Day 1, April 15, 2016: Research Panel 4:45-6:00 p.m.

Chair & Discussant: Amy Schmitz Weiss, Associate Professor, San Diego State University — ISOJ Research Chair

- James Breiner, University of Navarra (Spain): *The Economics* of Accountability Journalism: What Price is Right?
- Susan McGregor and Elizabeth Ann Watkins, Columbia University: Security by Obscurity: Journalists' Mental Models of Information Security
- Leonard Witt, Farooq Kperogi, Claire Bohrer, and Solomon Negash, Kennesaw University and Gwenette Writer Sinclair, CEO/Owner, 1Virtual World Development: Journalism: How One University Used Virtual Worlds to Tell True Stories
- Jeremy Littau, Lehigh University and Mi Rosie Jahng, Hope College: Interactivity, Social Presence, and Journalistic Use of Twitter

James Breiner: OK. We all know that there's been a big decline in the supply of high quality, accountability journalism or investigative journalism or watchdog journalism, whatever you want to call it. And this can be looked at from a perspective of an economist as being a pricing problem. This kind of journalism is costly as we heard today. It's never been priced in a true market, a true economic market, because it's always been subsidized by advertising, or in some countries, it's been subsidized by tax money.

So, is it a public good, like street lights, and should the public sector fund it? Should government fund it? Or, is it really a commercial product? And publishers and the government and the public themselves are all really kind of negotiating in the marketplace right now to set a price for this journalism.

I'm going to come at this from two sides. I was a reporter, editor, investigative team leader for many years. And then I went to the dark side as a publisher, yeah, where I was in charge of advertising [and] marketing. And so I've seen this issue from both sides. You could make a strong economic argument for investigative journalism by saying it has a great return on investment. Dave Kaplan of the Global Investigative Journalism Network has made precisely that argument by saying that this kind of journalism has resulted in billions of recovered tax money and also from fines from wrongdoers.

So the question is, you know, who's going to pay for this? And how much will they pay for it? So this was from the good old days when there was a monopoly in newspaper, and the ads in the newspaper paid for these big staffs where you could have investigative journalism done, but that model

has gone away and now this is the way that people get news—on their mobile devices. And more importantly, this is where the advertising has gone that used to support watchdog journalism.

This slide really kind of captures the whole argument, I think. That ad was delivered by a service that knows that this guy doesn't have a shoe. And it knows that he doesn't have a shoe because he's got a smartphone in his pocket. So it knows who he is, and it knows that he posted on Facebook that he's missing a shoe, and it knows that he searched on Google for a good place to buy shoes. And so that advertising is not in the newspaper that's in his lap, because these two know more about this guy than the newspaper does. So they dominate global advertising. Mobile advertising, they've got more than half. And these two combined have about 40% of all digital advertising globally.

So part of what you use to establish a price is metrics. And you heard a number of people today say [that with] internet metrics, there's lots of flaws. There's lots of problems. Tony Haile of ChartBeat wrote a very famous article in Time Magazine, "Everything you think you know about the web is wrong." And one of the main things [that] is wrong is page views. Page views really are kind of a meaningless metric. Everybody uses them. We all use them. But out of two-billion visits to hundreds of websites, 55% of the visits lasted less than 15 seconds. This is from his company's surveys of people. His clients. Hundreds of his clients.

And Pew Research backs him up. Pew Research found that the average—that only 12% of the users of the New York Times or the visitors to the New York Times spend more than two minutes a day. Only 12% of the New York Times users spend more than two minutes a day. How much time are they spending on Facebook? Then they've got digital media face, other kinds of problems—piracy, bots, ad blockers. You heard a lot about that today.

But there's good news. As we heard, the International Consortium of Investigative Journalist did this great investigation of Swiss leaks. Journalists from 45 countries. They found that a Swiss Bank, HSBC, was helping its clients commit crimes, illegal acts.

And then the same organization, ICIJ, as we all know, followed up with the Panama papers. And they used this concept of radical sharing among investigative journalists. And the response of the public has been huge as we heard. Millions of page views, so obviously there's an audience for investigative journalism. The public appreciates it—really appreciates it—when it's well done and when it's relevant. So there is a marketplace.

So, how much will the public pay? Well, depends on where you live. If you look at the top line, that's Finland. And if you change this to dollars, they are spending about \$140 per person, per year—at least, that was in 2008—to fund journalism, to fund the media. If you look at Great Britain down there,

their total is about \$90 per person, per year, to subsidize journalism. And that's basically a price. And if you look at the bottom there, it's the United States. And in the United States, we commit about \$6 a year per person, and that includes postal rate subsidies, tax breaks on single copy sales, and also.... What else? Oh, that's public TV and public radio too. So you can see how in our culture how we value or what the price is that we pay on public subsidies for journalism. As Joel was saying, every culture values it differently.

And now we have something called distributed content, which you heard a lot about today. The Wall Street Journal is on Snapchat. I mean, need we say more? Wall Street Journal and all the big media have decided that they are going in for distributed content with Facebook, Google, Snapchat, Instagram, Apple News, etc. They're going for scale. They're going for scale. And they're going to get faster load times. They're going to get a little bit of money. It extends their reach to new audiences, but it dilutes the importance of their websites. There's this disconnect between their brand and their content. And that's the price that they're paying.

So you can go for scale, and you can go for eyeballs, like BuzzFeed is doing, or you can go for engagement, relationships, and create community, which is what the Texas Tribune is doing. And on the local level, as we heard today, local investigative journalism does not scale. It does not scale. You can't use that model. You have to go for relationships, create community, not eyeballs.

And a great example of that is ElDiario.es in Spain. They managed to get 14,500 people to pay \$66 a year for a free product. And their value proposition is, "We're editorially independent. We're free from the influence of all the big business interests and political parties." And that represents \$800,000 for them, which is a significant part of their budget. But it's also interesting that it's only 1% of their audience—or actually less than 1%. So you can make a business out of monetizing a very small part of your total audience.

The Correspondent in Holland, similar. They had a big crowdfunding. Now they have 40,000 people paying also \$66 a year. And their value proposition is no ads. Also, editorial independence. And it's investigative journalism.

MalaysiaKini in Malaysia launched in 1999. They publish in four languages, but they only charge a subscription price to the English users. So they get nine million visitors a month, but again, only a very small part of their audience is paying for the online news, but it's enough to help them support their operation.

Then we have this great small group of investigative journalists, data journalists, in Mexico. It's called Quién Compró. And Quién Compró does exposes on the expenses of senators and congress. And they syndicate their stuff. They syndicate it to bigger media organizations. So the bigger media

organizations which aren't doing this kind of investigative journalism, they value it enough to pay them—sometimes.

So, should you all charge for online news? Well, the Reuters Study, 2015 study, Reuters Institute, they asked people in four countries, you know, "Would you pay for digital news at any price?" And the bad news is that anywhere from two-thirds to three-fourths said, "We wouldn't pay for digital news at any price." But what's kind of interesting is when you dig into these numbers a little bit, you can see that anywhere from 10-25% of the people polled said, "We would pay \$2.50-\$5.00 a month," relatively speaking, in their various countries, for digital news. And more importantly, in all the developed countries, 10% of the people polled are paying for digital news.

Piano Media is this paywall organization that used to be Press Plus in the U.S. And they combined with Piano. And then they merged with Tiny Pass. And now they represent 1,200 news organizations on four continents. And just taking their share of the paywall revenue, they made \$40-million last year.

How much are these users paying? What's the price? Not really clear. If you look at some of these pay models or the packages that, for example, the Times and the Wall Street Journal—I'm a subscriber to both of these—when they offer you a print and a digital package, you pay so much for this. And then if you want the iPad—if you want the iPad and the iPhone, you know, there's different packages. They try to mix and match. It's actually very confusing. But what they want is, they want you to pay for the digital like you used to pay for the print, and they want you to get the print, so that they can claim that for their advertisers.

And finally, the last example is Blendle, which has been very successful in Germany and Holland. They have 600 users. This is the iTunes for news, where you just pay per article. Around 20 cents to a dollar per article. Their pitch in the U.S.—they just launched in the U.S. like two weeks ago or something—has been no ads, no clickbait. And they've gotten a big investment from the New York Times and Axel Springer.

So, who's going to pay for accountability journalism? And how much are they going to pay? Well, one solution is public subsidies as we saw. Another is nonprofits, grants, local media for public radio, the relationship model, which is one kind of pricing method, the subscription model, paywalls, and Blendle.

So people *will* pay for digital news. So there's a commercial.... At the moment, we have a commercial solution and we have the public sector, tax-funded solution. And they both seem to be working. And right now, the marketplace is trying to figure out, what is the right price? So the right price, sometimes it isn't enough.

And if you want to talk more about that, why don't you come to Pamplona and we'll talk it over? [laughter]

[Applause.]

Susan McGregor: Hi, everyone. Thank you very much. I know we're at the end of a really interesting day here. So my name is Susan McGregor. I'm an assistant professor at Columbia Journalism School. I also have the great fortune to work with Emily Bell at the Tow Center for Digital Journalism, whom you all saw host the panel earlier today.

This is some work I did with Elizabeth Anne Watkins, who a first year PhD student at Columbia Journalism School. And we wanted to share with you our findings about information security for journalists. So the title of the paper is *Security by Obscurity*, which any of you who may have a background or know any computer science folks, [it] has special meaning in that community. We'll talk about that a little bit later.

But basically, our goal with this work was to understand kind of what's going on with information security with journalists and journalistic organizations. So we all remember the Snowden revelations. Obviously, today, the primary topic is the Panama Papers. But this is almost three years ago now. It was June of 2013 that the Snowden revelations took place and, of course, really changed the landscape for the way that a lot journalists and the public at large was thinking about the privacy and protection of their communications.

We also know about the Sony hack, which I think produced a different kind of anxiety, maybe in organizations beyond journalism organizations. I remember speaking.... I've spoken with a lot of people who have sort of said just, "How do you run an organization after something like that, where a lot of communications that were taking place that maybe people thought were private have just been exposed to the world in very embarrassing and damaging ways?"

And of course, the Gawker lawsuit in which just several months ago ordered that, as part of the evidence in this lawsuit, things like the computers, the smartphones, so basically chat histories, email histories of people at Gawker Media could be submitted as evidence.

I think that possibly given that this is an international audience, I think some of these things are maybe not so surprising or not so new, but what's interesting—what we found interesting was it doesn't seem like much has changed. So while it seems like there's been this big revelation about, you know, how little privacy we actually enjoy in our communications as journalists [and] how that can challenge our protection of sources, which of course is a major issue for news organizations all over the world and journalists all over the world, it doesn't seem like journalists are doing much differently.

So this comes from research that actually Tow had the opportunity to collaborate with the Pew Center on. And what they did about two years ago is they asked mostly investigative journalists, actually, so this was a group of journalists that, one, perhaps the first that we would expect to be taking extra precautions with their communications with sources in order to protect those sources and protect their stories.

And what was discovered was that, you know, about half of all of the journalists interviewed weren't using eight of the most common information security tools that are kind of out in the world—the ones that have been around the longest that are known the best. Less than 40% of them reported changing their methods of communicating with sources since the Snowden revelations. So for the most part, it was sort of business as usual *even though* the majority of them believe that the government was surveilling their communications in some way.

Similarly, you know, some of the concerns that were high on the list for these journalists, obviously, as has been the case for the industry for quite a long time, decreasing newsroom resources was number one in most cases, but number two was legal actions against journalists, right? And so kind of the, you know, the repercussions for journalistic sources in the last several years, obviously here in the U.S., the Obama administration has, you know, gained the mantel of having had the most leaked prosecutions within its administrations than in all previous presidential administrations combined.

Obviously in the U.S., you know, we have some of the most robust press freedom laws. And as Joel Simon noted earlier, we also have generally very robust shield laws for journalists and their sources. But the Snowden revelations is one of the things that it evidenced—was that those really aren't enough.

So the question that we had was, why haven't things changed more? And one of the ways that we decided to approach this was through the idea of mental models. So mental models is essentially a concept that says that when we think about doing things in the world—and they can be very specific concrete things or they can be very abstract things—we kind of have these mental systems that we can, you know, kind of put—almost like mental computers that we can put inputs into. And we work them through that process that we have—this mental model—and then we get outputs. And that helps us make decisions about what to do.

So one of the great scholars on mental models is a very well-known cognitive psychologist named Donald Norman. Many of you may know his work. He's written a lot of great books. This image is actually, I believe, referred to as the *masochist coffeepot* and is the cover of one of his better-known books, *The Design of Everyday Things.* And it's a great illustration of a mental model, because if you imagine pouring coffee, trying to pour coffee with this coffee pot, it becomes immediately apparent to most of us that you would

end up pouring hot coffee onto yourself. So Norman talks about mental models as, "What people really have in their heads and guides their use of things." Right? It's how we think and reason about the world and make decisions about systems with which we interact.

So this seemed like a good way to think about it. There's seems to be a disconnect between what we know are the risks that journalists face, and their sources face, but what journalists are actually doing when it comes to information security. So maybe if we can understand how they're thinking about information security, how journalists are actually thinking about these issues and reasoning about them, it will help us understand where that disconnect comes from.

And so we conducted in-depth, semi-structured interviews—so not dissimilar to the kind of journalistic interviews that many of us do on a regular basis with journalists and editors. So we wanted to kind of build on some previous research to get an idea of also not just how individual journalists think about these issues, but many journalists work in organizations, and how the attitudes of their editors or supervisors played into perhaps how they thought about these things.

And we basically used a process whereby you kind of look very closely at the interviews, pay very close attention to the language that people use, and use that to draw out themes. So again, very similar to what we do in kind of a journalistic process.

So two things came out of this. One was that our participants very strongly related the need [for] information security to the specific beat geography or story that they were working on. So they said, "Well, it depends on where you work and the kind of thing that you're doing." And also that meeting face-to-face was the way to address this.

So these are just a few quotes from the participants. I'll let you read them, but the idea is that, basically, there's this idea that it depends on how sensitive the material is [and] it depends on how sensitive the source is. You know, if you're on a national security beat, you know, maybe you need to worry about it, but otherwise, not really an issue, or if you think somebody is actively spying on you.

And we gave this concept the term *security by obscurity*. And the sense that we got was the journalists perceived that if they weren't working on topics that were controversial or of interest to powerful actors, then they didn't really need to worry about it. They don't really have an information security risk. And that the primary way that they could mitigate that risk was through face-to-face meetings.

In computer security, literature security, security by obscurity gets a really bad wrap. Because the idea is basically that you're counting on someone not

discovering what you're doing, how you're doing your security procedure for security. And of course, that works until someone figures it out. And in a sense, that's the case that we found here, too. So there's a huge limit to this, because the reality is that actually most security breaches are not the result of a targeted attack. So the fact is that a lot of security compromises come through basic phishing and malware, very unsexy, doesn't have to be *you* that the person is after.

If you're affiliated with a journalism organization, you are not obscure. OK? A lot of us, we may think, oh, I don't work for a large organization, I'm not publishing anything that's that important. Why would anybody be interested in me? The reality is that for the rest of the world, if you a journalist, you are a prominent figure. If you have an @newsorganization.com email address, you are necessarily a target.

Why does this model persist though? I mean, if we take this into account, why is it the journalists are thinking that way? Journalists are smart people. You know, they are not just trying to shirk this entirely. Well, what we found was that one of the reasons—one of the key things was that we found that a lot of journalists don't really have a clear understanding of the digital communication systems that they are using.

So Donald Norman would call this a systems model. How does the thing that I'm interacting with work? And a lot of the people that we spoke to were very uncertain about that. The other thing was that without those clear systems models, the easiest thing to do was just say, "You know what? Skip it. Let's talk in person." Obviously, this is limiting, but it was less costly and more effective. It was a more efficient choice than either learning about the systems models or just foregoing the communication altogether.

So this is a quote from one participant about their use of third-party storage. And they say, "I've tried to reduce my Dropbox usage, so I've been using USB-stick, which I actually have no idea how safe that is. It seems more safe." This is another quote from someone who was trying to have a sensitive conversation with another manager. And even though the organization has some information security tools available, that person wasn't trained on them, and at the end, the easiest thing to do was simply go and talk to them.

So the question [is] about, how can we move on from that? How can we do things that will actually bring us past this so that we can leverage all of the amazing tools that technology gives us to be able to communicate with sources? I mean, this is an international journalism conference, right? If we were to forego electronic communication with sources, it would sharply narrow the kind of journalism that we're able to do. There's an enormous benefit to having these tools, but we need to be able to use them effectively.

And so the main thing—sort of the main recommendation out of this is that we need to improve journalists' understanding of how digital communication tools work, so that they can be confident in making decisions that pertain to the information security of their communications. So that they don't have to say, "Well, I think this seems more safe," or, "I think this will help." They actually can use a clear systems model that's to say, "I will make this choice because I know it has this benefit. I will use this tool because it offers this protection, and that's the protection that I need in this case."

So if we deal with those systems models and engage in direct educational efforts, there seems to be a lot of promise here. This is somewhat an edited quote from one of our participants, who said, "You know what?" It was basically talking about two-factor authentication. And again, I'll let you read this for yourselves, but basically, you know, [it says], "I have enormous confidence in journalists. The job of journalist is to learn about new things all the time and make sense of them and communicate them to the public."

And if that kind of stance is taken with journalists themselves, which is not to say security is too complicated, or security is too hard, or it's too expensive, but to say, you know, if we clearly explain how these security mechanisms fit into your work, how they protect your work, your colleague's work and your sources, then most of the time you will be able to get journalists on board.

So thank you very much for your time.

[Applause.]

Leonard Witt: So what we're going to do is start out with a little video that we did to give you an overview of our project.

[Video plays.]

Leonard Witt: Hi. My name is Leonard Witt. I'm the executive director of the Center for Sustainable Journalism here at Kennesaw State University. The ONA, the Online News Association, gave us a grant for their Challenge Fund for Innovation in Journalism Education. And our challenge was to tell real youth justice journalism stories, but to tell those stories in virtual worlds just like here.

Gwenette Writer Sinclair: And I am Gwenette Writer Sinclair. I am going to show you how we produced the stories inworld by training the interns inworld in avatar and immersive journalism skills.

Christina Guerra: I'm Christina Guerra, the student video editor. And I'm going to show you how I took these inworld stories and edited then into mini-documentaries called machinimas.

Leonard Witt: 11 students from across the campus and across disciplines joined the project.

Students: I'm Camille Moore. I'm Claire Bohrer. I'm Jackson Walsh. I'm Ariel Greenway.

Altogether: And we are those students.

Christina Guerra: The interns created their JJIE virtual world accounts and came inworld to customize their avatars. They worked their way through inworld exercises that taught them both immersive journalism and virtual world avatar skills so they would be ready to produce machinima.

Leonard Witt: We studied what other professionals were doing also in the immersive virtual world journalism space.

Female Avatar: Can't see him. I don't want to go out there. I don't know what's going on.

Male Avatar: You just call the cops.

Female Avatar: They're coming.

Student: We started researching and reporting for our own story, bringing town of documents, and interviewing people in the juvenile justice system, like attorney Steve Reba at the Bartow Law Clinic at Emory University.

Steve Reba: Everybody thinks that if you're under the age of 18 you're going to be in juvenile court, but the reality is, in Georgia, the age of criminal responsibility is 17. So in Georgia, once you turn 17, no matter what offense you commit, you're in adult court.

Student: Our machinima team used the journalist's research to build inworld sets and avatars and then turn them into a machinima.

Leonard Witt: We're also looking at other techniques like Draxtor Despress's use of having real people mesh together with virtual world storytelling.

Student: Here are some of our machinimas.

Avatar Judge: You are all charged with the offense of armed robbery. The indictment says that on the 4th of January 1999....

Avatar Witness: He burst in and asked me just, "What's your f-ing name?" And I said, "What?" And all I felt was boom!

Student: Want to learn more about this great project, see our website.

[End of video.]

Leonard Witt: OK. So, Claire, maybe you can talk a little bit about what that program is like. We had 11 interns, etc.

Claire Bohrer: Yeah. So I'm Claire Bohrer. I was one of the student journalists for the project. So as student interns in the JJIA Virtual World Project, we met every Wednesday morning for about two-to-three hours. And we just talked about the progress of the project and go together. And aside from those two-to-three hours every Wednesday morning, we had to spend 12 hours outside just working on the project.

And so since all of us were from difference disciplines, we really didn't know much about immersive journalism or virtual worlds. So the first two or three weeks were spent on really familiarizing ourselves with immersive journalism and virtual worlds. And then eventually, we turned our focus to journalism.

So we came across one story in particular. It was really interesting. This boy from 1999. He was incarcerated at age 13 for being involved in an armed robbery. He got 40 years in prison. He didn't even have a weapon or anything. He was just there on the scene and involved.

So along with the story, we got a bunch of documents from case workers—he was in foster care—so case workers, police reports, court transcripts. And we pulled apart all these thousands of documents, and we conducted interviews and went on road trips and really did some major investigative journalism.

So eventually this story that was once just a bunch of documents really started to come to life in front of our eyes. And so our goal was to bring it to life to our audience as well, but in virtual worlds. So we relayed all of that information we got from our interviews and from the pictures we took. We relayed that over to our machinimist to actually put them in virtual worlds.

So you can see the crime scene. The actual picture is on top. And then the virtual world replica is on the bottom. And then also the same thing with the people. So these are the three boys who were involved with the crime, and on the bottom are the avatars.

And so throughout the entire project, I kept a progress blog. And you guys are welcome to check that out whenever you want to. It'll be up forever, I guess.

Leonard Witt: OK. And so we built our project on the work of Nonny la Peña, who's been working in this field for quite a while. I've got to be able to figure out how to get that. [Technical issue. Video starts.] Oh, that's the wrong video. This one. [Video starts. Mr. Witt speaks as the video plays.] So Nonny la Peña has been working in this field for a really long time. And this is the shooting that occurred with Trayvon Martin, [a] very controversial case in the United States. This is totally built on the 9-1-1 tapes that were made. And she went and had them super-enhanced, but everything you see here is really unfolding. Now, it's kind of dark and it's light in here, so you can't see it as well.

But she has also then moved on to Cardboard Google Viewers. And so she did a project on domestic violence, and you're right in the middle of that domestic violence. So we've been building on her work. So hers is one way of, you know, going out and....

[Talking to tech guy to play next video. Next video plays. Mr. Witt continues to talk as the video plays.]

So this is our own production then. I had been out months before this project began, and I happened to do a videotape of a guy on a panel talking about how he got smacked by a cop when he was 12 years old. And so we have taken this.... It happened at Chicago at 51st and Ida. If you know Chicago, this looks like a Chicago scene. And we went out then and reconstructed the story that he told. And in a minute or so, you'll be able to hear his voice. He's the narrator for this. And everything we've done in all of these projects are based 100% on the factual information that we received.

And watch the camera angles on all of these things. This is really important, because it's making like real cinema.

Man: ...51st and Ada. And the police drove up. My friend had a weapon on him. He ran. I didn't stick around. I ran, too. I didn't have a gun on me, but I ran. I remember....

Check this angle.

Man: I hid in a small lot. In the small lot was some broken down cars that got repaired there. You know, guys in the neighborhood would work on their cars there. I got caught right there. I put my hands—my hands—my hands on the car. I remember the police catching me. He was out of breath. He was mad. And he said...[stammers] The first thing he asked me is, "What's your f-ing name?" I said, "What?" And all I felt was boom! The man hit me so hard on my face. He busted my nose and gave me a black eye with one hit. I was like 12 years old at the time. This was a grown, giant man. His—his fist was so big, that when he hit me, it covered

both my eyes and my nose. And all I remember was that flash. And when he hit me, I remember blood rushing out of my face onto the back of the car. And I was afraid. I was terrified.

What can we do to—to help improve that relationship between the children in the community and law enforcement? We need to first recognize that police officers are human. They're not perfect. They need help. Officers need help.

[Mr. Witt talks as the video continues playing.]

So this kind of fits into the New York Times op-ed section and their visual opeds, op-docs. It gives you creative opportunities but with real voices.

[Video stops.]

So the next one—go ahead—the next one we're going to show is much more complicated, because this is the story about Christopher Thomas. Now, when we went to the lawyer, who you saw, Steve Reba, he handed us about 3,000 pages of documents that the students had to put together. It eventually turned into.... They went out and did interviews and called people. It eventually turned into an 8,000-word first draft, and then second draft was 5,000 words. How the heck can you take something like that and put it into a machinima that's going to be eight minutes?

So what we did, we used all the official documents. Every word on here is verbatim from documents from when he was two-years-old, through the courts, and everything else. And so you'll see how we were able to use their voices. Our students are reading and so are a couple of our staff members.

Woman: The case manager received a call from Miss Collins from Foster Parent Support Agency, Georgia Youth Advocacy Program. She informed the case manager that Chris Thomas and Chris Butts were involved in an armed robbery at a pawn shop. The two other young men involved were older. The owner of the pawn shop was shot in the shoulder. Chris Thomas and Chris Butts were apprehended by police. Police believed the gun belonged to one of the older suspects. Thomas and Butts were taken to Regional Youth Detention Center and were charged with armed robbery and assault. Both boys were tried, charged as adults, under the Senate Bill 440 law.

Man: You were basically abandoned by his parents and....

Woman: There are several people....

This is from a sentencing trial.

Woman: And I think she would like to address the court.

Woman: I was just too full. Let.... I'll let my mom. I'm just too full right now.

Man: OK. Yes, ma'am.

Doris: I'm Doris McCain. I would like to talk for all three of us.

Cynthia: My name is Cynthia Poole with the Baldwin County Department.

These are various people who were in the court talking about this thing. And then we would reflect back into the....

Woman: Chris Thomas has basically been in foster care about maybe 15—well—he's been in at least, I know, 15 places within the last 12 years. He first entered care on September 9, 1987 when he was two years old.

Man: ...visiting me at the time. They came in without any thought. My two children were standing in front of the store. My wife was standing next to me, and I had a customer. He just walked up, pulled that gun, pulled the trigger. He didn't say a word. Didn't say a thing. Didn't have a chance for nothing.

So that gives you a kind of idea of what we did. The whole purpose of this thing is to show journalism schools how they can produce these kind of machinima themselves. Machinima is a short-film, documentary film made inworld. And now, Gwenette Rider Sinclair, who's actually out here, I hope is going to talk, right?

Gwenette Rider Sinclair: I'm going to.

Leonard Witt: This is how she dealt with our students the whole time. She is the expert in virtual world. I know about journalism. She never met any of the students in person. Everything was done on Skype and inworld. So go ahead, Gwenette, maybe you can talk a little bit about this bigger metaverse of what we're talking [about] when we talk about virtual worlds and virtual reality.

Gwenette Rider Sinclair: Hello again. It's nice to hear you voices. So to explain a little bit about what our virtual world is and where it is, everything on the internet is part of the metaverse, from toothy websites to the virtual worlds described on this diagram. Is everything sounding okay to you folks?

Leonard Witt: Perfect. A little loud.

Gwenette Rider Sinclair: With financial sustainability and scalability as our goals, we used the free open-simulator software to develop a user-created virtual world.

Next slide. At our welcome center, visitors click through an avatar skills tutorial. Then using landmarks or a map, teleport instantly to destinations inworld, like "The Kid, The Cop, The Punch Chicago neighborhood.

Next slide. Using the virtual world itself as a 3D storyboard, teams inworld can collaborate remotely in real time to develop the story action, scripts, and scene designs. Using the inworld build tool, you can develop buildings and avatars from scratch or import readymade from thousands of free creative commons assets online. Developed scenarios can be used by production teams for multiple projects. You can easily modify buildings and avatars at any time, which maximizes flexibility for journalists to tell their stories and for machinimists using inworld cameras to capture the action.

Next slide. This 16-acre Chicago scenario offers an immersive experience for avatars visiting the virtual world neighborhood or role playing a story character from a real journalism story. You can also develop smaller scenes building only what your camera needs to record to tell your story. With complete inworld control over your content, your lighting, weather, avatars, cameras, including 360-degree cameras and 3D headset integration, the storytelling possibilities are endless.

Next slide. So we invite you to create your own avatar, explore the JJIE Virtual World, even produce your own journalism machinimas. Let us know if you would like a personal tour.

Leonard Witt: Yeah. And so these scenes, once you build them, it's kind of like if you were doing a cowboy movie, you know, and you need a saloon and you needed a dusty road and all of those kind of things. We built the set the same kind of way here. We built the Chicago scene, but now it's built. So if somebody else wanted to use that, they can come in and use it and participate in it. The angles—you can change everything. It's exactly like shooting real cinema once you get that developed. You put your characters in there. You can have bots who work as kind of extras, etc.

So that's our project. It was developed to help journalism schools think this thing through. And I think it worked really well. Fantastic student, Claire. If anybody knows [of] work in Denver, she's going to Denver soon. Give her a call.

[Applause.]

Jeremy Littau: Thanks for the chance to come talk to you about this research. Just to give you a little bit of a background on what we wanted to do and why we do it, my research partner and I are very interested in the

implications of what happens in an era of abundance. Social media has afforded journalists and citizens alike the ability to be involved in the news conversation in big ways. And so what ends up happening over the course of a day, during breaking news events or just regular news events, is people who are following along on social media are often inundated with information from sources they don't often know where it's coming from. The act of the retweet gives me the ability to share news with other people who are not following the people that I follow.

And so what ends up happening is we end up with a bit of a credibility crisis in moments of big news. People run into information. They don't necessarily—can't use the same heuristics in terms of deciding who to trust. It's not the days of, oh, well, somebody has the ability to publish it; they must know what they are doing. And that game has changed quite a bit.

So we have been working on this idea of what we call snap judgments. The idea that when somebody runs information on Twitter or some sort of social product, the first thing they are trying to do is figure out, does this person know what the hell they are talking about? And we do these things in more complex ways than we would do if it just had the New York Times brand on top of it. And we are making pretty subtle judgments in some cases about where information is coming from. And that's really kind of the basis of this research that we've been doing.

Some of the questions we're trying to answer is: How do people judge credibility when they run into information from people they don't know online? OK?

So we studied two basic variables. I want to unpack that first. The first one is interactivity. OK, I have to point this at that apparently. The first one is interactivity, which is a pretty often studied topic. It's not the core of this research by any stretch, but it's that replying, talking to people, engaging with them. Showing what we call *an intention to interact* by retweeting. It's a sign that I'm listening, not just posting content online.

The second variable we were looking at is this thing called social cue. Social cue is the disclosure of personal details about yourself online. So you can see on the board some of the examples of differences between high and low social cue. High social cue is not just saying [things about] my work, my affiliation, but it's also some personal facts about myself, the things that I'm involved in; whereas, low social cue—I'm giving a shout out to Marty Barron, the most famous Lehigh University alum—is basically just your work affiliation, who you work for, what you do.

OK? So these are the two variables we were looking at when we were deciding what we were going to do for this study. I'm going to give you a little bit of background of why we did this. First of all, this is based on—this is a follow-up study to something that just published in Journals of Mass

Communication Quarterly. I'm not going to go into great detail about this article that is published, but if you like a copy, you can certainly tweet at me. I'd be happy to send it to you.

What we did in that study, it was a field experiment that looked at these factors of interactivity and social cue in relationship to how people judge credibility. Here's what we found. We found that people who were highly interactive, journalists who were highly interactive were judged to be more credible by people who were making these snap judgments about information they were running into. Social cue didn't play much of a role in that study.

Interestingly, just as a side note, this actually mitigated some gender effects we often see in credibility studies. It's often been found that women tend to be much more — judge much more harshly than men when it comes to journalistic credibility. And we actually found that if people were interactive, there were some mitigating factors that actually made those two gender differences fairly equal.

So this was the background of the study. This was a lab experiment. We thought, hmm, that's kind of interesting. People whom are interactive get judged [as] more credible. So then our next question that we started to ask ourselves was, OK, well, wait a second, what are journalists actually doing with this?

So our purpose was to investigate that next question. And we did that by taking a look at those relationships between interactivity, social presence, and what journalists were actually doing online.

So what we did here for this research was a content analysis study. It was taking a look at journalistic profiles and journalistic feeds. We examined 555 journalistic profiles and analyzed them for this research. Just taking a peek at what that looked like. So you can see we looked at a few different things in addition to interactivity. Interactivity was judged by taking a look at their last 20 tweets. And we were judging how many of them were just straight off tweets of just their own nature or tweets of the link versus ones that actually had active replying, retweeting, things like that going on.

We also took a look at their biographies. We judged social cue basically by adding up the number of facts that were being shared and did that as a ratio of how many of them were social disclosure. OK. And we then also coded—I'll talk about this in a second—along the lines of coverage areas, the kind of topics these people worked in.

These profiles were pulled from Muck Rack. They were global in nature, so they were not just United States based journalists. They were a global sample. Interestingly enough, we didn't find much difference between global and U.S. based journalists, but the sample was fairly robust in that regard in terms of geographic spread.

So here are some things we found. First of all, about 43% of profiles exhibit a high social cue, which actually surprised me a little bit, just because when I talk with journalists, they often say they hesitate a little bit to put themselves out there. A lot of it is about describing themselves in terms of their work. "I'm a reporter." "I'm an editor." "I work for such-and-such outlet." Journalists, in my estimation just from anecdotal talking with them, I was surprised to see this number this high. People are often sharing some type of personal detail.

And I will tell you how we determined high social cue. What we did is we took the pool of people we analyzed and we came up with basically a mean score for what the average level of social disclosure was in terms of percentage. Then we rated people high if they were over the mean and low if they were under the mean.

So the mean score was something of about 30% or so of the facts demonstrated social cue or basically social presence. And so 43% of people it was interesting—more than a third of their facts were some sort of social disclosure, which is a bit of a surprise.

The other thing we found was that there was a bit of a split here. There were certain topics that we tended to see more social disclosure than others. So some of the softer topics, like lifestyle, maybe you could count opinion in that category. Science and technology and business tended to degenerate a little bit more social disclosure. They are definitely about the mean. Whereas, at the other end of the scale, people who were covering civic issues, that included things like politics, media, entertainment, sports, they tended to have less. OK. So that first variable, social cue, we saw about 43% that were high.

Moving on to interactivity, it was about the same kind of thing, about 40% demonstrate some interactivity. This was pretty much in line with past research that's been done on interactivity. I told you this has been much more studied in our field. We didn't see much difference between this and what's been found in past research. I will tell you that one of the things that we did [that] was different in this study was, we broke it out along topic, and that is something that is much less studied here.

And if you break it out along topic, you actually see interactivity is pretty high for some of these categories. Lifestyle, news, journalists tend to interact more with their audience. We can't talk about this anymore as if journalists are not interactive online. I don't think we can say that in a monolithic way after taking a look at some of these results. Certain topics tend to lend themselves more towards interaction than others.

The other thing that's kind of interesting if you go back and forth is that interactivity and social cue basically kind of look the same along topics. I

mean, they're kind of grouping at one or other end of the scale. The only exception to that really has been the media entertainment category; otherwise, they're kind of roughly separating themselves on basically the same ends of the spectrum, which we'll come back to in a second.

So the other part of this was that we ran some regressions to take a look at what some of this stuff meant, and what we found was this, is that—this was kind of another thing that was kind of a new finding—is that while social presence, in the original study that we did, did not predict credibility, but interactivity did, what we found in this research is that social presence actually does predict interactivity, which is kind of interesting that it's not.... We can't say that they are both causing some sense of higher credibility among the people who are making these snap judgments about Twitter profiles and information they run into online, but we can say the people who are more likely to disclose information about themselves are also more likely to interact online.

Another thing I did mention was the job, not-topic, area does drive it. So I mentioned the difference in the beat topic that some of these journalists were looking at. But the other thing I want to point out was that we did find that editors and executives were much less likely to interact online. And people who identified themselves as reporters—because we did code along job type—tended to be much more interactive.

So, what does this mean? Well, first of all, we talk in newsroom training sometimes—and this is more of a professional implication—we talk in newsrooms all the time [about], how do we get these journalists to talk more to their audience? How do we get them to listen more and engage with them more?

And this research suggests that it's possible that social presence may be a good bridge into helping people interact. If we want to help our reporters and journalists in newsrooms engage with their audiences, one of the first things we need to do is teach them how to open up. Disclose things about themselves. Now, of course, that's always a fine line. I know this is a debate. I don't want to sell that short. The things we disclose and how much we disclose, I think, is a topic that people worry about to some degree, and putting yourself out there too much [and] making much too less about the job that you're doing.

But it's possible here that social disclosure is a possible bridge. It's part of our training. Do we help people understand that by taking a step out there, putting yourself out there a little bit much, might be also a bridge towards the next step, which is listening [and] engaging? Making sure that people know you're listening to them.

Secondly, I think it has implications for how do we train. So if we know the people are making disclosures, maybe we accept the idea that this isn't a bad

idea. How do we draw those lines? I don't know what the answer to that is. I'm not going to claim to, but there might be a set of best practices out [that] we can start talking about in future research that would take a look at, you know, how do journalists make these decisions about what to share about themselves? What are the topics that are off limits to them? What are the things that are more likely for them to share? We didn't really take a look at that in this research, but I think it would be kind of an interesting area, because it might help us come up with a set of, what are the best practices for how journalists disclose things about themselves?

Third implication about this is that I think it's time to stop talking about interactivity as this thing that journalists don't do. This research shows that that's actually not true. It's actually more like people are tending to selfselect out of it in certain beat areas. I was kind of surprised by some of these results, to be honest. I was expecting sports writers, in particular, sports journalists to be a little more interactive. My impression, and this is my own bias, because I worked in sports when I was in journalism, is that sports writers tend to be a little more pushing forward in terms of technology and things like that. And we found that they were very closed compared to their peers. And we didn't really know what that was, but I think this is something that we should investigate in future work.

One of our hypotheses is that sports journalists and political journalists tended to group at the lower end of the scale in interactivity and social cue. And so what might be happening there is, they may be dealing with passionate audiences that might turn against them. They may be worried about trolls. They may be worried about people who are going to strike back at them, and so they don't want to take a step out there too much if they're dealing with audiences that might have a little more passionate response than if you just say something really bad about, like, oregano, if you're a cooking journalist, for example.

We don't exactly know what that looks like, but it was very interesting that there were a couple that tended to group on the lower end that definitely dealt in areas where people tend to have fandom attached to it, you know, politics and sports and things like that.

And that's it. So thank you.

[Applause.]

Q&A Session:

Amy Schmitz Weiss: OK. Any questions to start? OK. So while we're getting folks to come down, I had just a couple of questions for each of our panelists. So the first one goes back to James at the beginning, in terms of looking at what Evan Smith was bringing up earlier today in terms of looking at the models for making money in journalism today. I mean, he was saying

that, you know, foundations now are giving money to organizations, of course, to help them get going, but he was also talking about this being the beginning. So, do you see this in terms of where we are right now internationally as a beginning or as an ending, in terms of, how are they going to be sustainable and where they can get those funds from.

James Breiner: I think realistic.... He's realistic in saying that, you know, it's a long-term thing. It's a long-term play. But that means that all the foundations have to change the way that they think about this. In terms of internationally, because there is not that same kind of culture of foundations and tax breaks, etc., they don't have the sort of infrastructure. So I think that you'll see more of what I was describing as kind of a relationship model, which does work in places like Spain and Holland and Malaysia, where the journalists focus on going deep and just taking advantage of a small percentage of the audience who's really engaged, and to focus on that really small percentage which seems to be what was working also for the New York Times with their digital. They are getting most of their money, I think, from a very small percentage. I think 90% of the digital revenue comes from 10% of the audience or something like that. So that's, I think, what's going to happen.

Amy Schmitz Weiss: OK. We've got our first question over there, so....

Woman: Mine is actually very basic on the virtual reality. I was just curious, how long does that take to train somebody to do that? And how long does it take to actually do it?

Leonard Witt: OK, so....

Woman: Could I have Lynn just follow up, and then we can sit down? Because my question was, how would you decide whether the investment of time and energy is worth it for a particular story? Is it based on who you're trying to reach in terms of the audience? Or, is it based on telling the story effectively? How do you make the decision to use this set of tools?

Leonard Witt: OK. I think the story is going to dictate it, you know, and your audience. So, how long did it take? Well, Gwenette is a real.... You can't do this unless you have somebody who really understands how to do the virtual world stuff. She knows every little bit about it. So that's the first thing—you need that person to be there.

Then she took—worked with two students over the summer. They were two computer science students. By the way, the students from this were total interdisciplinary. They came from media studies. They came from English. One African-American studies, and a couple of journalists, and a couple of PR people, so it was a really good mix. But she worked with the two students to do "The Kid, The Cop, The Punch," and that took pretty much the summer.

Fortunately, towards the end, Christian Guerra came in and she's a media arts students, and she did the editing.

And so it's just like making a real movie actually. If you think, *I want to go do a video about a story*, you can do the same thing on this, because it's a similar kind of camera work, similar kind of editing. It's just it's happening inworld. But you have to kind of construct the inworld thing. And so for us, the reason why we wanted to do that, well, there's a lot of kids whose stories we would like to eventually tell. We got sidetracked because of this Christopher Thomas thing. We couldn't let that go.

But the original plan was to bring young kids in and keep them anonymous, but tell their story, let them tell their story, and then act the story out just exactly as it happened. If they'd been in solitary confinement or were pushed out of a house or whatever it is, we could show that 100%. And so the more adept you get at it, the faster you can be. But Gwenette, are you around now or not?

Gwenette Writer Sinclair: Yes, I'm here. Can you hear me?

Leonard Witt: So, what do you think in terms of time?

Gwenette Writer Sinclair: Can you hear my voice?

Leonard Witt: Perfectly.

Gwenette Writer Sinclair: OK. I'd like to say that the basic set of skills that you need to do this type of development, you don't need to learn how to build, because as I mentioned, there's lots of free creative commons assets online that you can upload inworld very easily. And the process of uploading is simple to learn. And what you need to learn to do is move objects around and have an eye for setting them in locations and next to each other, and looking at Google Maps and seeing what you're seeing really looks like in the real world if you need to replicate something. So things can be done pretty rapidly if you don't have to develop something specific from scratch.

We developed the pawn shop, for instance, specifically to match a picture. So that takes a little bit more time. But that building, for instance, that you saw in "The Kid, The Cop, the Punch," where the kid stole the stuff, to do that exterior and interior and little bit of area around it—because that was a single scene; that wasn't immersed in a whole block of development—that probably took maybe 10 hours of actual time once you know what you're doing and you're building.

To learn the building skill set, it depends on whether or not you know other 3D modeling tools. But believe me, it's not hard to master. I came to it a complete novice—the 3D modeling—and I was just so enraptured by it as an

artist that I taught myself. And there's lots of really good tutorials to learn how to build.

The project, whether a story is suitable or not, I think what Lynn wants to do telling stories where anonymity is important, I think it's perfect for that. Because the kids themselves or your primary characters themselves can help direct the story. You could even use their voices with some voice modification. But they can actually help you develop the set that's going to tell their story. And I think that's significantly important for realism.

Leonard Witt: Yeah. There's two other things, too, that you should be thinking about. One is cost. So Gwenette is like [a] total open-source person, so she used Open Sim. And to produce this thing in terms of equipment and all, it's very, very cheap, you know? You just need a decent computer and you can start doing that. You can't do that with most of the other things in virtual world. It's going to cost you \$50,000, \$60,000, \$70,000, \$100,000 to get started. This thing, the equipment was not an obstacle. It was very inexpensive. So that's the one thing to kind of keep in mind that you can do this relatively cheaply.

Amy Schmitz Weiss: Thank you, Gwenette and Lynn—Leonard. So Susan, I had a question for you in terms of digital security. You were talking about next steps and looking at how we can move forward of removing this aspect of digital security through obscurity. So, what would be a way in which digital security training could be done in a newsroom and in the classroom in higher ed?

Susan McGregor: Thank you. That's a great question. So, I mean, this is something that we are looking at in various ways to integrate at Columbia Journalism School. And I actually wanted to sort of give a shout out that the New York Times actually was of the first—about three weeks ago—hired Runa Sandvik, who's a well-known information security expert as their newsroom information security lead. So this is something that we're actually starting to see happen in larger news organizations, which is the idea of having some whose job it is to take this on. And, you know, I think that it's something that can be done quite directly. I mean, as the quote from our participant showed, you know, if you have a tech department that is capable of kind of translating these messages, it's something where you can come together and do it right there in the newsroom.

From a higher ed perspective, I think where I see—as an educator—where I see the opportunity to integrate this is, it takes a little bit of thinking, but it's to actually embed it into discussions about reporting and data storage and all of that as it goes. Right? So the moment that you're teaching students how to use cameras and manage the many, many files, photo files that they get, or transmit information to you as a professor or among themselves, it's actually where you introduce these things.

So I've done a lot of sessions for colleagues. I usually take about 90 minutes. A lot of the major things that we're talking about are what I would call *set and forget.* Things like turning on factor authentication is something that is easier to do now than it ever has been. You really do it once. You have it saved on your most commonly used devices. And most of us will almost never notice again that we have that set up, except for the fact that your account will get hacked. So I think it's something that is best introduced at the beginning [and] integrated with the tasks that it applies it. And that's really the key.

Amy Schmitz Weiss: Thank you, Susan. Next question I have is for Jeremy. So in terms of looking at the conversation about interactivity, social presence and journalists, and getting beyond the conversation, are journalists interactive? [laughs] We've always been interactive. Digital platform didn't just make that happen. So, I mean, in moving the conversation forward—been there, done that—like, where do we see now the idea of engagement? And how can we identify ways in which journalists can use these platforms to their advantage to bring that engagement and have those important relationships and conversations with their publics?

Jeremy Littau: I think that's a really meaningful question. Especially, some of you may have seen the news the last couple of days. It was talking about how social referrals to news are not driving traffic off of Twitter. And I think there was a lot of I-told-you-so's from the people who didn't want to be on Twitter in the first place. So I think, hopefully, we're going to get to the point where we stop talking about this idea that we're using Twitter basically to drive links to our website. And that is an engagement issue.

Like, what does Twitter good for? We're seeing more in the, I would say, probably more progress in the last couple of years around the conversation that Twitter is a listening tool. It's a tool for not just hearing from our followers, but also following people back and finding what people are talking about, and generating story ideas, and taking different perspectives upon the news stories we're producing. Stuff that Dan Gillmor was talking about back in 2005 when he was writing *We the Media*. This idea that we're mining our audience for perspectives that we're not getting.

I would like mirror interaction. I feel like it's been this thing we've been chasing in conferences like this, where we've been talking about it for a while and hoping that journalists will finally wake up to the idea that we can talk back. But I think the next level past that, really, is about, how can we use those relationships with audience to make our content better? To improve the user experience around the news that we're generating. And to really figure out how journalists are part of an ecosystem, not necessarily the people who are driving that ecosystem. Which I think is, when you think about it just in terms of link sharing, that's a skewed view of it.

Amy Schmitz Weiss: OK. Well, thank you. I don't want to keep you guys from drinks and food. So I just want to give a big round of applause to our researchers and their work today.

[Applause.]