ISOJ 2020: Day 2, Research Panel 1

Capturing journalism's evolution: From algorithms to misinformation

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Chair: Amy Schmitz Weiss, *San Diego State University*, ISOJ Research Chair & #ISOJ Journal co-editor
- Silvia DalBen and Amanda Chevtchouk Jurno, Federal University of Minas Gerais (Brazil) *More than code: The complex network that involves journalism production in five Brazilian robot initiatives.*
- Amber Hinsley, Texas State University, *Cued up: How audience demographics influence reliance on news cues, confirmation bias and confidence in identifying misinformation.*,
- Burton Speakman, Kennesaw State University, and Marcus Funk, Sam Houston State University. *What's on your page, on your pa-a-a-ge: Zombie content and paywall policies in American community newspapers, 2015-2020.*

Rosental Alves Hi, welcome back. Before starting this session, I have some some bad, bad news. We have just learned that two Spanish journalists, David Beriain and Roberto Fraile, were killed while working on a documentary about poaching in Burkina Faso, Western Africa. We are very sad and want to send our condolences to their families and all journalists in Spain. Before we start our next session at ISOJ, we would like to ask for a minute of silence to honor the memories of David and Roberto. OK, thank you. Thank you very, very, very much, and our condolences again to all our colleagues in Spain for this loss.

The second day of ISOJ has been very strong. We hope you had a chance to attend all sessions, but if you have missed any session, remember that we have the recordings of all sessions on YouTube. You can just go to the playlist at ISOJ's Knight Center's YouTube channel. So let's move along to our next session, the first of two research panels at ISOJ 2021, featuring articles that won the blind review competition for ISOJ Research Journal. Today's panel is Capturing Journalism's Evolution: From Algorithms to Misinformation. It will be chaired and presented by my esteemed colleague, Dr. Amy Schmitz Weiss, from San Diego State University, who is ISOJ's research chair and is the coeditor of the hashtag #ISOJJournal with me, but she does the real work. She works hard. She has always worked hard since she was a graduate student here at UT. So I know her. You should know that. So don't forget to be thinking about questions you have for our presenters so we can ask those questions at the end. OK, so let's go to the first research panel.

Amy Schmitz Weiss Hi and welcome to our first research panel of ISOJ. We hope you're having a fantastic time and enjoying all the panels. Today our research panel is featuring the papers from our blind reviewed paper competition that we had. Also these articles appear in our ISOJ Journal, which is available in print, hard copy, as well as digital, and you can check out the journal at ISOJ.org/research at any time during the conference. I highly recommend you read the journal and check out the amazing work of our scholars. Today we have three really great studies that are going to look at the evolution of journalism today, going from algorithms to misinformation and more. And I think we're going to have a really great time. So we're going to go ahead and kick it off to start with

Silvia DalBen and Amanda Jurno from the Federal University of Minas Gerais, and they're going to talk with us about amazing robot initiatives in Brazil.

Silvia DalBen Hi, Amy. Thank you for presenting us.

Amanda Chevtchouk Jurno Hello, everyone. Nice to be here with you.

Silvia DalBen Hello, good afternoon. It's a pleasure for us to present our research at the International Symposium of Online Journalism. My name is Silvia DalBen. I am a journalist, and I earned a master's degree in communication at the Federal University of Minas Gerais. And if the pandemic allows, I'm planning to start a PhD in journalism next fall semester at the University of Texas at Austin.

Amanda Chevtchouk Jurno Hello, everyone. My name is Amanda Jurno, and I'm a doctor in communication by the Federal University of Minas Gerais. We are both researchers and journalists interested in understanding the relationship between technology and journalism. This research is a combination of findings and thoughts developed by me and Silvia during her master and my PhD, together with our adviser professor Carlos d'Andrea at the group of social technical networks that is in Brazil.

Silvia DalBen Well, this research describes and analyzes five robots created in Brazil, seeking the professionals involved in automated journalism in an attempt to demonstrate the complexity of networks associated with this initiatives. Our methodology included semi-structured interviews and information collected in news and online digital platforms, intending to identify the actors assembling these five case studies.

Amanda Chevtchouk Jurno The five cases in the study are not created by great enterprises, but instead are developed by crowdsourcing teams or digital native newsrooms comprised with data journalism. The Brazilian robot reporters follow a different logic of those adopted by newspapers from North America, Europe, and Asia because they do not write any automated story, but focus on processing open data and creating alerts published in social media platforms. They use AI to process large volumes of data and Twitter's platform as the main channel to distribute information and interact with readers.

Silvia DalBen These particular uses of natural language generation in Brazilian journalism demonstrate how technology systems are hybrid objects shaped by social, cultural and political issues and have multiple uses depending on the context they are inserted. So inspired by the essential lessons of science and technology studies, we understand technological artifacts as occasional and temporary products directly related to a network of actors and their senses of their production, which are shaped by and also shaped the world in which they belong.

Amanda Chevtchouk Jurno The first robot is DaMata. The robot DaMata reporter was created to monitor legal Amazon deforestation using data retrieved from TerraBrasilis, an environmental monitoring platform created by the National Institute of Spactial Research, maintained by the Brazilian federal government. Launched in July 2020, it publishes an alert on Twitter every time new data about deforestation in the Amazon is published. The initiative also maintains a second Twitter account in English, as you can see in the slide. The bot was developed by researchers from the University of Sao Paulo and the Federal University of Minas Gerais in a team composed of computer engineers, information scientists and linguists.

Silvia DalBen Our second bot is RosieDaSerenata that was created to fight against corruption. Named Rosie in an allusion to the Jackson, it published alerts every time it finds the suspicious expenses of a Brazilian federal deputy that was refunded the public money. Each tweet quotes the deputy's name with a link to a regional document and asked Twitter users for help to verify if it's irregular or not. Since 2018, the project is part of Open Knowledge Brazil, a partnership to internationalize and inspire similar initiatives abroad.

Amanda Chevtchouk Jurno Our third robot is colabora_bot. It monitors the government's transparency websites checking if they are working and posted alerts on Twitter and Mastodon when a page is down, asking users how to check information receipts. The robots, part of the Brazilian Collaborative Initiatives Collaborative, specializes in transparency and open data that describes itself as committed to veracity and easy access to information.

Silvia DalBen Named in a tribute to a famous Brazilian journalist ruibarbot, our fourth robot monitors lawsuits at the Brazilian Supreme Court and publishes an alert on Twitter every time it detects nothing new happened in a lawsuit for more than six months. Committed with the transparency of the judiciary in Brazil, ruibarbot is the result of the work of a multidisciplinary team, including a lawyer, a product manager and many journalists.

Amanda Chevtchouk Jurno And here is the fifth, created some months before Brazil's presidential election in 2018, Fatima's name is an abbreviation of fact machine. It monitors Twitter feeds every 15 minutes and publishes a reply every time it detects a tweet spreading a biased news link, sending to the user on alert and Aos Fatos' link with the checked information. The project follows the methodology created by the International Fact Checking Network. And Aos Fatos team also conducts studies to understand the Brazilian news consumption and readers' main doubts. In addition to Twitter, Fatima has two other versions acting as chat bot on Facebook Messenger since October 2018, and in WhatsApp since April 2020.

Silvia DalBen We argue that the idea of automated journalism as narratives produced by software without human intervention after the initial programing stage overestimate the programmers' work and overshadows the role done by other professionals, turning invisible a complex sociotechnical network mobilized in those initiatives.

Amanda Chevtchouk Jurno With these interviews and descriptions of five Brazilian case studies, we wanted to show in this research how those initial concepts are limited and insufficient to define automated journalism and express its plurality. We argue that innovative initiatives like this involve an intricate ecosystem under formation. A new echo system that is being built, composed by multiple professionals working together in multidisciplinary teams to automate simple and repetitive tasks, saving journalists time to be dedicated in roles that cannot be automated.

Silvia DalBen When we look at those technologies as social and political apparatus, working in a more complex network of professionals and artifacts, we abandoned the idea that NLG software could replace reporters. It is important to highlight that those initiatives of automated journalism in Brazil are carried out independently, and four of them are committed to transparency and open data, publishing their codes on GitHub for example. Contrary to the most recognized examples of automated journalism worldwide, none of

them are associated with traditional media companies. Rosie and colarbora_bot are maintained by volunteers who keep them up and running with donations and crowd funding resources. DaMata is developed by researchers with funds from two Brazilian universities. And finally, Fatima and Ruibarbot are managed by two digital native journalism initiatives. Aos Fato and Jota, respectively, and have a hybrid business model that combines editorial partnerships and funding support for technology projects.

Amanda Chevtchouk Jurno The Brazilian case studies described here demonstrate a plurality of applications of NLG software in journalism, which are shaped by the social, political and cultural context where they belong. By helping journalists automate the repetitive everyday tasks, these five robots also manage and tailor networks, and they are not mere tools journalists use daily. As technical objects, they discover important facts, process information and act by posting it on Twitter, drawing attention to certain topics that could go unnoticed by journalists and other actors in this social debate. Some argue that journalists should learn programing language in order to be able to perform these task on their own. We do think that professionals should understand programing logic, and its knowledge should be disseminated and democratized in newsrooms. But the wealth of multidisciplinary teams is enriching for the work and shouldn't be eliminated. We believe that the exercise of working with engineers, designers, information scientists, linguists and other professionals in the development team contributes to the expansion of journalists, perspectives and functionalities of the social technical artifacts. Thank you.

Silvia DalBen Thank you.

Amy Schmitz Weiss Thank you, Silvia and Amanda, for that insightful presentation of your research. We're going to go to our next presenter, which is Amber Hinsley from Texas State University, also a University of Texas alumni. And she's going to be talking about audience demographics and how this plays a role in today's misinformation that is rampant in our world. And so we will kick it off to you.

Amber Hinsley Thank you so much, Amy. So let me share my screen here. Sorry, just a moment. I can't talk and do anything else at the same time. So thank you very much for the introduction, Amy. So I will say that like a lot of the other journalists, or a lot of the other journalism professors and academics who are presenting here, I am also a former journalist. And so I've done a lot of my research throughout my career based on my experiences as a reporter and editor in the newsroom. And so for the past few years, what that has meant is that I'm looking at a lot at misinformation and social media. The study I'm talking about today looks at how the audience's education, political leanings, etc. play a role in which news cues they rely on, things like headlines and photos, when they're trying to identify misinformation. Also looking at their demographics in terms of how those may influence their tendency to seek out information that confirms what they already believe and how all of this may affect their confidence in their own ability to identify fake news.

In terms of why this matters, I'm going to start here with a breakdown of why these particular things are important as part of the larger conversation that we collectively in academia, as well as newsrooms, and think tanks are having about so-called fake news. What's the role of these things as people are trying to identify misinformation? I love this quote to start with from the study that PEW did in August, because I think it understates national sentiment about Americans' relationship with news media. In that same Pew study, they found a deep partisan divide in perceptions of news coverage and expectations from articles to be inaccurate and for journalists to intentionally mislead audiences. Other studies have found that political ideology plays a role in individuals perceptions of fake

news and misinformation. We can fairly clearly conclude that political leaning influences how large swaths of the public view news media. But what's not as clear is how or if demographics also drive that relationship. And so we can look at how social identity theory helps explain the connection that individuals feel toward their social groups, which includes their sense of belonging they have via race, gender, political ideology, and why those connections can influence their assessments of misinformation. In seeking to understand and define ourselves, we foster a sense of shared connectedness with others who we see as being like us. One of the ways we come to know ourselves is through how we define ourselves in terms of our demographics. If you take a moment to think about how central some of these things may factor into your sense of self and how important they are in how you see others.

Journalists use these news cues to establish credibility, and the audience has learned to look for these cues to varying degrees when they're trying to determine accuracy. News cues help consumers manage information overload because it makes it easier for them to look to these cues to decide whether they want to further pursue the information that they're presented with. As users judge the credibility based on these news cues, they're processing these features in the context of how they relate to them and their interests. Since news cues influence perceptions of a news story, they are particularly relevant as journalists struggle to help their audiences differentiate between legitimate reporting and fake news. With confirmation bias, another component in understanding what influences our determinations of what is or is not misinformation, people prefer information that validates what they already believe. We all tend to do this. Previous studies have found that people seek out material from sources they perceive as being ingroup and assign greater credibility to it. Think about your own personal preferences for news. You probably tend to gravitate towards some sources over than others, and you lend more credibility to those sources that you agree with, that you see as presenting your truth. And analyzing the influence of people's social identities as they relate to race, gender, political ideology, among those other demographic variables, it can shed light on how confirmation bias functions in regard to fake news assessments. Other research has also shown that news consumers with strong political beliefs, so that's folks on either side of the political spectrum here in the U.S., they tend to spend more time with news sources that support and reinforce their views. So all of this then can result in an online echo chamber that is made up of people in your group, or groups, who are decrying oppositional information as fake news.

And then lastly, turning to the final research question in the study looking at confidence. Confidence is a crucial element in suppressing the spread of misinformation. It's also a very complex process to develop confidence in doing anything, including how confident you are in your own ability to identify fake news. For the analysis of misinformation, it really depends upon the strength of the argument that someone is considering and how relevant it is to their life. New information can threaten any number of identities that an individual holds, especially if it's seen as a direct challenge to a particularly salient identity. Individuals whose demographic details are really tightly bound in their sense of identity, whether it's on their political ideology or gender identity, helps them assess information in the context of what they think their group believes, and then they develop confidence that those evaluations are correct and accurate.

In terms of the method for this study, it was an online study with participants who were provided through the survey firm Qualtrics. They were all adults with at least one social media account. The demographic data in a table here. These were the independent variables in this study. I had to collapse the race categories in order to run the analysis

because the data was so spread out. But the data was collected for white, African-American, Hispanic, Latino, Asian-American, Native American, multiple races and other. With education, the options ranged from less than high school, high school, some college all the way through to a doctoral degree. And then for political ideology, it was a spectrum that started with very liberal, somewhat liberal, closer to liberal, neither liberal or conservative, and then repeated those same options for conservative. Again, a little bit more on the method now turning to the dependent variables, the things I just talked about with the research questions. The question wording is here on the screen, and it's for each dependent variable and also how it was measured. The wording for each of these was validated through previous studies.

All right, so you look at this and think, I'm not a stats person, and I don't know where to look. What you want to do is look for the squares with numbers in them, because that shows where there was a significant relationship. Because of the number of the independent and dependent variables involved in analyzing this research question, I did individual regression tests for each news cue to determine the influence of the demographic variables on each one. So this is actually a lot of regressions that were right here. The political ideology is one of the big ones here. And what it shows is that it was a significant factor in six of the features. So if you look down that column there, the people who were more liberal were more frequently saying that they relied on examining the URL, story appearance, headlines, visual they published, when they were trying to determine whether news stories contain misinformation. Education level was also a significant influence, if you look down that column there, with more highly educated individuals reporting they spend more time conducting research on their own, assessing objectivity, as well as looking at the URL, author, and sources. Taken together, if you look at all of the cues, only the URL of the story was significant across the five demographic variables, and the piece of information as looking like a news story was significant in three of those. The remaining news cues were significant in only one or two variables. And what this suggests is there's a lot of work to be done to improve recognition of these features as keys to identifying this information.

Going on to the next one here, a lot smaller table, not as much to look at here. This looks at confirmation bias. And what this tells us is that it has several drivers with the following demographic variables indicating that having information confirm what they already believe was of great importance to them. Being male, nonwhite, less educated and more conservative. The confirmation bias was significant in four of the five areas indicates that certain individuals identities may influence their desire for information that does not challenge what they perceive their ingroup as believing to be true. And then finally, with the last research question, political age, ideology, education were significant influence again with people this time who were younger, more liberal and more educated, being more confident in their ability to recognize information. This is in stark contrast to demographic identities of those who reported for research question, too, that they rely on information that confirms what they already believe. All right.

So what are the big takeaways? Right. What can we do with this? Demographics are foundation for identities that we hold as well as the groups we feel a sense of connectedness to. If we look at the highlights in terms of the importance of understanding how our social identities can inform what we see as credible cues of legitimate views, why certain individuals may seek out information that confirms what they believe, and why other groups report feeling more confident in their ability to identify fake news, all of this can be used in developing more effective news literacy strategies. In particular, if we look at the sustained influence of education across these cues, it suggests it could be one of

the most important factors in bridging partisan ideologies. If we focus more specifically on how this can help and what it may tell us, is that repeated news literacy training could help build research skills and an appreciation for objectivity, which has a trickle-down influence on several of the other news cues that were not as important on the previous lists. That younger people showed greater frequency in looking at certain news cues suggests the effectiveness of concerted efforts with media literacy skills training in K-12 and other places.

To kind of wrap things up then, we think about concern that we have with people who identify as more conservative. And one way that we can combat this problem, the question I have up here on the screen, is to focus on people who are seen as ingroup. So it may not be that you are the best person to talk to them, finding someone else to talk to them may be actually a better person to talk to. If you're thinking how can this data help journalists and other groups fight misinformation, these ways are outlined in the study here. What we want to focus on doing is with the demographic data, it provides a clear detail about which areas need greater focus in the effort to help people become more critical consumers of news and information and learn which cues can signal credibility. So I thank you for that, and thank you for your interest and for all of us and our research that we presented here today.

Amy Schmitz Weiss Thank you so much, Amber, for that insightful study that helps us to have some new ideas about news literacy efforts.I think that can help in terms of scholarship and also for newsrooms alike. Thank you. Next, we're going to jump to our last research presenters, Burton Speakman from Kennesaw State University and Marcus Funk, also a UT alum from Sam Houston State University. They're going to talk with us about zombie content and paywall policies in American community newspapers. So take it away.

Burton Speakman Hi, Amy. Thank you for the introduction. I'm Burton Speakman, an assistant professor at Kennesaw State.

Marcus Funk Hi, I'm Marcus Funk. I'm at Sam Houston State. I'm thrilled to be here. All the burnt orange in the color scheme makes me really happy.

Burton Speakman All right, so our paper, What's on Your Page, On Your Pa-a-a-ge, talks about zombie content and paywall policies. And what we did was in 2015, 400 community news websites were looked at to see sort of what their basic policy was in terms of online content. And then in 2012, we looked at those same websites. Every site that we looked at was live and functional in 2015. It might have been barely functional, but it was functional. And we looked at things like hard paywalls, metered paywalls. And then in 2020, we look for things like redirected sites and zombie sites. And one of the things that was interesting about this is in 2015, 400 out of these, 211 of them allowed full access to all of their digital content. 129 use some form of metered paywall that allowed a limited number. The limits varied fairly widely. Three, five and 10 were the most common, and then 60 did not allow the public to do any content access. Now, what we started to see five years later was things had started to change quite a bit. Only 97 publications allowed viewers to freely read all their content. And one of the interesting aspects of this and something that's going to change is a lot of those publications that didn't have a paywall were part of the recent Gannett GateHouse purchase, and Gannett had not put their standard paywall onto the GateHouse publications. So this number is going to have changed whenever Gannett decides to put that up there. But at this point, there were 169 publications at this point that utilized some form of paywall, 37%. And then we were looking at conversely, at this point

or in 2020, we had 60% of these community newspaper websites that were using some form of paywall. So it went up not quite double, but pretty close to it.

And one of the things you need to notice is what some of these changes were. Essentially, what they were doing was automatically redirecting at times, so these publications that didn't exist in the same way they did before, some of them were automatically redirecting. Well, not this one, but others that we're looking at. And in a number of these instances, the smaller publication existed as somewhat of a sub page, but not really. But what you were looking at, again, was a lot more of these hard paywalls like we're looking at right in front of us now, where to look at any article you had to log in and you immediately hit this login page. So here's our percentages. Here's what those look like. Again, you're looking at a big change in terms of a lot more metered paywall, a lot fewer places that had no paywalls, a lot fewer places that were doing anything. And then the really frightening part was 30% of the publications were inactive or deceased in some way, shape or form from the community news publications, websites in 2015. That's a really big drop. I guess that's stating the obvious.

One of the more common examples, again, was the idea of them being rolled into the larger publications. The Charlotte Observer. There were multiple publications that existed and had their own websites in 2015 that were now part of The Charlotte Observer's main page and that was where you were redirected in 2020. Others had been taken over by various sources. This was a community news publication that was actually taken over by a city government. They found that there were enough visitors, there were enough people who wanted to come, that they felt the site had value and took it over. Other sites had just stopped updating. This is one that had stopped updating in 2017. This was the first article on the website. Here is the Nebraska Journal-Leader, and this is their entire Web site, a little video, a way to subscribe. It is a website, but it doesn't really provide any information. And there were quite a few of these in 2015, as well. And you'll also, if you really look through this list, you would see some that had basically just a PDF of their front page that you could look at, and that was less common in 2020, than in 2015, but it did still exist. In other cases, the former news sites had completely changed and completely been abandoned. For example, this one was taken over by an Indonesian gambling site, and this was a full chain worth of sites. I think there were five or six of these in our particular study, where it was one small community news chain that had 20 publications, and several of them were part of our study, and they were all going to this same site. And another one, it was a commercial Web site that had taken it over, and this was another example out of some of those 30% and the commercial site realized the value of the community news site and had even set up a website that looks sort of like a new site, but it really isn't. Other times you'd run into something like this. This was a M Live, Michigan Live site where they had a number of small community sites, and then all of them had been rolled into the main site. And when you tried to go to the link, the original link, you were getting an error message.

Marcus Funk So all of this really reflects the word zombie. That's not just an opportunity for us to to make horror puns. It's very deliberate word choice. Because at least since George Romero reinvented the genre in 1968, zombies have never been just zombies. They're shuffling, lurching metaphors for a whole spectrum of social ills. And the horror comes from mindlessly existing and perpetuating inequality or injustice, not the fact that they are literally alive after they should be dead. And in a similar way, zombie news sites aren't just about websites that don't update anymore, that are still sort of there, but not serving any practical purpose. Or they're redirecting to something completely foreign and completely different. These aren't just relics or shibboleths that are somehow still hanging

on, clinging to undead life. Those that have been appropriated by non journalists aren't just big surprises for folks looking for local news and instead finding something in a foreign language or something completely different. Instead, we're using the term zombie because it reflects the economic trends, squeezing community news that so many of these websites still technically exist, but in miniature, or collapsed under a regional site, or appropriated in some way that undermines local community and local identity, reflects uncertainty and poor planning regarding paywalls and digital business models. The writing's been on the wall for quite some time for a lot of these trends. And yet still, like the folks that get zombified halfway through the movie instead of at the beginning, it still happens. We're still finding ways to fall into the same traps and suffer these same economic issues. And two, the zombified sites point to a deeper, and I think much more serious question. All politics used to be local, as the saying goes, and there was a real value in local identity, and local community, and local content. But all these local news sites, closures and zombification, are they suggesting that perhaps that's not the case anymore?

Burton Speakman Well, and I think that one of the things because this conference is so professionally focused, I want to sort of bring up at the very end of this is the idea that publications that had had paywalls in 2015, were much less likely to be among those 30% that went out of business. So that shows that companies that are at least trying something seem to have had better luck for not closing down. But for those larger chains that had rolled themselves into larger media outlets, that's essentially a running up the white flag for the local market. Because the expectation cannot be that these young people are going to suddenly come to your print publication after developing other news habits. And, you know, to a large degree, it appears that a lot of publications have essentially given up on small, local community markets other than in print with the expectation that those publications are going to fold. I can't come up with another solution.

Amy Schmitz Weiss Well, thank you, Burton, and thank you, Marcus, for that insightful presentation on zombie news. It kind of gives us a little bit of sadness at the same time to see the state of what's happening in the community in local news. But thank you again for sharing that with us. And this has just been an amazing panel so far of the three articles that are featured in the ISOJ Journal and on the website. What we're going to do now is we're going to move on to discussion and Q&A, so we can get started with asking our scholars more questions about their research.

Amy Schmitz Weiss All right, so let's go ahead and jump in with our questions. We've got quite a few here, so we'll see how we do in terms of timing. I think the first question we want to pose to the panel is going to go over to Amber. Amber, what does subjectivity in the context of key news cues mean? If you could elaborate a little bit more for us to tell us how you were looking at that in your research.

Amber Hinsley Sure, absolutely. And one of the things that we did with this was we didn't prime people by telling them this is what objectivity means. We just said objectivity, and they answered based on whatever their own conceptualization is of that. And so one of the things that we see from other research beyond this study is that the public does not have a great idea of what objectivity means, if you look at some other research. And so this is something will be interesting to dive into more with other future studies about misinformation is when people say they look for objectivity in stories, when they're trying to determine if it's misinformation, or if it contains misinformation, what does objectivity mean to the audience? Because as journalists, we know what that means. But by and large, the audience does not have an accurate conceptualization of what that is.

Amy Schmitz Weiss I think that's a really good point that kind of gets back to the other big finding that you had in your research of looking at how much education played a role in this. And so I was curious to kind of get a sense from you, where do you think we go from here in terms of looking at that aspect of education from several points? So one from the point of the newsroom, right, of thinking about this? You talk a little bit about this from the news literacy side. But second, I would say from the greater sense of the actual journalism educators who may be watching this and in the classroom training the future journalists, what can be harnessed in these moments in kind of diving into that and looking at that aspect?

Amber Hinsley Well, what this says is there's a lot to be done because there's a lot that people are not looking at that as journalists we think, "Oh, my gosh, why aren't you looking at this? Like, I really wish you would be looking at this. It can help you so much." That kind of thing. But what it does show is that especially with education is that that can be a key. And so it reinforces the necessity of news literacy education and information literacy education that we see here in the U.S. Different districts and different states have different standards for what that looks like. But for me, what it says is that those things look like they're working, and we need to do more of them. We're talking so much about vaccines here, so like that but with news of literacy. It's not a one-shot inoculation that news literacy needs. We need boosters throughout our lives for this, especially as information changes. And we had a session earlier today that was fantastic talking about how social media has changed the landscape for misinformation, and especially with COVID-19, how misinformation spreads so much and so quickly on social media, versus how journalists were trying to confront it, and debunk or prebunk some of that information. So for me with this, we already knew the political ideology played a role in how people perceive fake news. But the education part of it is maybe our best way forward in counteracting people's perceptions of misinformation.

Amy Schmitz Weiss And perhaps it comes down to really delving deeper into thinking about what that form of education, what form of training can be approached, and looking at it from a variety of different perspectives as well. Right. I'm going to transition here to Burton and Marcus because I think education is potentially a connector with your research as well. Right. You said 30% of the sites were inactive or deceased in the past five years, and how this puts a real big, you know, crisis. It has been for community journalism. And so I'm curious to kind of know from your perspective, how do you think, tying into the realm of educationm, and having people understand and know the role of community journalism, the role of local news, do you see that as a potential pathway here, or are we doomed to more zombie news content?

Marcus Funk OK, from an education standpoint, I think there are a ton of really vivid opportunities for local reporting and local news because this is where our graduates in journalism schools and in mass communication programs go. They don't go straight from the classroom to The New York Times. They go to those small weekly publications or those alternative publications right in our own backyards. And I think the more we incentivize our students to participate in that media, the richer that media will be. And that'll trickle down to the rest of the community because the better reporting is in those local media than the more likely people are to read it. And I think it plays a role in polarization, too, because it's really easy to have a really passionate opinion about what's going on in D.C. when that's, you know, eight states away and hundreds and hundreds of miles. But it's a lot more difficult to be radically polarized, or be chanting fake news cues when you're talking about something happening in your own community. And it's sad that in some ways

the ecosystem that seems the simplest way to solve these problems at the local level is also the same media ecosystem that it's suffering so badly.

Burton Speakman Well, I think part of that is, I mean, if you look at the Poynter studies over the last 20 years, people are much more trusting in their local media than they are the media in general. And when we lose those local media sites, that's where people develop trust in the media. That's where younger people kind of learn from their parents about what's going on. So it worries me as these sites go away, and these local news sources continue to fold, and we lose them, that we're losing that first line of defense in terms of teaching students media literacy, in terms of teaching young people media literacy. So I guess, Marcus took the optimistic approach. I guess I went the other way.

Amy Schmitz Weiss What risks do you think this poses to what represents local identity in a community in this regard?

Burton Speakman I think it has a lot to say about what local identity is, because there are certain elements that people tend to rally around within their community. In the local newspaper, particularly when I worked and from what I learned about the weeklies in Texas, and those types of places, was that people were very tied up. They felt an ownership. It was theirs. It was their publication. And when they lose something that's theirs, that's a piece of their identity that's gone.

Marcus Funk And think about, too, what fills that void. Because it doesn't stay a vacuum. We see social media pages start to assume those responsibilities. We see highly partisan social media platforms or individuals on social media filling that void, and filling it, in many cases, with garbage in a way that a local newspaper had a filtering ability, had a refereeing responsibility that's just absent on a lot of the digital social media pages that crop up in their absence.

Amy Schmitz Weiss Well, and I think it also transitions over into the realm of aggregation, automation as well, right. Looking at it from that perspective and how that can have such a huge detriment in terms of really understanding a local community. And I think everybody's connecting here with their research today. So on the side of automation, coming over to Amanda and Silvia. You know, looking at the research that you embarked on, I think it's really interesting to show how you're looking at it from a different perspective. Oftentimes the scholarship focuses on automated journalism from the standpoint of something that is quite technical as an object, that doesn't really have any human intervention in it. And I think your research shows that there are these important individuals from the media and from other entities that are working on creating a different kind, as you said in your article, different kind of journalistic content. And I was kind of curious to know from from both of you, how do you see this shaping in terms of specific journalism in Brazil within this context?

Silvia DalBen Well, I can be the first, Amanda. I started this research looking for, not this research specific from Brazil, but before I started researching automated journalism, looking for case studies in the United States. And every time I was curious about who are the people, who are developing, who were working on the backstage? And some of the scholarship that I read in the beginning, like 2012 to 2014, they used to say that those initiatives of automation would take out the human intervention except for the programmers. And this kind of bothered me a little bit. So in 2018, I got to know more about an operation that was the first initiative that I saw here in Brazil. And I had the opportunity to talk closer to the people, to the journalism, understand a little bit more how

this technology was being developed, and how the journalists would be part of the news and this content that was automated produced. So what I think that is really different here in Brazil, comparing today's experience, the initiatives that I observed in the United States, is because here we don't have a bigger news outlet or a bigger newsroom investing on it. We took a more digital native news content from smaller websites, younger websites, or also crowdsourcing initiatives from young journalists that get together with programmers and with data analysts and start to work with open data. Because our information access law, is from 2011. It will be 10 years old now. So when the journalism started to get in contact with open data and this fight against corruption, it got them to shape these initiatives here in Brazil.

Amanda Chevtchouk Jurno We've been working together for years now, and what moves us is thinking about the realities of platforms, and how they play a role in communication and mediating our sharing of information, and the things we get to read or get to know. This is the point where our research connects, and I think that what we wanted to show in this research is two things. On one side, the platforms and their algorithms play a role that is a bad role in this circulation of information that is, I forgot the term in English, but in helping to spread the the biased information, disinformation, misinformation and making people be more and more in their own bubbles. But there are other sides of this, algorithms and platforms that can help journalists, and we have to understand them and to look at them as partners and not mere tools journalists use in their daily routine. They are partners. They can be useful to free journalists to do other stuff, to do all the things that only humans can do. So I think this is what connected us in this research. It's what we wanted to show.

Silvia DalBen And one interesting thing that we have to get in mind is when we talk about robots, we also have that imaginary kind from fiction films. And actually, when we look to those technologies, what we are dealing with are computers, algorithms, software, as some objects. They are part of newsrooms' daily routines for decades, since 1990, since connecting the Internet. We don't use anymore. I don't know the name in English, but the machines to type. We are using computers, and we are using softwares. We are connected to the Internet. So we are not looking for something from the future. But actually we are dealing with things that are more close to our present than our future when we think of these automated information, automated content.

Amy Schmitz Weiss We have a question that wants to know, do you think artificial intelligence will replace the journalist?

Silvia DalBen Yeah, that's the point. When we started this research, when I started this research in automated journalism back in 2013, this was my fear, like, "Oh, my gosh. Robots are coming to my profession. Should I keep being a journalist, or not? What is this?" It was my main motivation to research automated journalism. But what I got and those past years is studying these, and I think Amanda also in our path, because we know each other for many years now, is that we are not talking about automated robots that are working besides journalism, besides the newsrooms. Actually our technologies are inserted in our profession and working side by side with journalists, but also with programmers, with data analysis, with math, with physics. People who work with other sides of the information, helping to build news stories or other kinds of stories that we can produce nowadays with the Internet. So when we think about the replay being replaced by robots, I could say that, no, we are not being replaced by robots, but we have to be open to other professionals that will be side by side with us in the newsrooms. Not just journalists, but other kinds of backgrounds. And we should also be open to other

technologies. And when you think of technology, our profession, if we think historically, journalism was always shaped by technologies. We were shaped with the press. We were shaped because of the invention of television. Our profession was shaped with the invention of radio, and now with the Internet. And I think this is just one more tool, one more technology, that will help to shape the future or the present future of journalism.

Amy Schmitz Weiss Amanda, I see that you have a question for Amber, connecting your work with hers.

Amanda Chevtchouk Jurno Yes, I do. I would like to hear, Amber, what you think about the role these platform play in this misinformation situation and the spread of misinformation? Because I know that this was not part of your research question, but I would love to hear you on that.

Amber Hinsley Sure. Well, I can speak to kind of what I'm aware of here, what's happening in the U.S. and a little bit internationally. But we see obviously Facebook is one that people talk about in terms of social media growth and spread of misinformation on that. And so that's something we're all aware of, as well as algorithms and how those work in terms of targeting our demographics. And so other people who fit your demographic profiles, they've clicked into these groups or this information, and so it's now showing up in your Facebook feed. And, you know, to certain degrees, other social media platforms do that as well, Twitter and some others, with the suggestions that they make. And so from what I've seen, and I think we all know this anecdotally, at least, social media is so much of an echo chamber. It just reinforces what we already believe. And so social media allows us to find our in groups. In my research, I work with social identity theory. And so who are our groups? And social media allows us to go straight to those groups and to talk among those groups. And so all that we're hearing is reinforcing what we already believe. And it just makes those voices so much stronger, and it reinforces our belief. And it's almost this vicious cycle. And this question of how do we get out of this? And part of it is understanding, at least from what we see here with research in the U.S., is understanding that sometimes we're not the best person to try to talk to someone and dissuade them of whatever misinformation, belief that they hold, especially if you're seen as someone who is part of the outgroup. You're not someone that they identify with. It doesn't matter what you say. Like the truth doesn't matter. And it's more about finding someone who they see as credible, and believable, and giving them the tools to be able to go and talk to that person or that group. And on social media, that's so hard. I don't see that as being an effective place to try to do things like that. That's where in-person communication is I think really where you're going to be able to change minds and get the actual truth. The capital T truth shared over misinformation.

Amanda Chevtchouk Jurno Can I add something, please? I was thinking about when we were talking about education and the need for news literacy. Silvia and I have argued for a time now that we think that this news literacy should include technology literacy because we are not going to get rid of these platforms, or these algorithms, or these artificial intelligence. So we as journalists and teachers of journalists and professors of journalists, we should teach our students how to understand these new mediations that are not going to go away. So I think how to deal with that, we have a lot of points to tackle, but one thing that we can do as professionals and as teachers is to teach our students to deal with this and to understand these new mediations, to not ignore them. Because they are there, and they are interfering in our public, in our circulation of information and misinformation.

Amber Hinsley Right. Well, and it's so important to teach it beyond journalism students. Like we're preaching to the choir, so to speak, with that. And these are people who want to receive the message. This is why it's so important to have this throughout the lifetime, or your lifespan, in elementary school all the way up to college. Some universities here in the U.S. actually have media literacy types of classes that are open to all majors. And that's something that I think all of us would love to see at the college level where we have some bit of control of making things like that happen. But across the states, in the U.S., there is no standardization for what literacy education looks like. And this is why it's so difficult, because we all agree that technology education must be a part of this. But getting that to be picked up in any kind of a standardized way so that there's some consistency to it is so difficult.

Amy Schmitz Weiss Marcus, you seem to be nodding. Do you want to add your thoughts?

Marcus Funk I would agree with all that. We do have an entry level common core media literacy course that works pretty well here at Sam, but it's challenging. And I would say yes. Because it is a technology problem, but it's also a social problem, you know. And I think there's a temptation with a lot of things that journalists and academics do is to focus on the toys. Right. It's to concentrate on the technology and how those mechanical innovations can change our industry or change our democracies. And I get that. Obviously we need to address the technology and those innovations. But at the same time, some of the toxicity that we're seeing, some of this disinformation is ancient. You know, a lot of the conspiracy swirling around about January 6, and, the whole QAnon bit, that's not new. That's not digital. That's ancient. You know that predates all this technology that's now being used to circulate it. So I think that's part of the challenge. I mean, it's like we're doing improv, right? Like we have to do the technology, and we have to understand how tech influences all this toxicity. But at the same time, we have to sort of isolate the thing and talk about the thing independently of the platform. And it's tricky. It's really difficult.

Burton Speakman Well, and the thing, I mean, honestly goes back to we've got a large segment of the population that distrusts all media, and it goes clear back to the Goldwater campaign, historically. And you're looking at a situation where it's just simply ramped up, and ramped up, and increased to the point where now you have an entire media ecosystem that's designed to tell us that the entire rest of the media ecosystem is presenting you news you can't trust. "We're the only legitimate news type of news source."

Amy Schmitz Weiss Yeah, I think it's a complicated situation, right. The relationship that is there is quite complicated, and there's no complete solution to this that's going to be solved in one one day. Right. But I do think, as you said, there has to be a connection not only between the understanding of the importance of an informed society, the importance of journalism, the technology and understanding the back end. But I think the other crucial part and kind of goes back to what you were talking about, Burton and Marcus, is the local identity, the engagement with the community, the recognizing of being able to be with the community and of the community, versus talking to the community. I think a big part of that is part of this as well in terms of how we see this moving forward, and if there are ways to kind of get at that, which can be quite complicated, as we've talked about. We've got just a few more questions before we wrap up here for the day. We've got a question about do you think local audiences, and we talked a little bit about this, in migrating to social media, he mentions in Rio de Janeiro, many people in newsrooms take information from social media, and local sites will not survive this kind of competition. I guess kind of putting this in the past for Burton and Marcus, do you see the role of these kind of zombie sites

potentially evolving into other areas around the world beyond just looking at community journalism that's been happening here in the United States?

Marcus Funk Well, I'd certainly be worried about the trend of all politics becoming national, which I certainly think we've seen in the United States, I'd certainly be worried about exporting that elsewhere. And I don't know much about Brazil specifically, but I do know that the national political environment down there is almost as toxic, if not as toxic as it is up here. And I would assume that, you know, there's certainly a possibility that a decline in local media or a decline in interest in local journalism is contributing to that. Because that urge to be polarized about something happening in the national capital a couple hours away, that's strong for people in the social media era. And if you don't have to worry about being that polarized about local content because there's no local content to be polarized about or there's less local content, then that buffer is gone or diminished severely.

Burton Speakman Well, and I worry about the loss of local anywhere when it comes to things like vaccine distribution. I mean, in places where the media is trustworthy, where the local editor is known, the local editor, can do things like write an article combating some of these virus pieces of misinformation. But if that comes from a national publication, or that comes from the national nightly news, or even a big regional that's an hour away, people are less likely to trust it. People are less likely to buy it without that connection, without that level of trust, without that level of experience. So that worries me no matter where it occurs. And I'm not going to say I know enough about the South American media ecosystem to know how their local news coverage functions, but wherever there's that loss of local news and that local connection, it worries me in their ability to counter misinformation at the local level.

Amy Schmitz Weiss I think we're going to be closing out here for our panel, but I wanted to ask each of you if you could provide everyone who's watching right now with one key takeaway that you think folks should think more about, whether they're in the newsroom right now, whether they're a student who's entering the journalism field, or whether it's journalism educator. A key takeaway that you think is important for them to share. We'll go over to Amber first.

Amber Hinsley Oh, great. Start with me. Thanks. What I presented on today is part of a larger research I have about fake news, and how do people get information, how do they identify misinformation? I've even got part of it focused on COVID and social media. And one of the things that I keep coming back to that I guess keeps surprising me is the way that people will embrace confirmation bias, and that for me, that's something I struggle with so much as a journalist and now as a journalism educator. And as I mentioned earlier, the thing I have to remind myself is that sometimes it's not my voice that's going to make a difference. And that's really a hard thing to let go of and to realize that I can't win over everybody. And so instead, let me find someone else who this other group, this other person, is going to see as credible, and see if I can get that person to talk to this group. The idea of the in group identity, and if you are not seen as credible and part of that group, it doesn't matter what you say, or how much truth you provide, how many facts you provide, they're not going to hear you because that's not the truth as they see it. And so finding someone else to be that bridge is a really important way forward, I think, in terms of being able to overcome misinformation.

Amy Schmitz Weiss Let's jump over to Silvia and Amanda.

Silvia DalBen You can go first, Amanda.

Amanda Chevtchouk Jurno OK, I think I'll take my personal research interest that is thinking about the technologies and their interference in the communication and circulation of information. I would suggest that the students and journalists pay attention to technologies and how they are not neutral. They are not neutral. They are not neutral. Try to look at that and see critically algorithm's platforms and all the affordance and interfaces that you are dealing with, the most you can in your daily routine, but try to keep critical, looking at these technologies.

Silvia DalBen And I would like to call the attention of these students for the relationship of artificial intelligence and data, and big data, for example. So I would pay attention to data journalism, and I think learning tools to not just to write great stories, news stories, but also learn how to produce charts and to deal with data journalism. And investigative journalism is something that is really close to automated journalism.

Marcus Funk I would say don't be afraid to double down either as a student or a journalist on local news, and on local coverage, and finding ways to incorporate and adapt major national ideas and national problems within a local lens. And for that matter, I would recommend getting involved in that local community in other ways, too. You know, I feel like politics are such a big part of our lives because we don't have the same number of outside interests that we used to. And I wonder if investing in local reporting and local journalism, but also just local civic participation, wouldn't make a tremendous difference in reducing the toxicity in our political environment right now.

Amy Schmitz Weiss And Burton, you have the last key takeaway.

Burton Speakman So I guess for me, if I was talking to someone running a major newsroom, particularly a Gannett or a digital first, my comment would be don't give up on the local publications. Don't regionalize everything. Don't cut off your nose for that short term profit increase, because the reality is in the long term, it's going to have a negative impact in the industry. Journalism is supposed to be about more than just making money.

Amy Schmitz Weiss Excellent points. Well, we've run out of time. I would love for us to talk more. We could about this for hours, but I thank you all for sharing your research and your amazing insights with everyone this afternoon. And for those watching, please take a look at ISOJ.org/research to look at the research that these amazing folks have done, and definitely follow them in their future research that they're going to be doing. So thank you all again for joining us. And I'm going to hand it off to Rosental, who's going to have some announcements before the end of the day.

Rosental Alves Yes. Thank you so much. Thank you. This was really great. I think I learned a lot in this session. Some of the topics that have been concerning us with the algorithms, and I learned the zombies that I never heard before in that context. But I think it was a very informative session. So thank you so much. So now I want to thank also all the other panelists and chairs that I spoke today. The second day was really very strong, as I said in the beginning, and to those of you from all over the world who have been following us on our laptops, on your cell phones, I thank you so much for participating in this second day. Keep going with the conversation on Twitter. And also, don't forget that if you missed any of these sessions, you can still find the sessions, the videos, on the channel of ISOJ Knight Center at YouTube. We want to thank Google News Initiative and Knight Foundation, the major sponsors. Muchas gracias, Univision por apoyarnos con la

tradución a Español. So don't forget, ISOJ'ers, that if you want to keep the conversation going, you can go now to Wonder, to this software that you can become a little bubble and go around. So we have a Wonder room for more conversations and the chance to network and collaborate with your peers. Just follow the link in the chat to be placed in the Wonder room. So see you again tomorrow with another fantastic day of ISOJ 2021. Thank you very much.