Bounce rate is really important because everyone says, "Oh, what happened? They bounced off. Are they happy? Are they sad?" And I always think about these kinds of measures. I feel like I'm in a séance. I'm getting all of this sort of signal, but I don't really know what's happening out there, 'cause often I'm looking at the data later, after the

person's gone, and trying to make sense of what on earth were they doing to leave these traces behind.

So it's kind of like an archaeological experiment half the time, and I'm really interested in the ways in which – when I talk to people, depending on their focus, I say, "Yeah, but those users are part of a network, and if you're looking at centrality and you've got a node and a node, how do the nodes feel about each other? And what's happening between that connection?" And sure, it's important that we have more people connected than ever before, but what are they doing, and how is it changing their relationships? We've had – a couple of the speakers have already brought that up today.

So what is this thing about meaning, feeling? What does it mean to be connected? And I think that Christian talked about services and this idea that we're building a long-term relationship with people. And the bounce rate matters 'cause they're gonna come back, but we sort of need to be careful about their privacy and be concerned, but find other ways that are ethically and methodologically sound to understand why they went away, how they felt about it, and what would bring them back in a sort of service relationship.

So I'm really personally interested, and this talk is gonna focus on the sort of emotional connection. And I'm gonna show you a couple of applications which are really about the real-time Web. We were looking at YouTube videos earlier, and I'm really interested in the distinction between – the difference between asynchronous connection and synchronous, real-time connection. And I'm not talking so much about Chatroulette; I'm talking about – although that would be really fun to talk about. But I'm talking about what happens when people in real time work together.

And the takeaways, for those of you who are getting really hungry, 'cause I'm standing between you and lunch – so you can leave after this if you want to – words are tricky, and they have baggage. And when we talk about users or groups or networks, we're talking about people and that it's really important that the methods that we use, we don't let them be myopic and push us to saying, "I only care about users, and I only care about what they're doing on the page," but to really start asking those questions and using methods and inventing methods about what does it mean for people to be there, 'cause that's what's gonna create a service that's gonna grow with them as time goes on.

No one-size-fits-all measure. It's a moving target. I teach at Berkeley, and I've taught in the past when I was in academia, and one of the things – I used to work with students a lot and say, "I know I'm teaching you experimental methods and statistics, but you have to know what your questions are and use the right method, and don't be afraid – because you think of yourself as an experimental psychologist or you think of yourself as a computer scientist – to go and try and do a fieldwork study." If you think yourself an anthropologist and you've always done qualitative work, think about doing quantitative work, 'cause the distinction between qualitative and quantitative are not as big as you think. You can make anything into numbers, and you can interpret anything for meaning.

So don't just say, "I'm a network analyst, and I don't really care about what's happened with the nodes; I just wanna know they're connected." And I'm being extreme, but I think the baggage and the limitations often come in the way we perform who we think we are as researchers.

So here, think about the lure of numbers: "Ooh, how many people have we got on our service?" And don't also just think about "I only look at the user." So there's the devils in the details, yes, but we should look at the big numbers. And the big numbers don't tell you everything, so triangulate and always question your questions.

So hopefully I'm gonna show you a couple of things where we've tried to do that. But these are the sort of organizing principles that I try to go in when I'm doing a study or a project.

I'm gonna try and talk about a couple of these, but I just wanna give you a flavor for the kinds of studies that we've done in my group. The top one, we had – Yahoo had a service called Yahoo Live, which was a webcasting service, which I personally loved, and we had – people had channels.

And so you could have your Live up in the corner, top left. You've got a chat space, and these are webcams of people who are checking into your channel. The ferret channel was quite well traveled, surprisingly. It was literally a camera on some ferrets, but apparently lots of people came and clicked and viewed. Why, we don't know, but they did. Well, they were quite cute, actually.

We studied DJs who were webcasting and doing live shows, to start to look at how does a person, a DJ, (a) use all of these different features, like view counts and chat and making eye contact with people in their little webcam boxes, in order to create a sense of audience and connection and to try out tracks that they're doing and mixes that they're doing, but also – because that's a lot of work that they're doing, right? So how could we help change the interface?

But also we went out and we interviewed people about where does this, as a performance space, sit into your other performance spaces? How are you reaching your primary constituencies, which are the people who listen to you, other DJs, and potential people who might get you deals? And so it was a bigger picture about what we could do with this tool, but also where could we design a service down the line to help people like DJs, but people who are like me, who might like to practice something, or educationalists, on how to use a technology like this.

The next one, I put "inclusion/exclusion." That is a network diagram of people asking questions about Yahoo Pipes, which was a visual programming language that got released by Yahoo.

And so what we did was we did content analysis of the questions, but we also just did a network analysis of whose questions are getting answered and by whom. And you can't

see my little egg very well, but you can see there are some people who are answering a lot of questions and to whom questions are being essentially directed. And then there's the poor people around the edges. That edge that you can see are people whose questions never got answered. Oh, they went away.

And when we looked at why those questions weren't being answered, often it was because people didn't know how to express the question. They were newbies. Now, the question I posed was, do we care about newbies, and do we wanna make them into experts? Do we want to understand what this means to them and help bring them along? In which case we might design a different service around a community involvement to help people learn language and learn how to ask questions that get answered.

But you wouldn't have known that from just the – if I just talked to a few people, I wouldn't have gotten the sense that there's a lot of people out there in that outer ring not being answered. And if I just looked at that and hadn't gone to actually talk to some of the people whose questions didn't get answered, or done a content analysis on it, I might not have really understood that some number of those people weren't just a bounce rate 'cause they didn't care; they were a bounce because they did care but they didn't know how to be included. They didn't know how to get inculcated, invited to the community.

So I'm gonna go on and I'm gonna talk about the other two in a little bit more detail. But first I wanna tell you about my favorite thing, Flickr. So Flickr has over 40 million users in November 2009. I think it's actually quite a bit more than that, but I was just trying to get some numbers for you, 'cause I want those big numbers, little ones.

And I love Flickr, and everyone's "Ooh, you know, we've got loads of people on Flickr, and it's all very exciting, and they're sharing photos." Great. But they're also doing a whole lot of other things. So I did a site analysis where I spent – and I kind of spending time – it's very hard for me to do participant observation on Flickr, because I love photos, and it was such a pain but I did it.

People document and they have personal and collective memories. We know that people upload a lot of pictures that never get made public, that never get any kind of information change on them at all. They're archiving.

So it's not just a public sharing space. They've got their collective memories. They're archiving and putting things into groups and sets for other people for whom they believe – with whom they believe these shared artifacts create meanings, and let relationships continue despite distance and time.

There's a lot of people competing. They wanna be in the top interesting category; they want to be the best in their class or better than their friends at photography or at whatever it might be, telling stories with photos.

People want to belong. People come there for affiliation. It's like, "Well, you know, I started taking photos, and I'm a stay-at-home mom, and I don't get out very much. But I

reach out to all of my friends through Flickr, and I've met this new moms' group online, and I'm really making new connections there." This is not different from other Internet sites. I just – I'm really interested in how it manifests in Flickr.

People learn. There are loads of educational groups. People informally learning or formally learning. And there's this awareness near and far that I alluded to earlier of "I know what you're up to, but I'm away," and it's a very light touch. We hear about touch points. This is an emotional touch point space for a lot of people.

And there's also vanity and voyeurism: Who's looking at my stuff, and what are they doing? And there's a huge amount of browsing around. We know from logs that people often just hit on friends of friends of friends of friends and bounce around and spend time just browsing.

And we did a study where we looked at people and we characterized them as, you know, butterflies or self-presenters or whatever. We had a series of categories, and one person could have many roles. And people were partitioning who had access to pictures, and sometimes having multiple accounts in order to have these different roles, those faces I mentioned at the beginning, the different faces that we put to different people.

So it's not just a big lot of numbers. It's actually a lot of people finding meaning and behaving and expressing themselves in different ways. Oh, what did I do? I hit the wrong one. Woo, that was a bit shocking.

And this, I wanna show you about this. So one of the things I'm really obsessed about is access control, 'cause as someone who talks consistently about having different faces to different publics and being socially appropriate – I don't think it's just a British trait – I'm very worried or concerned or interested in how people manage their online identities. And I've been working on some of that with my colleague, Shelly Farnham, about this notion of faceted identity, which is something that also Dana Boyd talks about a lot, another friend.

Anyway, so this is old work, but I did wanna share it with you because I think it shows – it illustrates the relationship or the power of the aggregate to the individual in doing both.

So what we did was, these old data, 2005, I want you to take away the message of the method, not the specific data. We just visualized where people's self-reported location in the world and what they've done with their access-control privileges on Flickr. We took people who had more than, I think at the time, like 25, 30 pictures and who were active, and we just sampled. Now, this is self-reported location. We did not do any tracking of anybody. All we did – we didn't look at the pictures – was "Did you change your access-control privileges?"

Now, there's an old myth in the human/computer interaction literature that nobody ever changes the defaults. So I wanna tell you that the defaults were public at this time, and what you're seeing here is, if most of your pictures are private, it's red; if most of your

pictures are public, it's green. Now, if I had just done an aggregate the whole of Flickr and hadn't thought about "You know, there's cultural differences. I wonder..." And we just visualized it, and this doesn't really tell you anything except there's something going on. Something's going on.

So we followed this up, and we did a survey. We contacted people on Flickr who were friends of friends of friends, using a snowball method. We phoned people where we couldn't actually go and do field interviews, and talked to people in Scandinavia or in the U.K., and just started to find out – we recorded everything that people said and did a discourse analysis around people's awareness of being public or private.

And it turned out that people in the U.K. and Scandinavia were much more likely to talk about things like you never know who's looking; data privacy is a really important issue. It's not just about keeping yourself safe; it's about putting things up that I don't want to have offend anybody else.

Folks we talked to in the Bay Area were like, "Yeah, I don't care. Just stick it up there. It'll be fine. Nobody's gonna be interested in me." And I mean, it was just really fascinating.

The other thing we found, and we did this – we did a data check for this as well for self-reported age and the number of people you knew. As you get older, you tend to have more things private. But it turned out that most people weren't worried about themselves; they were like, "Well, there's pictures of my kids on there now. And so I would've had everything public for me." Now, this might not surprise any of us, but it was not in the data as they were just laid out; we had to go and ask people. "We bought a house. I don't wanna show everybody everything."

People who had more than 12 friends were more likely to have more things public. People who had fewer than 3 friends were more likely to have more things public. People in the middle tended to have smaller groups, and they tended to keep more things private.

Now, these numbers are all over the place now, but it was just an interesting set of things that led us to design a series of access-control privilege – things that you could do with pictures, access control on pictures and so forth, and this was before sets could be private, which could have led to a series of patents and so forth. As far as I'm aware, none of those have actually come out, which is another story about doing design, 'cause there's a whole other context of how things get taken up in the business world. But I think that it's an illustration of how we understand a lot more deeply that cultural difference matters.

So I now wanna talk about trust. I'm staying with sort of emotion and one of my favorite topics, dating. I did this work with Elizabeth Goodman, who has worked with me a few times as an intern; she's a student at UC Berkeley. And we studied dating, and we were really interested – the person who was the product manager at the time invited us to come and just think about dating.

And so at that time, I can't remember how many, but I just looked up some numbers for you a couple days ago. There's about 94.9 million Americans, 31 percent of Americans, people here have been online dating. People seldom admit it these days. I don't know why, but they have. Twenty million people a month visit online dating services. So it's big business, big numbers.

So what's going on? How are those people feeling? I've got scads of data on this, but I'm gonna just go quick.

I'm interested in the metrics, remember? Page views, etc., etc., data mining. We did data mining. We did comparative and competitive site analysis. We did a survey of 600 people. We followed up with phone interviews with about 50 people, and then we went out and did field interviews with – I think it ended up being about 26 people. And we asked them if we could interview them at home or go to their favorite first-date location.

And we focused on people who are in their 30s, mostly, and who have other priorities. And the reason for that – there were two reasons. One is that the demographic for Yahoo Personals tend to skew a little older. Most people who want a quick hookup go to PlentyofFish or other places. There are many other places out there. I can give you a list of 'em. If anyone's interested, tell me your proclivities and I will make some recommendations.

*[Audience laughter]*

We also – I'm personally fascinated by how people manage time and space and build relationships with other people, so I wanted people who were sort of serious about finding somebody and had to navigate schedules and calendars.

The thing we found, out of all of these numbers – oh, I've got a little statistic for you, a little tidbit for you. So when we were doing the data mining, it turns out that blokes tend to go online, and their strategy is "You know, those 200 women, they might be interested in me. I'm sending every single one of them a wink. Pfft." Women are like, "Hmm, he looks nice. What do you think? Should I send him a message?" So the women come home from work and they're, like, looking at their results, and they're like, "Holy – no. No way. I can't see this. I can't see the wood for the trees here." And the guys are like, "Where's the action? Why is no one getting back to me?"

Now, those are very different strategies that may well be rooted in a particular kind of dating strategy that we might say would be gendered or cultured. But it has a very significant consequence for the back-end algorithms of how you match and present and make sure that people feel like they're getting a service from your service, okay? It really matters.

And aside from that tidbit, I'm gonna talk about anxiety. Remember, I'm a psychologist. So these forms. I'm sure many of you have filled out these forms. It's like, how do you

turn yourself into a list of attributes? Remember the faces to different public whatever? When I'm with my triathlete friend, I am an unfit slob, right? Unfit slob. I come home, unfit slob. Where's that?

*[Audience laughter]*

But yesterday I spent the day with my beer-swilling British friend who I think the last time he exercised was possibly – was not this millennium. And I was like, "I am rockin' sporty, I'm super-sexy, and I like to go out, and I don't drink much." Right? So there's this huge anxiety and this presentation of self which is really difficult. Now, we need it for the algorithms, right? 'Cause that's how our algorithms work.

But people are looking at this, and then they're like, "Well, I didn't get any results. Well, I'll just pretend I'm actually 39, 'cause maybe the algorithm will work better for me that way." And then you show up. You show up on your first date, and everybody looks – "You said you were sporty, and you're a beer-swilling slob. And you said you were 39." It's like, "I wasn't lying to you. I wasn't lying to you; I was lying to the algorithm."

*[Audience laughter]*

And I just think that that's an interesting – because we think of us as a service provider putting two people together who want a relationship, and we think we're invisible. We're not. People are not that disinterested. They are having a conversation with us and with the algorithms. I think we were talking earlier about personalization, and if you wanna have a different result from Google, do something different. That's a relationship with an algorithm.

There's also people here who said to us, "Do you people, like, read my messages? Because, you know, I didn't get this guy recommended yesterday, but he's showing up today. And I only put yesterday – I said that I like to play mandolin, and he showed up. Did you read that?" No. I can tell you, we've got a lot of users. We're not reading every message. But it's an interesting way of understanding the world and building a relationship with this world.

One other thing we found was this notion of intensities of effort. So one of the little things you can have is, you drop down; you say, "I want to only date somebody who is approximately three feet away from me" all the way up to "the globe." And it turned out that people – and we had a sort of model that casual daters wouldn't put a lot of effort in, but serious daters would.

And actually, we talked to people who – one person in particular who really wants a relationship and will not go further than the corner, because it's like, "If they don't like me as I am, they don't – not involved." Another person who was completely – "I'm totally casual, but I'm gonna fly to D.C. this weekend to meet this guy."

And I mean, I'm not saying that that's the right answer either. What I'm saying is that it's more nuanced than that set of assumptions around behavior and what it has as meaning for those individuals. And so one of the things we were really interested in just like breaking out – so what does these sites do? What is their service? Well, they work here. Make a profile, match and select. Highly computational.

What we don't do is have an explicit conversation or provide tools to allow people to have explicit conversations with us and with each other. A date diary might be one. A calendar of dating might be another. Recommending certain kinds of events that you might like to do would be another, where we see whether you like them or not, and if you don't, then we have a different picture of you. There are lots of ways to do this, and we designed a whole slew of them.

But the one I wanna just talk about right now is this idea of planning the date, 'cause one of the things we found really interesting is, okay, we've matched you up; now fly free, help yourselves, find yourselves, whatever. Now, we have a set of services at Yahoo, like maps and recommendations for things to do. And so what Liz and I thought was, well, why don't we bring together maps and recommendations from various sources in a mash-up. So now you found somebody that you want to date; let's help you plan that first date.

Now, this came specifically from an observation that people said, you know, "I'm on the phone, and then he said this" or "then she said that." And then we sent an e-mail, and now he's sent me four e-mails, and I don't have to time to –" So we haven't even met yet, and we're like, is this guy – and he's thinking, "I really wanna give her lots of choices," and she's thinking, "Will he stop already? I don't know."

And, you know, it was actually not even that people – they're emotional and anxious already, right? So remember that I talked about real-time communication? I was like, well, why don't we let them plan it together? Why don't we just say, "Okay, here you are. On the left, you've got the results from Yahoo Locals. You've put something in. Down here you've got a chat space." You can see I'm never gonna get a date, 'cause I put in the stinking rose.

*[Audience laughter]*

It's gonna end instantly. *[Laughter]* That is a live chat space where you can literally go to a point on the map, you click on it, and it opens up, and I can leave a little note there. So if you are online right now, you can see me type, and I can go, "Look, this is where I think we should go," which is like pointing to a page. If you're not online, it stays there as a little bookmark or a little notelet for you to look at later. And it's just sort of step through some of these.

We have a picture-in-picture on the map, and this is really important because if you let me see where you're searching – so imagine we're both, real time, sharing this live map, right? In real time. We're seeing the same thing. We've got chat space going. You take

off to Berkeley while I'm still in San Francisco, 'cause they're loosely coupled, these maps. You're not controlling it. It's loosely coupled.

I see a picture-in-picture of the fact that you've hopped off to Berkeley, so I might get a clue without having to explicitly ask you, "Ooh, maybe you wanna be in Berkeley." 'Cause a lot of human relationships are about sending subtle cues through our behavior, which are completely missing when you're like, "Do you wanna go to Berkeley or what?" You know? I didn't have to say anything. I just went to Berkeley on the map, and you saw me do that.

The live chat – oh, British food. I'm still not gonna get a date.

*[Audience laughter]*

This is a live link, because when I made that thing up there, the chat space, the chat from there also appears here in the log with the live link back. What we tried to do was give lots of hyperlinks that you could move between different communication spaces.

You've got your contacts – I'm gonna come back to contacts in a second – got your search results, and you've got your bundled favorites. So imagine that I have decided the perfect date is gonna be five or six little things that we do. I haven't invited you yet. So I say, "We're gonna go to Fisherman's Wharf, and then we're gonna go and eat fish and chips, and then we're gonna go and watch a film about fish and chips." And I send that off to you, and I bundle it all up, and I send it off, and I say, *[Imitates French accent]* "I planned the day. Would you like to join me?" All right, so you come in. I don't know why I got French. That was very French. It's 'cause the British are actually jealous of the French. *[Laughter]*

But, you know, "I've planned my day, and I'd love you to come and join me." And so you come in, and you have a look, and actually, you've decided that because of my fish and chips fetish, you're really not interested in me. No worry, 'cause I've bundled my favorites and so I can go, "So, Johnny, would you like to come on my date?"

*[Audience laughter]*

So you've bundled it all around, right? And I kinda figured there was a whole service model where we could get the Don Juans or Don Juanitas of the world to make us the ideal date and bundle them up and sell them, and then import them to map chat and look like we're really cool.

The other thing we did was, you can make the searches that you're doing – remember loosely coupled? You can make the searches that you're doing private or public. So I'm over here searching away fish and chips, or steak. And you're over there, and I look at your searches, which you've let me see. But remember, it's a subtle cue. You don't know that I'm looking, but it is available. And you've put "vegan" in. That might give me a

clue without having to say, "Do you eat meat?" and then the vegan going, "Oh, no. No way, I can't date you." So I can sort of subtly start searching for vegan to impress you.

*[Audience laughter]*

It doesn't have to be on; you can turn it off. I've told you about the picture-in-picture zoom.

Anyway, so it all comes together. There it is. And what I wanna say is that that back-end algorithm stuff – I work for a company that's interested in advertising. I personally shop constantly, so advertising is fine for me as long as it's not cellulite or yellow teeth. Anything else, send it my way; I might be interested.

So one of the things that we did was we actually mined what was being chatted about and what was being selected, and we've got your location. Now, remember, this is a prototype, so we instrumented it, and anybody who used it had signed up to let us use the data 'cause they knew what we were going to do. One would have to be more careful if this were actually put out there for real. But we started to mine what people were talking about and where they were talking about it, and we just did this sort of social opinion mining and made recommendations.

Now, why this matters is because I might be talking to my work friends about a day out for work, and the things I'm gonna be looking for might be very different. And so that conversation for a social group would require a different set of recommendations for ads than if I'm with my potential date. So I don't want the same things, like, you know, T.G.I. Friday's or whatever. I want French Laundry so that I'm, like, you know, getting posh things.

And so what we're trying to do here is make those recommendations of value to you – not personalization, but a value to you in the social context you currently have, with the current face you have on. Because if I talk to Ben – fellow Brit – about Wimbledon, he probably – he would think, "Does she mean the tube station, or does she mean tennis?" If I talk to my American friends about Wimbledon, they know I mean tennis because there's no reason why I'd be talking to them about the tube station. So different recommendations for different social faces, for ambiguous words.

We actually tested this out, and the algorithms are – our back-end stuff is not – 'cause it's a prototype – not completely right. But I remember writing somebody, "Yeah, I will do that. That's excellent." And all of the recommendations I got were for last will and testament. So you have to be a little careful how you implement that. That's the prototype.

One last project. We have a few minutes here. This notion of synchronous real time and how that buys you a different emotional relationship to each other, that you're doing something together, sharing an experience. We've talked about sharing videos before. And a lot of this is like, "Oh, I don't know that you're there at the same time." So if I

knew that you were watching at the same time, maybe I'd chat with you about it. 'Cause things are separate. We've certainly got social elements, but you could be there anytime.

So we built something. This is the brainchild of Ayman Shamma, who works with me. And we're all obsessed with this same kind of synchronous get people talking to each other. It's called Zync. It is available with Instant Messenger 9. I think it's not even a plugin now; I think you just get it.

And what it lets you do is it lets you drop a URL to a video into an IM, and you can watch it at the same time as me. So here's this dialogue. There's the link. You click on it, and basically a button says "Watch with me," and then it opens, and I'm watching at the same time as you.

And we talked to a few of the engineers about this. They said, "Yeah, but what about control?" And I said, "Let the social controls take place here. If you stop it, I've gotta type out, 'Oy, what you doing? Why are you doing that?'" Right? If it got a little out of sync, which it can do with little lags – "Hey, hang on a minute." If I stop it, if I start it, if I scrub it – we can talk about making that shared experience a shared experience.

So let me see if this works. So you can see here, we're sort of like just chatting away. And what we did with this – we put it out. We tried it with a bunch of people, and we really kind of cast it as the insight that, if you're sitting next to somebody on the sofa, you're gonna be chatting in real time about something.

So what we're trying to create here is that feeling of being on the sofa with somebody even when you're far away. And looks like it's just stopped. Which is my video, not it. Hello. Any idea why this might be doing this? Well, poo.

*[Audience laughter]*

Well, what would have happened – I'm gonna perform it for you now –

*[Audience laughter]*

– is there's a screen here, and it was very loud. And it was an ad, actually. But it was two people arguing about whether they'd been to a place or not, and sharing it in real time.

And so back to the thing about instrumentation. We had all of these things. We had all of these data. Remember the meaning, feeling, connection, long-term value? And we had the data, so this was – the first part of that was released over there, and it's gone up here, and we've got loads of these, and people like that. And we have about 400 million people a month. That right? No, 400,000 people, not million. Apologies. Four hundred thousand people a month, half a million using this.

But we wanted to instrument for experience and feeling, not just being present and using. So we've recorded the type of event. We've got an anonymous hash which identifies senders and receivers without any information about them at all. We have a URL to the shared video, time stamps. We've got the player time, number of characters and the number of words typed. We do not keep chat, but we can see how much you've chatted. Emoticons, we can keep because apparently that's okay. I love emoticons 'cause, actually, it tells you a lot.

So here we've visualized percentage of actions over time, where it's watching, chatting, playing, pausing, going back, rewind. Here we've got this really interesting "what's happening," so this is a chat activity. Stuff happening, stuff happening. The first time we visualized this, we stopped it there, and we were like, "Oh, god, look at that. Nobody's doing anything. It's dreadful. And what's this stupid spike over here?" The stupid spike over there turns out to be the meaning. That's where people start talking.

So remember the shadows and séances I talked about? If you're on the other side and you think engagement is about clicks, and you haven't got any clicks – "Oh, no. Nobody's engaged with our product." If you wait long enough, to the end of the video, you see everybody starts talking. If I'm really engaged in a movie, and you're sitting next to me rabbiting at me on the sofa, I'm gonna go "Shut up."

*[Audience laughter]*

"Talk to me later."

So the instrumentation and the model of engagement here came from the understanding of the meaning and the practice of what it means to co-view something, to collaboratively view something.

We also looked at reciprocity, and we found that when it's in real time like this, much more reciprocation occurs. And I have an explanation for that, which is if you send me a video, a link in e-mail, I can ignore it if it is another one of those cat videos. And I can go, "Oh, sorry, my e-mail was so full I didn't see it." If you're online with me and we're chatting about something and "I've got another cat video for you." Like, "Oh, lord, I'm gonna have to watch it," because I can't tell you that I can't stand those cat videos.

So there's a social obligation and a relationship between people that we're facilitating here that I think means that you sent me one of your cat videos, I am so sending you a dog video. My dog video will eat your cat video.

*[Audience laughter]*

So what we also did was a content analysis, and we looked at categories like nonprofit, technology, and shows, and everybody was sharing more, but mostly it's music videos that people are sharing, short snippet music videos. And we've got a project this summer

which is starting to look at music and comedy and how they get shared and at what temporal frames and why. So that's just a hoof in that work now.

And so this is the project I told you about right at the beginning, and this is the one with the DJs. I'm gonna see if this video plays, because I just want you to watch what she's doing while she's doing this sort of asynchronous/synchronous trying to connect. And this is DJ Backside, who is awesome.

*[Sound effects playing]*

That's not very exciting, is it? She's actually doing hip-hop stuff. Maybe I can do that for you. *[Laughter]* I've got the wrong clothes. Oh, I'm sorry, the videos don't seem to be working, but what I want you to take away from this – I'm gonna take that horrible noise off.

What she does is, she's typing here, and then she turns at some point and looks at the audience and asks them something. Then she gets a question, and she's doing this, and then she turns around and she answers the question and goes back. But the eye gaze – and she's going from here to here and engaging people. You asked a question a couple of minutes ago: "Hey, you, you're down there." So she can see these. "Hey, welcome back, it was so nice to have you here."

So when I was doing the participant observation and I was watching a chat called DJ Dulo, who's from Oakland, and I was sitting here, boring, dull nerd in the corner, just like taking my notes. And he goes, "Ze Liz, yo." I was like *[Imitates gasping]*. And suddenly I felt like all of these other people could see me, and he could see me, and there was a really visceral feeling of being part of something. And terrified, actually, 'cause I was so uncool. So what do I do next time I go on? I wear my nicer T-shirt, a little cap backwards.

*[Audience laughter]*

'Cause I'm part of the group. But it was just a really interesting exercise, and the gathering of the data, which coupled with what was happening at the back end, in terms of the database and the looks and the temporal rhythms of when people come in and out, really sort of gave us a feeling for where this real-time sharing, real-time Web is going. And I'm personally super-excited because this idea that you can understand what people are doing by clicks is just not true, right? You really have to see how people are engaging with each other. So I think this sorta like brings this morning's talk all the way folded back round. And this emotional connection is really important.

Words are tricky. They're not users, groups, and networks; they're people who may be part of those models. Methods can be myopic, so triangulate those methods and keep inventing new methods, and this is the audience where that's going to happen. There's the numbers, but there's the details. Qualitative and quantitative are the same thing. It

depends on how you interpret and write up what you gather. And always question your questions. Those are my takeaways.

I'm up here, and I'm very privileged to be here, so thank you again. But these are all of the folks with whom I've worked, and thanks again to the workshop folks yesterday. And enjoy your lunch, and I'd be happy to chat.

*[End of Audio]*