CHM Computer History Museum

**Workshop on Making News with Data:
Tech and the Future of News**

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Attendees:
David Yarnold (Moderator)
David C. Brock
Meredith Broussard
Jeremy Caplan
Dave "Davey D" Cook
Marc Etkind
Richard Gingras
Jason Koebler
Marian Chia-Ming Liu
Alex Reed
Kirsten Tashev
Subramaniam (Subbu) Vincent
Marc Weber

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Marc Etkind: Good afternoon, and welcome to everyone in person and online. It's a pleasure to have all of you with us. I'm Marc Etkind. I'm the brand new Computer History Museum President and CEO. It's day three for me. I previously was NASA's Associate Administrator for Communications, where I ran our own internal newsroom and social media channels. I also work closely with major press outlets, industry, media and influencers, so I'm really excited about today's workshop. This afternoon, we're excited to convene the latest workshop in Computer History Museum's Tech and the Future of News initiative. Today we build on CHM's convenings in New York and Silicon Valley in 2022, and our 2023 workshop and public forum, as we continue to explore the latest opportunities and challenges unleashed by technology for the future of news, including and particularly the latest around data journalism and AI. You can check out the report from CHM's last convening at futureofnews.computerhistory.org. I want to introduce our moderator. Moderating today's workshop is David Yarnold, CHM trustee and Pulitzer Prize winning former executive editor of the *San Jose Mercury News*. And you've just been named interim CEO of American Leadership Forum Silicon Valley. So congratulations.

David Yarnold: Thanks.

Etkind: Yeah. On behalf of the whole CHM team, thank you, David, for your tireless work in the months leading up to today and shaping this afternoon's workshop and tonight's public event. So, with that, over to you, David.

Yarnold: Thanks Marc, and congratulations on the new gig. So, what a great group at this table, practitioners, researchers, educators, funders, you know, you represent sort of all facets of news, of journalism and technology. Thank you for agreeing to participate. Why don't we go around and introduce ourselves to one another? Why don't we start with the folks on Zoom, and I promise you, I'll try to keep you in mind. If you raise your hands during the conversation, I'll try to make sure that you're not out of sight for us. So Jeremy, why don't you go first, and then, Meredith.

Jeremy Caplan: Hi David, thanks for hosting, and thanks to everyone for being here. It's a pleasure to be here. I am Director of Teaching and Learning at the City University of New York, Newmark Graduate School of Journalism, and a former *Time Magazine* reporter. I focused on writing about business and technology primarily. And these days, I think a lot about how we're preparing the next generation of journalists to make a positive impact on our civic society. Given all of what's been happening in the world of technology, it's really important, I think, for the next generation of journalists to be prepared to not only catch up with what's happening in technology, but kind of capitalize on the capabilities that they have now, to really do important, impactful work that no one else but them will do. So, that's my focus, is teaching AI and journalism, innovation and journalism, entrepreneurial journalism. We started a program in entrepreneurial journalism to help journalists around the world start up new ventures at CUNY. And I also write a newsletter called Wonder Tools, to help those of us who are sometimes overwhelmed with technology keep up with what's new and actually useful.

Yarnold: Really looking forward to asking you a few questions about all of that. Meredith?

Meredith Broussard: Hi everybody. Thank you for the invitation. It's delightful to be with you, at the Computer History Museum. My name is Meredith Broussard. I am a professor at the Arthur L. Carter Journalism Institute at New York University. I'm also the Research Director at the NYU Alliance for Public Interest Technology, and I'm the author of several books, the most recent of which is called, *More Than a Glitch: Confronting Race, Gender and Ability Bias in Tech*. My academic research is about artificial intelligence for investigative reporting. I do investigative reporting with and about artificial intelligence, and I do a lot of work in the algorithmic accountability space, so, holding algorithms and their makers accountable.

Yarnold: Thank you for that. Let's continue around the table with Marian Chia-Ming Liu.

Marian Chia-Ming Liu: Hi, thanks so much for inviting me, it's nice to come full circle. You were my editor at the Merc when I was a music critic, so I really appreciate that. I'm a project editor at the *Washington Post* kind of in charge of reaching new audiences and innovating new technologies and sections and the ways we tell stories. This is personally important to me, because while Asian Americans are the fastest growing demographic in the US, and also as a child of immigrants, I think I very much felt not heard and not seen. So, it has been my goal to make sure other communities are seen and heard. So, thanks again.

Subbu Vincent: Hello, I'm Subbu Vincent, nice to meet all of you here. Nice to meet some familiar faces and new faces. I direct Media Ethics at Santa Clara University's Markkula Center for Applied Ethics. So, just as a quick statement, applied ethics is not philosophy. Ethics, usually in universities, goes to the philosophy department. I am not in the philosophy department. I face industry, the news industry and social media and such, and distribution companies are my stakeholders, and the work involves convening, consulting, case studies and research all towards one common goal. I look at journalistic and information sourcing in distribution as well as in news. That's basically what I do. And thank you for having me, David.

Yarnold: Thank you for joining us. Davey.

Davey D Cook: Thanks for having me, Dave. Davey D Cook. I teach over at SF State, and I do radio for Pacifica. In particular, KPFA, where we do a daily show called *Hard Knock Radio*, and we're heard in probably about 10 cities. I'm interested to hear what new things are coming down the pipe. We definitely do the dance with AI. We report on the downside of it and how it's impacted our communities, but we also have found it to be a very useful tool at the same time, and so, making sure that our folks are exposed to it is important, and then I got to do battle with it in the classroom. That's a frontline thing for me, how we're wrestling with that in our department, having to deal with that is quite a challenge, but we're up for it.

Yarnold: Kirsten.

Kirsten Tashev: Hi, I'm Kirsten Tashev. I'm the Chief Curatorial and Exhibitions Officer at the Computer History Museum. I work closely with the curatorial, exhibitions and programming team. We're very excited to have everyone here today. We've actually been working quite a bit the last five years exploring AI. We

just opened a new exhibition, and we feel like the museum can play a unique role in helping people sort of cut through the fog of AI and especially to use history as a guide to the present. Nice to have you here.

Marc Weber: I'm Marc Weber, Director and Curator of the Internet History Program here at the Museum, and I started with web history in Geneva, 30 years ago, actually, as executive director of a mini media magazine, as we called it, to experiment with video, sound, working with Swiss radio, TV, *Le Mans*, The Economist Group, when it was absolutely new. And I've been very interested in following online journalism ever since, even though I became much more of a historian.

Yarnold: David.

David Brock: I'm David Brock, I'm a historian of technology, and I am the Director of Curatorial Affairs here at the Computer History Museum. I'm also sort of a compulsive news consumer, so this is personally a topic of great interest to me, and I've been lucky enough this year to be able to help curate our programming around technology and news, and just am thrilled to be in the room and to learn from all of you this afternoon.

Yarnold: Steve.

Steve Smith: I'm Steve Smith. I chair the Board of Trustees here at the museum. I've been a trustee for, I don't know, 20 some years, but I've viewed this program, from the day I heard it was being conceptualized, as one of the really great examples of the kind of work that an institution like ours can do to bring practitioners together around really important issues that affect humanity, really, and appreciate all the effort that's gone into this from those people who have been participating in it, and I couldn't resist coming to see the real thing. Thank you.

Yarnold: Thanks, Steve. Richard.

Richard Gingras: Thank you, do I have to -- oh, it's on. Richard Gingras, I'm the old guy in the room. I spent 50 years at the borders of media, technology and public policy. Started out at PBS in Washington, where my mentor was the founder of PBS, and he said something to me in 1975 that influenced my career. He said, "Richard, if you're interested in the future of media, stay close to the technology, because it's what establishes the playing field and the ground rules." And that wasn't obvious in 1975.

Yarnold: That's pretty prescient.

Gingras: It's a pretty obvious thing today. So, I worked at Apple, built their pre-internet online service. I helped found Salon.com, the first digital pure play. I ran the Excite search engine. And I spent the last 15 years at Google, largely as global vice president for news, which was everything from how we present news to Google users on search, Google News, etc., but also all of our efforts in working with the ecosystem, the Google News initiative, where we spent roughly a billion dollars over 10 years to try to drive innovation in the news industry. Obviously, there's more innovation that's needed as we adapt to this world around us, and that's what I'm here to talk about today.

Yarnold: Great, thanks. Jason.

Jason Koebler: Hi, I'm Jason Koebler, I'm a co-founder of 404 media, which is a journalist owned publication that covers AI, surveillance, privacy and really how big tech impacts humanity, and especially how people are using these new technologies. I'm a former editor in chief of *Motherboard* over at Vice, and besides reporting on these technologies, we also sort of grapple with what they're doing to the business models, especially of smaller publications. So, try to attack it both from like a journalistic perspective, but then also look at the business side of what things like AI are doing to the industry.

Yarnold: Thanks. Alex.

Alex Reed: Hi, I'm Alex Reed. I am a project manager and lead data analyst with Mapping Black California. We are the data and GIS arm of *Black Voice News*, a Black-owned newspaper in Riverside, California. We are Google News initiative grantees. So, some of the people who are doing innovation in news journalism. We do mapmaking and GIS, mainly around the things that impact Black people and people of color across the state, and in some cases across the nation. We are handling issues with regards to race, social justice, public health, archiving, the current administration, honestly, in California and the world beyond.

Yarnold: Thank you, Alex. Well, I hope you can all see why I was so excited about this panel. The breadth and variety of your backgrounds is really pretty remarkable. Let's have some fun today. Let's make sure that we ask each other questions and not just sort of have a sequential conversation. We are all consumers. We all have some expertise. And as Steve said, the Computer History Museum is exactly the right kind of place to bring this collection of experts together, and I want to start with a lightning round for the panel. And I'll go first. If I say, "computing and news," what's the first thing that comes to mind? I'll go first. *The San Jose Mercury News* was the first newspaper online. I was managing editor at the time. It was 1994, and the bad joke is that when it loaded at 28k dial up, it was no longer news. Who wants to go next? Do I have a New Yorker? OK, go ahead, Jason.

Koebler: For me, I grew up and was asked to hit the streets and start talking to people and go do man-on-the-streets interviews and things like that. And, I mean, I have done some of that reporting, but for the most part, almost all of my reporting has been talking to people in a weird forum, finding them on social media. It's like, I got into journalism because I didn't want to sit behind a computer all day. And I sit behind a computer all day, and yet, like, that's where the news happens now. I mean, of course, there's huge use in getting out into the world, but the amount of stories that you can tell by finding, like, weird communities online, by clicking one level deeper in your computer, is pretty amazing.

Yarnold: Awesome. Subbu?

Vincent: So, I don't relate to the word computing in journalism the way I relate to it in engineering. And I wear both hats. I've always looked at journalism as storytelling. So, to the degree that storytelling is aided by anything, it's good. So, I've seen computing as a way to that. So that's why data journalism is the term that jumps into the frame. That said, today's data journalism has got nothing -- has so much, so many

different arms and legs, than maybe 15 years ago when I first looked at it. So, that's kind of the mixed feeling I have in my mind, because on the engineering side, I feel there are much more opportunities for computing that may actually harm storytelling if they're not examined carefully.

Yarnold: I have a hunch we'll get to some of those. How about New York? Anybody there want to be next?

Caplan: I'll jump in. I remember in 2006, "You" were the Person of the Year at *Time*, when I was at *Time Magazine*, we selected "You," the person out there on the internet who was doing UGC, user-generated content, and we had the sort of web 2.0 era. And I think one of the threads when you think back to that period and the current period is the significance of audience as part of our thinking and community thinking as part of how we're thinking about journalism differently. You know, historically, we printed and published and broadcast in a largely one-way direction. You know, I was in the Letters department at one point at *Newsweek Magazine*, and we would take in the letters, and it was very nice for people to write in a letter, and then the editors would largely ignore a lot of that. And these days, there's still some of that that happens, but in general, we're much more attuned to and we're realizing the importance of being attuned to the needs of the audience, user-first thinking in terms of, you know, creating products and services that are actually relevant for people and resonant for people. So to me, going back to the question, I think computing and journalism is really about making it a two-way and multi-party kind of conversation, and making it interactive, making it multi-device, multimodal, and in a way that it really wasn't, historically. At least, I would argue it wasn't primarily, historically.

Yarnold: Thank you for that. Meredith.

Broussard: So, I have been thinking about something, a project that I began a few years ago. I started writing for the internet in, I think, 1996, and sometime in the mid aughts, I realized that everything that I wrote back in the day had disappeared from the internet. The only place that it still exists is in printouts, in archival file boxes in my office. And so, I started thinking about the idea that the internet is forever, and how that's a lie. It's just, a big fat lie. And so, I got really interested in how we preserve digital journalism, and especially for digital-first journalism, those artifacts are not necessarily making it into the archival databases that we rely on. And so, there's a certain way that journalism, which, of course, is the first draft of history, is disappearing, especially data journalism and interactive projects. There's not really a good way to preserve these in library databases. And so, I'd be really interested to talk to people about kind of the AI-enabled journalism present, and what people are imagining that future is going to look like if we still don't know how to preserve interactive artifacts. How are we going to think about preserving AI-enabled artifacts?

Yarnold: Really interesting question. Alex.

Reed: I would say honestly, with a lot of the conversations we have, they come from a two-sided angle. We speak from a storyteller perspective and an accessibility perspective. And when I think about computing, the internet, it is a two-way void where, from a sustainability aspect and storytelling, we are trying to solve the problem of newsrooms -- local newsrooms have no idea how to address the internet,

which, so many local newsrooms thought that they could just take their print papers and publish them, and that was all they had to do, and have now fallen off the map into that one way of the void. And then, as a researcher, as a data analyst, the other side of that is, I am someone who ingests a lot of data but publishes a lot of data into the other side of that void. And our audiences, who do manage to go online and see our publications, have to then deal with the context setting that doesn't happen when you don't have an idea of how to deal with how much information people are constantly getting off of the internet, from people who sit at their computers all day publishing from that storytelling side. So when I think of computing, when I think of the internet, I think of a two-way void.

Yarnold: It's a really interesting term. Thank you for that. Richard.

Gingras: You know, computing, in a sense, has been part of journalism of 50 years, right? You go back to early word processors, ATEX, for instance, systems for putting newspapers together. I think the important thing for us to keep in mind that, you know, as journalists and as those working in newsrooms, is with any technology and computers, you know, computers or technology has value, but they don't have values, right? It's what we bring to it, and as I work with newsrooms and have around the world, I always like to try to keep people reminded of that. And too often, of course, with technological change, people fear it. Newsrooms feared the internet before they adapted to it. Newsrooms are fearing AI before they're adapting to it. And that's a dangerous thing, because we know the bad guys are going to do the bad things. So the question is, how do we do our best to do the good things? Right? How do we -- like, with journalists, when they say, "I'm afraid of AI and losing my job," the response -- I typically can't say it, because coming from Google, it doesn't really resonate. But say, if you're concerned about your career, then adapt to the technology, because this can give you the superpowers that you need to be an ever more effective journalist.

Yarnold: Great. Thanks for that. Davey, do you want to get into this?

Cook: Yeah, a couple of things were said, and I'm glad -- I don't know, is it Meredith? That it?

Yarnold: Yeah.

Cook: I'm glad you said what you said. I've been on the internet since '94 and we were doing our newsletter. For me, it was a godsend at a time when magazines were cost prohibitive, and reaching people in a way that you wanted to was pretty overwhelming. Being able to put stuff online and be a one-man show was game-changing, and to be able to say what I wanted to say, and not have to deal with all the bureaucracy and all that. It was a great tool, and it opened a lot of doors. The playing field was kind of leveled. Fast forward, the playing field isn't leveled anymore. One, people, when I was coming up, we weren't really taught to save everything. So, when servers disappeared or somebody shut things down, a lot of good writing disappeared. I'm glad I saved what I did save. Today, I'm in the practice of download, screenshot, download, screenshot, and if I'm doing my journalism or I'm writing it, then putting it on, but these are things that haven't been taught to people, and especially a lot of the folks that I'm dealing with in the communities that I'm at, and so, that becomes a challenge. The other thing that I would say is that I've seen the writing change, and I would have some questions for Google, because you all are the holy

grail that everybody's trying to get into the search engines. And so all of a sudden, I'm seeing people who want to write, say, about the sky as being blue. But you know, one time they might be like, "Well, I got to follow this format and do these Google words," so all of a sudden, their story's kind of catered towards what's going to make them be seen and heard, versus telling a true story. So that is a challenge that I see. And I would also say that, having been on so long, I see a lot of people don't have ethics, they haven't been taught values, and they don't know how to do basics, you know? I know how to write, you know, so I feel like I can use this tool. I have ethics, so I think I can use the tool responsibly. But I see a lot of people who are real quick to say things that they shouldn't be saying, they're unethical, that they will cut and paste and copy as my students will do and not attribute. Folks don't know how to do research. They don't know how to look things up. Their research today is, "I went online." Went online where, who did you get it from? How do you know what they're saying is true? And so, we're now seeing people make a copy of a copy of a copy, and then saying, this is the truth. That, I think is a huge challenge. So, for me, I think a tool is only as good as the values -- to your point, as the values that you bring to the table. A tool is only as good as the people who use it. And we got to keep in mind that this is a tool. And I'll say one last thing for us, for me, it's been a godsend, because we've gotten sued over the years. Somebody would go, "Hey, that's our picture." We didn't know. So now, you know what? I can make my own pictures, or we need a song or something. You know, we can make our own songs. We can make our own things and put those up there to add to the storytelling. And that's been a game changer for us. But we definitely need to have this taught with values intact real early on, like kindergarten.

Yarnold: I'm going to bet that, while this group may disagree on a lot of things, we're going to agree that the ethics of the tools themselves really don't matter. It's really all about the users. I think we're going to all agree on that. So, you know -- we're not all going to agree on that. Awesome. So, you know from our previous discussions that we're not doing sequential presentations. We agreed to do a conversation, a threaded conversation. So, I'm going to begin with you, Marian, because I'm really struck by your approach. Having worked in newsrooms for almost 30 years, I'm really struck by your approach that starts with audiences, and you talk about it as -- and you talk about how it determines the tools that you use, what you bring to the table, and in the end, what the *Washington Post* has done. Can you talk a little bit about some examples of where you put audience first and how it has changed the *Post*?

Liu: Yeah, I think it's incredibly necessary to know who is a target to tailor the product, because I call it the Field of Dreams Problem, just because you build it, people will not come, because they don't know you built it, and they're also not there where you are building. So, it's only the super nerds who are going to go to our landing pages. Most people won't do that. So, I was a project editor of the Pulitzer Prize winning project on January 6, and I got called on maybe months after they started, and we were -- wanted to document what happened, but our big project was about red flags that led to the insurrection, what went down that day, and the repercussions. But we published almost a year after January 6. So, my first question is, how will people even find this? Do people even still care? So, I took the top 50 stories that we wrote about the insurrection by page views, and looked at how did they get there, how was traffic being driven? And not surprisingly, it was not search. Because we are in a year of pandemic and killer bees, people had other things on top of their minds. So then I was like, well, then we have to be everywhere they are. They can't escape our story. So we did online events, we did newsletter, we did, of course, a site, we did print, we did Facebook, Instagram, TikTok, all the things. And for TikTok, I think we were

especially keen because we wanted to -- a lot of social media, the way it's built, they're not going to -- I mean, think about how you use social media. It does not inherently drive back to the site. So it's more of a branding tool so people know that you're there. So, and we had a very heavy subject, and TikTok is a very, you know, Dad humor, light platform. So, we did the heavier things first, and then we tried something more native to the platform, so people will get that you're not copy pasting, that we're native. So, first thing we did was, you know, the obvious thing, like we had the events, the photos and the events that led to it, what went down the day, afterwards, pretty standard. But also, people get their news and learn differently. So a lot of people like, prefer podcasts. We wanted to do something more audio driven. So we just had a picture of a desktop phone, and then we played the threats that came in about January 6, that people were going to storm the Capitol. So, you just heard the raw threats. And the third thing we did, which plays to the playfulness of TikTok, is we had our TikTok guy, Dave, play the older guy, and then the intern came up to him, and intern was like, "Do you even remember what happened on January 6?" And he said, "No." And then that was it. It's meant to be funny, right? You don't have to cram everything in. And then the caption just said, "To find out more what went down, here's a link." So, I think it's really important to kind of like, meet people where they are, and then get that -- especially when you're talking about like, in your earlier question, we're talking about computers and news. What's been hard -- the meme that first came to my mind is, you know, the dog who's sitting in the fire like, "This is fine." On one hand, it's democratizing the news that anybody can be a content creator, but also, when you're talking about values, when you're talking about who is creating the news, who are they reaching, it also hurts us in terms of business models when we give it away for free. So you want people to know that we're giving -- like, this is investigative work. That project took 10 months to put out. We published on Halloween. So, it takes a lot of time, and I've kind of been on -- I've created many, or managed many different kinds of sections, from a travel section targeting female millennials, we made sure that we were on Instagram and they were playful. I mean, we were able to reach younger females because -- to Well+Being, we wanted to be like the anti-Goop, so basically covering bodies and shapes of all sizes and colors. So we want to be very scientific, opposing to what's going on, you know, with sites like Goop, which put out a lot of woo-woo information. A lot of that is on TikTok. So we started on TikTok, and to style, which has been a very long, you know, flagship thing that Ben Bradley did way -- for the *Post*, but it was only in print. We never had a online footprint. So, how do you curate that to not only, like, reach people to our site. We did a live forum. So we did events, and then we made sure you couldn't just, you know, sign up to go. We had to invite you. So, instead of just hoping, you know, there would be, like, you know, younger readers that could be there, potential readers, I went and looked at not only the big universities like Georgetown, but to the junior colleges, to the high schools, to the film clubs. I looked at all the professors and found the minority ones, and had them invite their students so we could get, like, our ideal audience. And then, you know, serve them up what style would look like in real life. And then, not only were they there to hear -- like, the event was like a reporter interviewing a subject. So, the first one we had Christopher Nolan, you know, and Ava DuVernay, and people like that. And we had it in a museum, so we had it off-site, so it was inviting, but also showed what style could look like. We put our stories into a zine with comics, so it's all approachable to the kind of audience we wanted to have.

Yarnold: So, let me ask you a question. I believe it was Richard who made reference to the fact that newsrooms aren't always the most change forward places. How did your newsroom take to a very audience-focused approach?

Liu: Well, for Style -- so, for Well+Being, that editor kind of had a vision in mind, so we patterned it off what she wanted. Style, we were kind of trying to figure it out. But what was really cool is, instead of having a person from -- you know, who isn't necessarily in contact with the audience that we want to reach, having him be the North Star, we made readers our North Star. So every step of the purpose, just like product testing in the Silicon Valley, we tested with future readers. The name, even the name sounds like it would be fashion, but it's not about fashion, it's about culture. So then we realized, okay, you don't understand the name, so then we need a tagline, but then the tagline has to be very much in connection with what the *Post* represents.

Yarnold: So that editor was receptive.

Liu: Because he didn't -- he was more open to like, how do we reach these people, ideally, and then we even matched up, like, we had pieces and a moodboard of how it might look like. So we took future readers, and we took staffers, and then they created, using those pieces, what the site would look like, and we patterned the eventual site off of that.

Yarnold: So, the *Post* has been out ahead of a lot of others in terms of audience focus. Alex, you have a very different approach to audience at *Black Voice News*, and you speak a lot to decisionmakers.

Reed: Yes.

Yarnold: Can you talk a little bit about the work that you do?

Reed: Yes, of course. And I feel like I don't necessarily have to -- It's visual, but go to the website. The work that we do is --

Yarnold: Actually, I'd love to use the visuals.

Reed: Yeah, the work that we do is, we sort of have three different audiences, because we take decision makers a little lightly, right? Decision makers can mean different things on different levels. Firstly, it can mean people that you've elected, people that have been, you know, assigned by people that you've elected, and they get to make choices for you. Maybe not the ones you want them to make, but they need data in order to make those informed decisions. Maybe they've listened to the data. Maybe they don't. But in often cases, we need to make a publication, or we need to make, at the very least, a statement about the kind of communities that these decisions are being made for. So if, for instance, I were to speak to that level of decision maker, the highest level decision maker, in this case, I'd talk about our Hard To Count Map. We, for the Census, were tapped to be the Black strategic media lead in California. We developed an index of the Black people in California that were going to be the least likely to respond to the census. Right? Black people in California have been notoriously difficult to count accurately, and a lot of people think that, "Oh, well, it's a matter of, they don't trust the census." You know, you hear the syphilis studies, you hear Henrietta Lacks over and over and over and over and over again, and you kind of begin to disregard the general idea of Black people, people of color, lead very busy lives. They oftentimes are coming from single parent homes, male or female. They oftentimes are dealing with multi-

generational homes. They are over represented in low-income homes. They're over represented in homes where they have lower attainment levels, and this just means that they are less likely to go fill out a census form. Maybe they live in a region where they don't have access to broadband, they don't have a cell phone that has access to the internet, and they're not going to go to a website link. Maybe they don't have a census server.

Yarnold: I'm sorry, so, what tools did you use to do this?

Reed: So, first and foremost is pulling previous census data, right? And then secondarily, it's surveying. It's talking to the people in these different regions. It's building connections with other media outlets, right? And so, one of the reasons we were tapped to be that Black strategic media lead was we had a network of over 100 Black newspapers, radio stations and digital media outlets who were already in these communities, who had access to these populations that we needed to survey.

Yarnold: And so, is this built on a GIS platform?

Reed: Yeah, so, this is built using ArcGIS, which is Esri. Esri is a GIS mapmaking service that's based out of Redlands, California. They are the main servicer for the majority of our tools.

Yarnold: Can we see your other examples?

Reed: Yes, of course. Sort of the second audience that we speak to in terms of decision makers is community constituents. This is nonprofits. This is community advocates and policy advocates in, I would say, on the county level in California. It's a COVID-19 dashboard that we created that came out in three phases over the pandemic, the first peak in March, the second peak in December of 2020, and then as follow-ups as vaccines rolled out in 2021 and '22, and this tool also built using ArcGIS. Their dashboarding tools followed a similar vein, pulling data that we were getting statewide, somewhat unreliable data, and tapping nonprofit organizations and community decision-makers in regional areas to get accurate, on-the-ground information about what was happening within their communities, pull it into a central area where they could get information they needed and see where investments need to be made as to who was being served, and seeing if we could improve outcomes for Black people who were overrepresented among deaths, hospitalizations and vaccination, underrepresented among vaccination progress at the time. And then, sort of that last level of decision-makers, when we're talking about our audience, and it's the people on the ground, right? Oftentimes, what we're trying to balance with mapping Black California and *Black Voice News* is the very thin line of telling the stories that people know to be true about their lives, the anecdotal information, and then the facts that we know we can pull from surveying, reporting, census, you know, all of those sort of federal sources, state sources. So, with this map, food deserts in the city of San Bernardino, we were trying to tell what we knew to be true, which was people were overusing food banks and farmers markets instead of grocery stores because they had no access to them in their areas. And so, as you can see on here, majority of the residents who are below the poverty line really only had access to food banks, churches, fast food restaurants and bars, and the few grocery stores that were in the city were in our majority residents above the poverty line areas.

Yarnold: So, let me ask you something. I have a little experience with people who use GIS and it's basically all about visualizing data, and my experience, and I wonder if it tracks with yours, is that when people see data represented visually with a tool like this, they say, "Wow, I had no idea." And it really is sort of an eye opener for them, even though it's a fairly straightforward approach. Is that your experience?

Reed: Yes, absolutely. And it really depends. We see that so often with the like, community constituents, who are the advocates and the community members, because they're the ones who are not used to seeing the maps and the charts and the dials and all that sort of thing. People who are making policy decisions on a greater level, they don't really care about the visualization so much, they just want the hard information. But when people who are living those experiences, who are in that every single day, see these visualizations, they see themselves represented, they're really the ones who have like the deep connection, the emotional connection, the tie to the information laid out. They feel as though, "Oh, my lived experience, my truth, is being represented on a scale that will actually inspire change in my community."

Yarnold: So, there's some validation there too.

Reed: Oh, absolutely.

Yarnold: Yeah, that's so interesting. So, Subbu, you sent me an email saying not to forget that there's a sector we don't write about. There's a whole sort of way of seeing the world that journalists don't write about, and that's around income and class divide. And in a recent piece you wrote about election coverage, you said, "This is a call to journalists to untie themselves from the vocabulary of the political polling industry." So, do you think that there are -- can journalists use technology more effectively to do what you ask them to do?

Vincent: I think the way Alex's organization has gone about class already says they're using technology to do it, but they did not start saying, "I already know what story I want to tell. I have a sense of what story I want to tell. I have the sense of the gaps, and I'll take what's already there and go tell the story." They actually went about it saying, "what's the data showing, what data is missing, what data is needed?" They've got a sense of going about actual data first, which includes class indicators. That's a data experience. I meant -- so, when you ask, I mean, how can technology be used to maybe sort out the class imbalance, or what I call the anti-working class bias in America in actual storytelling, I think we've got to start with the proposition that people who are lower income and poorer people in America can actually be sources as whole people. If they can be sources as whole people, with lived experiences and ability to prioritize and contribute to actual solutions, then what happens is their views and voices will get included in the storytelling that individual reporters want to do. The issue with the sourcing paradigm has always been held hostage by exigencies of the moment, deadlines, work pressures, one story a week, one story a day, etc., etc., and so, the investment of time -- so, in my mind, in Applied Ethics, I imagine what I call, like, a line, I mean, below which you can't just extract quotes, views from people at short notice. People are busy, like she said, they have less autonomy over their lives, so the investment of time that reporters need to put into like, this example Alex gave about food pantries, that itself would not be known by general news reporters, as to you can go to those areas and meet people who actually are in

need and understand how they view the world, including politics, how they view elections. Why do they stay out of elections? So, just investing more time results in turnaround. But it won't result in turnaround for tomorrow's story, it will result in turnaround for stories over time and the criticism by those reporters who do this very well. For example, I interviewed Gary Fields. He's the Associated Press's democracy reporter, fantastic practitioner. He goes to Georgia. He interviews actual people who will say on the record why they will not vote for either party in the election. Annual household income, 50k and below. 70 million people sat out this election. Even if 10, 20 million of those people voted, it will blow up the swing state map. And yet, in the swing state vocabulary, they only bring middle-income people and higher-income people of the independent minds into TV newsrooms and make it look like swing state voters are all middle income. That's not the case. But how will those people even show up in news if they're not included in just plain political news stories, as if they're voters too? They're voters, but they're nonvoter voters. They're saying there's nothing in the economy for me to vote for. So, I think sourcing has to change, and technology can help by maybe starting to do just plain and simple crowd sourcing. The way 404 Media beautifully asks, like, in each of your investigative pieces, you actually ask a question, "Are you from Palantir Media? Do you want to speak to us off the record?" Like, the expose you folks did this morning. Generally, we have to be open to be a -- to be able to be found, and to go out and reach people who are for -- from income levels that are far outside whom we think as sources.

Yarnold: Yeah, that's pretty interesting.

Koebler: Can I just very quickly address--? Thank you for saying that. And one thing that we say internally, like, how we try to do our reporting, we call it ground up reporting from within. Like, that's our internal North Star for how we approach stories. We don't really care -- I mean, sometimes we care what Mark Zuckerberg is saying, but very often we care what the lowest level employees at tech companies are doing. We want to talk to the Amazon workers. We want to talk to, you know, the people who are working in factories and things like that. And over time, that has really made our reporting a lot better, because you start hearing about these issues that bigger publications, frankly, are missing, because they're just talking to people in the C suite, people at the executive level, and they're not necessarily capturing these concerns of working class people within these giant tech companies, and you can easily extrapolate that out to any industry, to the entire economy, to voting, to politics, etc. And so, I think that's a really smart thing.

Yarnold: So, when you say from ground up, when the four of you started up 404, did you deliberately talk about that?

Koebler: We did. I mean, we had like a little internal guide. I mean, I think in our first announcement post where it said, "Hey, we're 404 Media, this is how we're going to try to tell stories." I think what we did say, ground-up reporting. And that doesn't mean that you never write about what rich people are doing or what the political class is doing, but we use sort of this entry point of, someone can get a job at an Amazon warehouse off the street, like, what are they -- how is Amazon treating those people? And how are they experiencing this technology, or how are they experiencing their jobs and their lives? And very often, you can work up the ladder, and by that, I mean you talk to them, and maybe you talk to their boss, and then maybe they leak you some documents, and eventually you start talking to the executives, but you're able

-- we're able to break really big stories because we're focusing on something that's like, really granular at a very, like a hyper specific level, and then sort of broaden that out over time, which I think does help us be a little bit less extractive, because we try to talk to people about what they really care about, and we try not to tell them what to care about. We try to talk to these workers and try to talk to what impacts them.

Yarnold: That's so interesting, because that's exactly what Subbu was saying, that a lot of political journalists approach it with a frame already in mind.

Vincent: And they're taking the frame of a polling industry that is very clever. Before elections happen, you will not see polls that say "annual household income less than 50k, how are voters leaning?" Because they assume those are nonvoters already, because the actual polling campaigns say there's no ROI in talking to those people, because they're not going to vote. Then journalists then say, well, there's no ROI in actually talking to them as sources, because they're not going to talk to us. So the whole thing is self-perpetuating. But after the elections, if you go to the AP exit polls, you'll actually see data that says under 100k, under 50k, you'll see an income number, which way did people vote? If we can report income-based elections outcomes, why can't we report income-based elections polling, opinion views?

Yarnold: It's a great question. Richard, I see your hand up. I was going to pivot to you anyway. Davey, I'll get to your question. When it comes to computing and news, you have arguably had one of the best seats in the house over your distinguished career, from your time at @Home, at Apple, Salon and Google. You've been a funder, creator, thinktank advisor, and as of this week, a board chair at a group of community digital sites in Ontario, Canada. You did a recent Medium piece about democracy journalism, and it's full of all sorts of provocative terms. And I found that it was interesting that the resolution, one of the resolutions, lay in community-based journalism. And I'm interested if you could sort of walk us through your thinking in that piece, and what it was you had your hand up to say?

Gingras: Yeah. Well, starting with that piece, and it's up on Medium, it's on the evolution of media and democracy. How did we get here, and how do we move forward? I often find, you know, that too often, when we're trying to understand a change, is that we fall into simple memes. We don't go deeper into our analysis. So, as I went through that, and as I surface in the piece, of like, what's happened to cause our democracies to be so much less effective? There are two key things that I would point out. One was, if you study the history of communications, you can go back to Gutenberg, right? As you expand access to expression, it always drives disruption, and it always introduces additional perspectives and conflict in societies. Right? The Gutenberg Press, Martin Luther triggered the Reformation. Right? There's never been a golden era of truth. But as you advance that forward, if you take it into the world of electronic media, television, broadcasting, cable, the internet, right, it just got exponential in terms of the number of viewpoints out there, and that makes it extraordinarily difficult for a democracy to work and makes it extraordinarily difficult to find consensus, right? That's point one. Point two comes out of the really marvelous research of Robert Putnam, which he did starting 50 years ago in Italy, on the whole notion of what are the correlations between an effective provincial government and an ineffective one? And the remarkable conclusion was simply this, in provinces where the governance was effective, people were engaged in their communities. And he didn't mean they were engaged in civil society. He meant they were engaged with each other. You know, his book, *Bowling Alone*, in that era, in the '60s and '70s, was

largely as a result of television, spending six hours a day watching television, we're not going on picnics, right? And then you take it forward to the internet, and we're kind of dropping into our silos. We're not engaging as a community. So, the core point that I make there, which is why I've been so enamored with this organization in Canada I've been working with, is how do we rethink the role of a local news organization in a community? In fact, with Village, we talk about putting in place a community impact platform of which the newsroom is a part, and the core objective is, how do we strengthen the communities we're looking to serve? How do we drive them to engage with each other? And by the way, a key element of that, which I'll draw in the research point that I was going to make is, to me, one of the unfortunate pain points in the news industry today, I've been asking a question to every publisher I know for the last five years, "What kind of research are you doing about the market you serve?" And 98 percent of the time, the answer I get is, "We study our usage." And I, "Well, what does that tell you about your market?" Right? Do you understand the information needs of your community beyond your perceptions of their needs. Right? With Village, obituaries drive as much traffic as all of the accountability journalism. You know, what's going on in a community park? What new restaurants are opening? I'm doing some work with Chicago Public Media, and with Medill, we did a massive study about local news habits in Chicago, and one key question at the end was, "What motivates you to consume local news?" What do you think the top motivation was? To save money. Number two was health and wellness. Third was, I want to understand what's in going on in my community, so I can talk about it. And number three is, I want to know about the events in the community, right? That's hugely powerful and hugely important. And the interesting thing about that, and about looking at a community in that fashion, is it makes business sense, right? Village media is profitable entirely on the sale, direct sale of digital local advertising, because that local jeweler, that local funeral home, the only way they can actually drive awareness in their society isn't via queries on Google search. It's by driving awareness through that local media property, and at that level, interestingly, advertising is valued information. It's not Exxon greenwashing, it's valued information. And I think the mistake often we make in the emerging arena is we have a lot of emerging players founded by journalists, extraordinarily noble, but they don't understand the business. And as I say, they would rather eat worms than sell an ad.

Yarnold: I think that's so interesting, because it was John S. Knight who, back in like the '60s, would talk about the importance of store news in the night newspapers. And he meant ads. So, that's so interesting. So, who trains those journalists who staff up those sites and populate today's newsroom? So, Jeremy, you have a large role in that. And I personally bowed out of two deanship searches when I left newspapers because I couldn't figure out what to teach students. So, I was really intrigued by the couple of videos that are on your site, where I was seeing grad students who had come there to write feature stories, all of a sudden doing video and captions on their work, and talking about becoming true well-rounded multimedia journalists. So, can you talk a little bit about how you view teaching prospective journalists now, and a little bit about your Wonder Tools? And I'd also be really interested in your four-point framework for evaluating AI tools. Because then I'd like to turn to Meredith to talk a little bit about how AI gets used.

Caplan: Well, there's a lot there. I would say, first of all, in terms of teaching the students in our school, we focus on serving communities, right? Richard was talking about how we can actually serve people based on their needs and their lives that they're living. So, we have an Engagement Journalism program,

which is relatively unique among journalism schools, in the sense that it focuses on ground-up journalism, essentially starting with the community and understanding community's needs, and then developing products and services that really are resonant with the people who actually live and work in the community. The bilingual program, which we have, is also relatively unique, because a lot of readers, it turns out, are not able to find quality journals and content in their own language, in some cases, in their communities. And so, we're interested in training a generation of journalists who can report in multiple languages to serve their local communities. And then, in the entrepreneurial realm, we see a need for lots and lots of new experiments, you know, lots of new projects, micro projects, in many cases, newsletters, podcasts, niche video channels. And these are products that are going to serve a small group of people relative to the huge masses that media has historically served. And so, we've focused on training people who are entrepreneurial in mindset and willing to try and willing to fail and willing to run, you know, short experiments. Our entrepreneurial program, for example, the most recent iteration of it is 100 days, right? It's essentially a sprint. It's a boot camp to give people practice creating something and building not just the journalism part, and to Richard's point, they have to sell an ad, or they have to generate revenue in one way or another. And so, we focus not just on the journalism actually, but on the entrepreneurial thinking and on sales, and on developing a revenue projection and thinking about building a team and thinking about running a business in a sustainable way. So these are the kinds of things that we're teaching the next generation of journalists. By the way, we're also teaching professionals that are already in the field. You know, there's been a gap historically in journalism schools, in the sense that they serve younger students by and large, but there's a huge number of journalists out there who are transitioning to new positions or new opportunities, or being called on to create new products or called upon to do metrics and analytics, and they haven't been trained to do that. So, we're, as a school, we're also focused on serving that existing group of professional journalists who need professional development, and this is an area where I've seen the industry really fail, in my view, in the sense that many news organizations just don't have the bandwidth to do that, or just haven't put a focus on doing that kind of professional development. So, individual journalists and journalists on staff at a lot of places are kind of left to their own devices to figure it out. So that's something we're aiming to do, and we have been doing at CUNY.

Yarnold: I have a question, not to interrupt, but I will. Do you think your journalists, your students believe that it's their job to help strengthen the communities they serve?

Caplan: A lot of them come in to our school because they want to make a difference in the world. So, you know, it used to be at least, I used to think of people coming into the field because they wanted to be a great writer, or they wanted to tell stories. They wanted to be on TV as a broadcast journalist. I actually, when I talk to our students who are coming into the school, a lot of them see a problem in the world, or they're frustrated with the governance that they see around them, or they're frustrated with systemic inequities, and they want to make a difference. And so, one of the big issues we confront is exploring the nuances and the differences between activism and journalism.

Yarnold: That's interesting.

Caplan: So that's a big topic for us, and exploring the role of journalists in making change, but a role that's different from the role of an activist in making change.

Yarnold: And Jeremy, you're constantly bringing new tools to your classrooms.

Caplan: Yes, I mean, so, the tools that we work with, I think, are really important in enabling us, empowering us to make an impact, particularly when you're dealing with individual solopreneurs, right, who are creating a newsletter or podcast, video channel, whatever it is, a niche site. In order to do all of the different things, managing the growth of that, managing the monetization, developing the new product, distributing it, creating journalism on a whole bunch of different topics, editing carefully and thoroughly, creating multimedia content. To do all of that, you need a broad set of tools. And so, we do try to enable students to be creative with how they do their work. Part of it's deciding what you're going to focus on and doing the, you know, the eternal verities kinds of things, the reporting and the writing ethically, but you also have to do it really creatively these days in order to be as impactful as you can. So, that's a separate focus that I have, is helping journalists do that, because most of us don't have the time to figure out all these tools. Every single day, as most of us here probably are aware, there's new launches, there's new AI tools, but there's all sorts of other tools that are available to people, and it's hard for journalists, when they're busy, to discern what's actually useful and then how to make use of those tools to do quality journalism. And per Meredith's point, to do it ethically and to be also mindful of the dangers, right, or the potential hazards that we encounter when we're using some of these new tools.

Yarnold: So, I would recommend all of you take a look at Jeremy's Wonder Tools Substack. He's got 50k subscribers, and including a piece I thought was really interesting, An Investigative Journalist's Favorite tools. I thought that was really pretty terrific. So you write about a four-point framework for evaluating new AI tools.

Caplan: Well, there's a lot of different ways we can look at these tools. One of them is, is, you know, is it useful for something I'm actually doing, right? So there's a lot of tools that do all sorts of whiz bang kinds of things, but we need to start with our purpose, right? So if we're trying to analyze a particular set of data, if we're trying to make sure our writing is clear, if we're trying to just get a transcript or translation of material, right, we start with a purpose in mind. So, that's the first thing is, like, what are we actually trying to do? It's like, if you're looking to go somewhere, you first want to know what your destination is, right, before you figure out your way-finding. The second thing is, you know, what's your level of time available? What's your bandwidth, right? Some of the -- some of the tools that we're looking at are really, really simple and easy to use, and others require a lot more, you know, effort and time. If you're hosting an AI tool locally on your laptop, that may require a little bit more careful thought and execution than if you're using a precooked AI tool that's publicly available. So, bandwidth and availability of your time and effort. A third is, you know, looking at the actual platform and sort of the privacy and security issues, the ways in which the model was trained, and the accuracy and the reliability of the information you're looking at, right? So that's a key third point. And then the fourth is just the usability. Like, we all have so many choices at our fingertips, so we have to find the tools that really work best for us, that resonate with us and that suit you. Because you have a choice of so many different options, and ultimately, it comes down to what do you feel most comfortable with and what resonates with you and your purpose and your preferences. So, those are four of the factors that I think are valuable to kind of consider as you're developing your own toolkit. We all have to have our own toolkits, and they have to be suited for our work and our preferences.

Yarnold: That is super helpful. So let's stay on AI for a minute. Meredith, the titles of your two most recent books are *Artificial Unintelligence: How Computers Misunderstand the World*, and *More Than a Glitch: Confronting Race, Gender and Ability Bias in Tech*. Safe to say, you are an AI skeptic.

Broussard: I'm actually, you know, I would call myself a critical -- critical voice in AI. I would call myself a critical scholar of artificial intelligence. I don't know that I would call myself a skeptic. I mean, AI is here, you know, I'm not denying its existence. I am, however, raising a lot of questions about what is its role, what are the values and ethics embedded in technological tools like artificial intelligence, and questioning the hype around these tools.

Yarnold: Can you talk a little bit about ways that people assume AI is going to be good for information dissemination, and turns out not to be? I think the bias piece probably speaks to some of that.

Broussard: Yeah, so the bias piece is very straightforward. There are biases in the world, and those biases get embedded in AI tools, in part because the tools are created by humans, and humans have unconscious bias, right? We all have it. We're all trying to become better people every day, but we can't see our unconscious biases. And then we have these small, homogeneous groups of people creating technologies. They embed their own collective unconscious biases in the products they create. So, that's how bias works in technological tools.

Yarnold: What is it you think people don't understand about AI?

Broussard: I think there are two things that people don't understand. I think people don't understand how AI works, and I think people also don't understand that they've been using AI for a really long time already. Okay, so, if you think about the different kinds of AI that are out there. Like, people are talking about generative AI right now, but a few years ago, everybody was talking about machine learning, and actually, you've been using machine learning for years without realizing it. Every time you do a Google search, something like 250 different machine learning models get activated. And so, using AI used to be disguised, right? When Amazon claimed to have these stores where you could walk in and pick things up and then walk out and get charged to your Amazon account. People are like, "Oh, it's such fancy AI." Well, actually, it turns out that it was workers in, I think, India, watching people shop and writing down what they picked up. So there's a lot of effort invested by the tech companies in making technology seem like it's magical, seem like there's no, you know, there's no little man behind the curtain, but there are always ghost workers in the background. And so, something else that happens is the gatekeepers, the big tech companies, really want people to feel intimidated by technology, so that the technology can have more status, right? So that they can charge more for it. And so, this thing has kind of arisen where people who are not coders feel intimidated by new technologies, feel intimidated by AI, and feel like it's something they can't understand and therefore they have to submit to it. So, I do a lot of work around demystifying AI, explaining what AI is in plain language, explaining complex technical terms in plain language, so that we can bring more people into the conversation. One of the traditional functions of the media is, of course, accountability, holding power to account. Well, power nowadays resides in algorithms, resides with the people who make algorithms. So, that accountability function has to transfer onto algorithms and their makers, which is why we have algorithmic accountability journalism. But when I

started doing this kind of journalism, you know, with and about AI, I realized nobody knew what I was talking about. And I would get questions like, "Okay, well, you mean, you make like a robot reporter?" And I would say, "no, that sounds really cool, but that's not what I do." And so, I realized that a really important part of doing high tech reporting is explaining in a very low-tech way what you're doing, so that readers trust the reporter, so you can increase transparency, and that transparency increases trust.

Yarnold: What does that look like in a given article or in a given publication?

Broussard: Well, if I'm good, then it doesn't look like anything at all, right? It just looks like news. So, you don't need to have these complicated whiz bang things. So like, when I go and I spend two years building a hacked expert system, I'm not going to embed that in the story, because nobody is going to understand what I'm talking about. I'm going to make it look really seamless, and I'm going to have a line saying, "All right, well, what I did in order to make this story --" So, I did this big story for *The Atlantic* years ago about textbooks in Philadelphia public schools. And the research question I ended up answering was, do students in Philadelphia's public schools have the books and other learning materials that they would need in order to learn the material on the state-mandated standardized tests? And that was a really complicated question. You need software to answer it. The software didn't exist. So, I built it, and it was AI software, right? But nobody wants to hear about two years building software. They want to hear, "The software didn't exist, so I built it," and I've built trust with my reader, as a journalist, as an ethical, you know, person who's behaving ethically relative to my audience over the years, I've built trust by telling them -- telling readers about my sources, telling them a little bit about my process and being transparent. Like, when anybody asks about the details of what I did, I'm totally happy to talk about it.

Yarnold: Subbu, you want to get in?

Vincent: I wanted to come back to this question about ability, bias, values and so on. And I think Richard made this point about tech and values. And I wanted to complicate that actual angle. If you go to Perplexity, or any AI overview tool, You.com, Google overview, you ask the question, "Did Justice Clarence Thomas take gifts from Harlan Crow?" Or you ask the question about those two names and what the actual connection is, when the news cycle was ongoing, you will get, "Yes, Justice Thomas took it, and here are all the details." You'll get the summary, AI summary. You'll get the citations on the right with the brand logos of the entities that did all of that. All of that seems fair. Everybody's happy. Now you change your question. You ask the question, "How did it first come to light that Clarence Thomas took gifts from Harlan Crow?" You go see the answer to that, and the answer to that is that ProPublica in June 2023 did the expose for this. You'll find a small blot, and then you'll get a bunch of other things. My question has been, for tech and bias, is who decides the site -- that all citations are equal? I would rather, when the first question was asked, that the boots on the ground story work that took six months or a year to do, where those reporters went to Georgia and met Clarence Thomas's community members, asked a bunch of questions, talked to people associated with Harlan Crow, did all the work, without that story coming to light, the rest of the second-order derivative work with some primary value add wouldn't have happened. It takes the first story of that kind to break the ground. But if you look at the list of citations, the ProPublica citation will be seven, eight or nine. I'm just going to state this as a case to you. My question has been, did the engineers who built the UX for that AI overview, did they have a conversation about,

should we just follow a default citation approach, or should we differentiate citations from each other? Should we say the journalism that went into one of these pieces is the primary journalism, and the rest of them is not, or they added value later? Should we do a chronological thing, in which case, within a few hours or within a few days, depending on which news feeds I'm seeing, the work that 404 did for something will go down in the list. So, I think there are questions about what values the people who are building the technology bring to the technology, before we can ask the questions about other people who are using the technology. So, I've asked this question at a few places. I get very interesting answers, because we assume that citations are all equal. So, I wanted to hear what you folks have to say about citation UX, just design of citations, when journalism about reality is implicated, especially when without the first few pieces, you wouldn't even have known that that reality exists. And this is happening over and over again. So, I'm just giving you one example. So, this is one case. Now you take a completely different case of again, technology use for storytelling. This is not distribution. This is actually storytelling. So I'm on the board of KALW 91.7 FM here, which is a local media organization, San Francisco, just in case the folks on Zoom want to know, they're doing a podcast called *Uncuffed*, which is a storytelling effort for people incarcerated. They produce their own show, and one of them is now -- the host, Greg, he was incarcerated the last year, he's now the host outside, and they could have gone and -- this is KALW, which is a well-known journalism organization. Now, I mean, why did they decide to let people incarcerated tell their own stories, as opposed to treating them as sources? They've actually made a choice that they will tell their own stories and the organization will put them in together as a show, and it goes out online for actual distribution. So, there are conscious decisions people take, and I feel that needs to get into discussion more often. Then we will be able to overcome these kinds of biases, tech values and so on.

Yarnold: That's so interesting. Jason, I want to get to you, but Davey, I know you had a comment. Thank you.

Cook: As we were talking, I want to put on my hat of working for Clear Channel for about 10, 15 years, also working for Time Warner. And one of the things that I'll never forget was probably back in '94, '95, I was told by my bosses to go out and bring our street team, or offer our street team to every college in the Bay Area. Send a notice out, I was in management at the time, and we'll come over and we'll do a free party for you. And the question was, why would we do that? And the answer was, we want to make our radio station, KMEL 106, a bad habit that people can't quit. And that became the modus of how we operated. Everything we did was designed to get somebody to be the ultimate consumer. You didn't have to listen to our station, but you would know we were the station for Hip Hop and R&B, and everything, the programming and everything was centered around that. Fast forward, Time Warner, you know, programming the digital stations, and we have this big meeting, and we're told to reinforce learned behavior. Again, people in both places did research, put people in rooms like this, find out everything they could, what colors you like, down to the demographics. We had a profile for Black folks, brown folks, old folks, the whole nine. Now, that makes sense for us to just get as many people as we can have, and we would have these type of meetings. It was literally, we have a map, and we'd be, "How do we get Black women? How do we get brown women? How do we get Black males?" And the job was to conquer those demographics, make them locked into us. Now, when we were an independent station, maybe that was okay, because maybe the station next door wasn't doing that, but once we became centralized and had

1200 stations, well, then that becomes a problem, because that's the operation for a whole lot of organizations that are communicating to folks, and no variety. So, the job is to conquer demographics and get us to stick to whatever it is that we're offering. That means truth gets tossed out the window. That means that we're not going to necessarily dig deep. We're trying to figure out what we can do to get you locked in. I don't think that has changed when people have moved completely to the digital space, and we're talking about some of these things now. I see more branding than I see genuine conversation. I see folks who are addicted, and that was what we were doing at Clear Channel, getting people addicted. Folks are addicted now, and I don't think that's been factored in. I think journalists are addicted. I'm looking on my feed for my news story before I'm going out and actually going, "Let me go down the street." If you don't believe me, watch how they do crime reports. There's what, 15, 16 websites here that are on social media that are just dedicated to doing crime, and they have entire ecosystems on making Black people look crazy. And these things are amplified, and they're the first things that pop up, and then policy is made off of that, and news stories, by reputable news agencies, are done based upon what I would say is lazy journalism. You didn't go out and find out what was going on. You just basically cut and paste. In this case, you took a video that somebody gave you, you showed it and it got amplified, and then you are now under the rubric or the umbrella of a journalist, because journalism now means a whole lot of things to a whole lot of people. It's not just people who may do the work that you do, Jason, or what you all are doing. It's like, the guy who has a website that everybody goes to, that's a journalist now.

Yarnold: Well, so, that point about truth telling is, I think, at the heart of how we report on AI.

Cook: Well, I also think that we have to deal with the addiction aspect of it, because that addiction is something we're not talking about. There are folks that are locked into certain things because a lot of time and money was invested. We were spending millions of dollars to get you addicted to listen to our stations. We were spending even more to get you addicted to listen to us online. I don't know if those addiction things have been broken. We're not talking about that.

Yarnold: I think all of us would agree that, no, they haven't, and screen time is longer than ever, which lets me turn to 404 Media and Jason. You, of all the sites that I visit regularly, you seem the most deeply embedded in the culture itself of technology. And you told us in a conversation we had before, that we had last week, that 404's mission is to talk about how technology -- the technology's impact on people, and that means that you have to know a lot about the technology. You also told us that to do research, you said, like, "I'm in 100 different Discord rooms." And that stuck with me, because it sounded like some weird *Severance* scene. But can you talk a little bit about 404's approach, and a couple of stories in particular that you think demonstrates what it is that makes 404 different?

Koebler: Yeah, I mean, I think when we talk about AI, the biggest thing is that it has allowed people to spam the internet very quickly and very easily and better than they ever have before. We did an article in December 2023, I think, that we had worked on for, I want to say, maybe eight or nine months about there being child sexual abuse imagery in a really big open source, large language model. They were basically unable to clear it out. And that was an extremely difficult story for us to do, because it dealt with illegal content that we didn't want to see and would have been illegal for us to see. You know, it's like, very explosive allegations, so on and so forth. And it took us eight months to do, probably. And as you

mentioned, we published a story, we got a lot of attention. Within 10 minutes, that article had been scraped and reposted by 30 different AI news farms that basically like, took our work, wasn't word for word, they had changed a few words within it, they had changed people's quotes and things like that, and these ripped off versions of our articles were appearing higher on Google than our own work.

Vincent: And they may even cite you. They even cite you, but they'll still be above.

Koebler: Right, and so, I mean, that's like an example. That was happening to all of our articles, but that was a story that we did that we spent a lot of time on, and so, we sort of dove into this ecosystem of who is running these websites, and how are they doing, and what's the business model, what's enabling it, so on and so forth. And we actually found a person on Fiverr, on the sort of like gig work website, and asked them to clone our website, to basically make an AI-generated version of our website, where they trained their model on our work and then published 200 articles a day, just generating random stuff based on what we had published, and then we wrote an article about that process. And to do that, we needed to understand how this spam economy worked, more or less, but it was also pretty existential for our business, because we were doing this journalism, and then it was getting ripped off and republished essentially immediately. And at the time, it's much better now, but at the time, Google News wasn't indexing us. Google News now does index us, but they were indexing these publications that had more like, authority than us, because they were publishing 200 articles a day, and so, it seemed like they were more of a news site because they were just scraping the entire internet, republishing all these different versions of our articles, so on and so forth. I know this is a bit of a ramble, but basically, we are trying to figure out how people are using these tools and how it's impacting people's day to day experiences on the internet. And to do that, you sort of just follow the money. We've been joining these different Discords where you can learn how to create spam that will go viral on Instagram, spam that will go viral on TikTok. A lot of these people are paid out directly by the platforms, because they're seeking engagement. They're seeking shares and likes, and a lot of the stuff that they're making is just very, very weird. And so, people will look at it for a second, click like, or frankly, comment on and say, "What the hell is this?" Which the algorithm takes as positive feedback because it's been engaged with. And so, to do this, we don't need to be like, the most technologically inclined people, but we do -- We don't really want to go to like TechCrunch Disrupt and hear what Sam Altman has to say about the latest version of GPT. We're very interested in, when that is released to the world, how are the people finding ways to exploit it in ways that affect journalists, that affect people's day to day lives, that affect artists, and so on and so forth. And so, like Meredith, I mean, I think that we're not AI skeptical, but we are very critical of how these technologies are being used. Because despite all the lofty utopian claims about AI doing your job for you and all of this sort of thing, it's like, the dominant use of AI still is for porn of celebrities, like, nonconsensual pornography of celebrities. It's for spamming social media. It's for doing SEO a lot better, and that has a major impact on our information ecosystems and just frankly, discoverability on the internet. It's becoming really, really difficult to stand out when it takes me a week to do a really good story that I put my heart and soul into, and in the meantime, 500 AI content farms have published 5,000 stories each, and they've all got a bite at the algorithmic lottery that is social media.

Yarnold: So, I want to invite you all in a couple of minutes to ask each other any questions that have come up for you during this conversation, but I want to stay with this for a minute. One of the best

traditions of journalism is to be able to point out wrongdoing and hold people to account. And you talked a little bit about how 404 ends up being like a white-hat hacker, sometimes. And the story that caught my eye, and we first talked about, it's actually a GIS story, is about -- what was it? Graylark? Which was -- why don't you tell the story?

Koebler: I think GeoSpy, it was called, but basically it was an AI tool that allowed you to geo-locate people based on an image. And so, if you guys know like, GeoGuesser, the guy on TikTok, who you take a little picture of a street, and he can identify it, because he's very good at playing this Google Maps game, there's now an AI that will do that. And we, sort of, we test -- we are guinea pigs for ourselves very often. Like, quite often, my colleagues will say, "Does anyone feel like being tested on right now?" And so I sent Joseph, my colleague, a lot of photos of me just on vacation or around my house, and he ran it through this tool, and he was able to pinpoint where I was pretty accurately, and this has all sorts of implications for, like, stalkers, harassment. It has a lot of legitimate uses as well. I mean, it's a very useful tool for journalists who want to know like, where a war crime is happening or something like that. But we basically, like, wrote this story, and this company was contracting with the federal government, with a few state and local police offices as well, and they sort of turned off some of the broader access to the tool. And very often, we're able to do a story, and then the company is either unaware that something bad is happening with its tool, and so they either tighten the moderation -- you know, we've shut down companies before because we found that they're acting unethically, and then they get a congressional investigation, things like that. So we are, like, impact-focused, like, we want to have a positive impact in the world, and we want to make sure that tech isn't being widely abused. Although it, of course, will continue to be. But we do have the impact, sort of, in our -- we're going for it often. We're trying to have some sort of positive impact. And then I guess the last thing I'll say is, like, there is so much AI generated content in the world right now, and we don't want to say like, "Oh, we'll never use AI," because, you know, we do use AI all the time without even knowing it, with things like translation tools and search algorithms and so on and so forth. But I think that the risk that journalists have, and that publications have, is that if they start relying on AI too much, I think that there's a very -- it's a very inhuman technology. It's not very good at mimicking like, a personality, in my opinion. And so, we really decided from the get-go that we didn't want to have a view from nowhere. We didn't want to do both sides for everything. I mean, we didn't want to also be psycho and like, just anti-everything, but we wanted to tell journalism with a perspective and with a personality, and we wanted our readers to know who we are and how we did the stories, which Meredith also brought up. And I think that that is the path forward, especially for smaller publications, where they know there's a human being behind the work, because that's how we've been able to stand out, is just saying, like, "Here's who we are, here's what we believe, here's how we did this article." And also, like you said, Marian, like, how can we get you involved? How can we get the audience involved? How can this be more of a dialog, a back and forth? And at this point, we're getting a lot of our story ideas and tips directly from our readers. They know what is a 404 Media story, and they're like, "Hey, check this out. I saw this, like, look into it." And that that's been a really cool dynamic, I think.

Yarnold: So, you had a really terrific piece, I think it was last week about the zombie internet, and you said that, "I've spent more time than anyone I know endlessly scrolling through AI spam." Congratulations. Are all really working with the zombie internet?

Koebler: I think mine's worse, because I've reinforced the algorithm to show me AI generated content. But, I mean, I think it's like, it's entirely possible that we will just be seeing more and more of this. You know, Facebook was sort of the first platform that was overtaken by this, and it was almost like a look into the future, in my opinion, because Facebook is like, this older social media platform at this point, very mature, and honestly, kind of like decaying from neglect .Whereas like, Instagram and TikTok have just a little bit better moderation, and they're a little bit less gameable spam-wise. But I mean, I do think that people don't want to see like, weird AI disinformation and body horror and things like that when they open up their social media feeds. They want to like, see what their friends are doing on vacation. So I think that there is a moment now, and that's kind of like, why we've been repeatedly ringing the alarm bell. This is what the future could look like, if we don't stop it in some way, but at the same time, it's like, we're trying to build a direct connection with our audience. So I think that the efforts of things like what Marian and Alex are doing, going out into the communities, connecting with communities, connecting with the audience, you know, we are trying to build our newsletter, our direct connection over email with our audience. And I think that that is the future of news. And it's been the future of news for a while, but the days of being able to just like, toss your story on Twitter or toss your story on Facebook, and hope it goes viral, are over, and they've been over for a while. So, I'm optimistic, actually, despite all that, but because I do think that there is an increased opportunity to connect directly with audiences. It's just, the idea that you can do that at scale easily is gone, and it's been gone for a while.

Yarnold: Do you agree with that?

Vincent: I want to connect what he said to what Richard said earlier. I think in these conversations, too often, we're mixing up national and sector news, like, globally relevant news. Like, I would say 404 Media's audience is not local. It's all over, because it's about technology. But with local news, the hard challenge has been, how do you build -- how do you be legitimate in your own community? And how do you let the community strengthen itself without you trying to go in there with a big moral halo and say, "I'm here to strengthen you." And how does local news have a standing without taking the values of national news itself? Like, what makes something actually readable locally is not the same thing as what makes it readable nationally, what makes a story readable that's common to the whole people in a country. There are differences. So, the reinventing model has to be around newsworthiness, determination, information needs. So, I think the audience's thing is, what is common? Go to your audiences. Go to communities. Actually, some people will say, "Don't even call them audiences. We're just part of the same community." So, what we find from our audiences, if we are embedded locally, is going to be different than what we find from audiences when we call out at large. And there are journeys there to be had, and I think those journeys are not the same. So we should not run the risk of taking national vocabulary and the industrial press's approach to discuss everything and bring it in locally. We have to probably reinvent it. Maybe the organization Richard is actually working with is one example, but I know of other examples who -- other organizations that are doing it in their own way.

Liu: If I could add on his point. So, I've worked in all the different markets. I've worked hyperlocal, local, *San Jose Mercury News*, *Seattle Times*, but also national, with *Post*, and then international, I've worked in CNN and Hong Kong. I think it's very important to realize we're part of the fabric of the community, and we are not talking down. We are not in our ivory towers, but also in the way we do analytics. So, to your

point, Richard, if we look at a story, and if you just look at page views, and it might be softer, say, if you write about the Asian community, that doesn't mean that story isn't valid. That means we might not have reached that community. It might mean -- and you need to look at other factors, like, what is the conversion rate? How deep are we going in the community? Do we even have inroads to this community? Who did you interview for this story? Are they reflective of the community? Did you even get the right angle for this? And so, I also worked with Reynolds Journalism Institute in looking with URL Media, which is an umbrella group for Black and brown media. And instead of just looking at these cold factors of page views, you know, conversions, we looked at, well, what -- did that writer get speaker gigs after this? Were they on the radio? Did they speak at universities? Did people create change after this story? Did they actually take up what, you know, was advised in the story, and then did it lead to legislation? So then, we looked at, on top of looking at the page views, can we convert the qualitative things like change, into a quantitative thing like Google Analytics, and actually have a bigger, fuller story about what's going on and actually see, to your point, like, what is the role of news? Because we keep seeing, as an industry, "Oh, you know, it costs as little as buying a coffee." But to many people, a coffee is a need. News is not necessarily a need anymore. And how do you even like, get at that? How do you even show them that you know news is important?

Cook: Yeah, I would just add to, the challenge you have is that there is a push to make the national seem like it's local, and that becomes enticing for a lot of people to have the luxury of being able to maybe be soft and not have the numbers that people have come to expect. It's a privilege, because I've seen folks that are like, "Hey, you did this story, but it didn't get as many views." Well, it was important to the people in Oakland. "But we got to let you go, because you know why? The Breakfast Club had somebody from Oakland on their show, and that's what's really sizzling. That's what's hot. And this is what we're going to go in." And you see that with local news, you know, where folks are bringing that national voice that I think spent a lot of time branding themselves, and they insert it into the local atmosphere. And unless you have your own independence, you're dealing with people's like, "I need a return for this money. I need a return for this." And if you don't have folks that can rock and roll with you, then you're dealing with this, I'm going to call it an addiction. I'm addicted to the national thing that is buzzing, or whatever is trending, than I am willing to invest with something that may not be on your radar, but is really important to the folks that you're talking to. And I'll just close with this, that was the challenge in the first place, before the internet. A lot of communities were left out of traditional media, and this is why they went, because it was the democratizing agent. Now we're back at square one again, in many regards.

Reed: I want to add on to what you're saying, because I see the connection between what you're talking about and Jason and Meredith with addiction, but then, also this fear of missing out with AI being the new internet tool, right, that we have to integrate, we have to use this, we have to bring this into our revenue model, because the national papers, the national level publications, are the ones that are getting it. They have the money, they have the ad space, they have all of the revenue streams that we don't have. They're the reason, because they're doing it on that scale, they can stay alive and we can't. And the problem with that -- not so much the problem, but the issue is, the best personality the AI replicates is a white supremacist one. And when you're working in Black spaces, and they're scraping and republishing the same papers, they're not citing, they're not bothering with the ethics of it, and they're putting out the same stories over and over and over and over again, and we're just building these tools that then feed

into that with no sort of like, care for what that actual information is, especially us, as data reproducers and data publishers, right? We have to be very careful when we get in on the, "we need to build an AI tool as a newsroom to make ourselves flashy and to make ourselves relevant," because all of the information that we put out through that AI tool is immediately pulled down from the -- immediately pulled down and repushed to the internet. And in California, specifically, with a small Black population, in comparison to some of the Deep South states, when our population struggles, that is amplified first. And so, if we don't tell a, not necessarily success-first story, but a growth- or potential-first story, it will always be a story about the struggle, period, end of statement. And that's always what the AI, what our tools will focus on, that's what they will reproduce every single time. And so, I'm curious, it's my question, if you were headed towards that, for the groups, for Meredith, when you're trying to have the conversations with people to make AI more accessible, to make talking about building the tools, using the tools, more accessible, how do you impress upon people the challenges of integrating the technology in a way that is not kind of lazy, or, I don't know, that removes the ethics of it, that makes it easy for audiences, maybe, to misuse?

Broussard: Well, Alex, I'm so glad you brought this up, because I immediately raised my hand because I wanted to jump on something you said, which is the imperative to build AI tools that newsrooms are feeling. And I'm so sympathetic to that, and I want all newsrooms to realize, you do not have to build your own AI tools. Like, people have tried it. People have built chatbots. People have built AIs that summarize the news and reported out. And all of those have failed. So, we don't need to keep doing things that fail, right? Like, there are lots of AI tools that you can use, but the idea that other newsrooms are out there, like, using all this cool AI stuff, that's actually not really the case. Like, there's a lot of hype. But when you go around and you actually ask people, "Okay, how are you using AI? Or, you know, are using it in investigations?" The uses are far more mundane than most people imagine. So, there are only really a couple of success stories that I'm aware of. Maybe Jeremy, you know others, maybe others in the room know of like, big, flashy, AI success stories. I am not aware of anything except pretty mundane uses. There's a really good piece in, I think it was referenced in Neiman Lab the other day. It was about how ProPublica had used a generative AI model to analyze a data dump, a document dump. And they had done a -- they had engineered a prompt. Like, prompt engineering, by the way, is just writing very clear sentences. It's writing computer code in natural language. It's not outside the ability of any journalist. And so, at any rate, they did prompt engineering and said, "Okay, imagine I am an investigative journalist, and categorize the items in this document dump according to the schema that I've laid out, and then tell me which of the items in the schema I should pay attention to." And when you kind of break it down, it's like, oh, that's a really useful thing. Like, it's very useful to have the LLM analyze this huge document dump that a human being could never read through. On the other hand, it feels kind of like, "Oh, that's it?" Like, there's no magic to it, right? So we really need to keep this feeling of FOMO and also disappointment in mind and just be really honest about what is happening with AI in these spaces. So, to your second point, how can we build more ethical AI? There are lots of ways that you can de-bias AI models or use ethical frameworks, use responsible AI techniques when you are developing AI tools. The big tech companies have fired a lot of their responsible AI and trusted safety teams. So, that's one of the reasons that it's not happening at a national or international scale anymore.

Yarnold: Jeremy, did you want to get in on that?

Caplan: Yeah, I think one of the interesting areas that we'll see more of is news organizations using AI to more carefully and successfully target readers with relevant material. So, if you go on the web, you go to Amazon, you go to Netflix, you go to many other consumer sites, it's personalized. There's AI used to make sure that what you're looking at is really relevant based on your interests. If you go to many news organizations, and we can argue about whether there's a benefit to this or not, but you go to many news organizations, and you're getting the same view as someone else, regardless of whether you're not interested in sports, or you have a very specific interest in weather or some other particular topic, and so, news organizations are starting to realize that, and an example of this in Spain, Relevo, they boosted homepage engagement substantially, by a third, apparently, which led to higher subscription rates, higher advertising revenue, based on basically serving people with more relevant material. Right? Using AI to essentially analyze reader behavior patterns. And there are a bunch of examples like that, which I think are interesting. And the reality is, we're in a very competitive online environment, and so, AI can be helpful in a variety of different ways, one of which is making sure we're serving people relevant material that's of interest to them based on what they've read before, and what they've expressed interest in for the news organization. So, that's one specific example. I think, also, in the realm of newsletter delivery, we can deliver newsletters that have specific subsections based on people's interests, and it's easier to do that with an AI tool than to do that without using AI, for example. So, a lot of customization and pricing, differential pricing, AI can help us with that. So on the business side, I guess I would just add that I think there are opportunities that news organizations are starting to take advantage of, and given how desperate news organizations are for measures to move them towards sustainability, I think that's a really crucial area.

Yarnold: I am struck a little bit by, following what Meredith said, that all those good uses, while they seem really valuable in terms of the business case, they're not rocket science. I mean, they just don't seem like it. But I can understand why they're really useful. I want to turn back to something that you said, Jason, and invite all of you to jump in here as we're 15 minutes from the close, and I have a last thought, of course. You said at the end of rooting out bad actors across the internet, and all the really good work that 404 is doing, that you're optimistic, that you think there's reason for optimism. And it was around people sort of getting fed up with being fed AI slop. I'm wondering what the rest of you are optimistic about, or am I surrounded by a room of pessimists?

Vincent: I'm optimistic about something. So, I recently started giving slide talks on, can LLMs pass a journalism ethics exam? Because LLMs have been benchmarked for all kinds of things, law exams, eighth grader math tests. If you see the benchmark list on the Stanford CS website, it's called the HELM initiative, Holistic Evaluation of Language Models, the number of benchmarks that are being produced, and six, seven models are being tested against, 50 models, and the scores are all very useful. My question is, what is the LLM benchmark for different types of journalism, different aspects of journalism? So, if you take the use case about differentiating between 404's breaking story this morning, and all the AI slop that tries to --

Yarnold: Which story are you referring to?

Vincent: Just take any story.

Yarnold: I'm remembering a 404 story this morning about people getting licenses for Ubers and stuff. Is that --

Vincent: Let's take the one where they reported Palantir. This morning, they have a story on Palantir's tech contract, going into $20, $30 million, so let's say that's copied quickly, within a few hours, and it starts showing up in distribution. I feel that LLMs have better capacity now, compared to NLP, to process the sourcing in stories, identify the actual sources, use the actual boots on the ground work -- the manifestations of boots on the ground work, can an LLM tell the difference between that and derivative work that simply cites the first story, adds a few quotes, but the headline is more savvy, they may have better SEO. I think distribution can improve if LLM capacities are actually tested for specific use cases, especially a fundamental question on the internet we've not solved, can you differentiate between a boots on the ground story and a derivative story, in the list that you have ranked and you're about to put out for a summary? There's always been interest in that, but NLP couldn't do it. Machine learning of old models would have to be task-specific. How much can you build? But general purpose LLMs, I think can be tested. So that's where we proposed a benchmark case for it, saying, let's test LLMs for it. I'm optimistic we can push the needle there.

Yarnold: So interesting, and yet another sort of like, engineering focused solution.

Vincent: Ethics needs engineering, but engineering can go -- just blind engineering doesn't help. So, I like the normative use case from ethics, and engineering is an attempt to solve.

Yarnold: Yeah, yeah, it's so interesting.

Cook: I'm excited that people are recognizing the biases that exist and they're challenging it. I had a question for you, Alex, what have you seen as the biases when you're using any of the tools? For us, just real simple. Trying to get a figure when you're asking Midjourney or somebody to draw a picture showing a Black couple, can't get that. You know, can you show somebody holding a red, black and green flag, flag for liberation, without having the American flag in the picture? There's all these little things that probably won't make sense to a lot of folks, but it does in my community, when people are going, "I want to see myself," and you can't see yourself. Just the other day, we drew a picture. Well, we had a picture to use on our splash page, and the folks look like monkeys, you know? And it's those little things that pop up over and over again, that just indicates a bias. And I think, you know, people are starting to see that. They're starting to see how certain things are popping up. And I guess the challenge before them, before all of us as a community, is, how do we now start to address that? Do we build our own mouse trap? Do we talk to people in the room and say, maybe you need to have some folks sit down? I'll give an example, and I'll close. When Pandora started, they bought all of us who were experts in music. You know, my thing is hip hop, and they sat us down and they go, "Let's break this down to its very last compound," so at least there was some sort of authenticity by the time the listener got it. There's a difference between Rakim and Drake. There's a difference between Nicki Minaj and Lauryn Hill. It's not just all in one umbrella. And I think that's been missing for a while, and it may go over people's heads until you start talking about Black resistance, or Black excellence, or a whole bunch of things, of people who have found

themselves left out, and we get something, and it's like, it's there, but it ain't there, you know? And now's the opportunity to maybe at least bring that to the table so it can be considered.

Reed: Yeah. I won't say exactly what I see in terms of bias in the tools that I use, because what I will say is, as much as I sound like I am an AI skeptic, because white supremacy, I do use the tools. I know what I can and cannot do with them, right? I'm not going to ask AI to do math for me, because I know that's not what it's for. But what I am optimistic about in it, and what I do like about it is that in the work that I do, my job is to be very cognizant of my own bias, and my job is to be very cognizant of not feeding into the bias of the community that I am serving. And when I get to go to these kind of events, and meet with people who are maybe not on like, the complete development side of AI, I meet a lot of people who tinker with tools and whatnot. I'm meeting a lot of people who are in the entry level aspect of it, who have been opened up to the world, who get to do the vibe coding that I learned about at Stanford last week, who can go and build a tool with a very small data set, and they can learn about the bias in their own information, right? I was talking with a group who was wanting to build a tool that could just tell them about the sources that their own newspaper has been using over and over and over and over again, and just that, they only wanted to use to have a database of sources .And from that conversation, we were like, "Oh, well, could we learn about the opinions of those sources, and how the opinions of those sources have been impacting the stories that we've been writing over time, or that the paper has been writing over time?" In our set, we wanted to do a chatbot, which we're not going to do anymore, nobody freak out. We wanted to do a chatbot of our data that we've been collecting from the *Black Voice News* archive over the past 20 years, of just our digitalized -- digital archive, and we may still be able to build the model. But that's just about learning, what have we been writing about over and over and over again? And now I'm like, oh, we need to do that survey. Is what we've been writing about serving the community that we've been writing, you know? So that's the sort of thing that I'm optimistic about, is people are now experimenting with AI to figure out, do I know what I think I know? What do I think I know? Do I need to learn something else? That sort of thing.

Gingras: Well, first of all, I think it's important that we should always bring skepticism to just about everything we do, everything we do, whether it be tech journalism, public policy, whatnot. Dig deep. As far as optimism, I was with John Palfrey at an event recently, the head of the MacArthur Foundation, and I had gone into some of these things. He said, "Richard, you're the most optimistic person in news." And I said, "No, John, that's not really the point." You know, we, as leaders, you find optimism at an ingredient level. I can't look at the world today and make a statement about optimism versus pessimism. I don't control over that, you know. But when I talked about, I said, like, the model of Village Media, by the way, City Side, Berkeley Side, Oakland Side, they're doing extraordinarily good work as well. I said, as leaders, our job as leaders is identify constructive paths forward and drive them forward with as much passion and optimism as we can. So, when I look at Village, I say that's a marvelous model. Whether it's Village's or whether people just take the ideas, I'm going to drive that. You know, at Google, I had a team 5, 6, 7 years ago using machine learning then, we didn't call it AI, developed this marvelous set of tools for investigative journalists called Pinpoint, you know, which is used by hundreds of newsrooms around the world, including the *Post*. I think they still use it. Which allowed journalists to analyze massive document dumps at scale, and do investigations that you wouldn't even think of doing. I can be optimistic about that. So, I think that's what we need to do, bring skepticism, find positive steps forward, and help others drive

them. The one thing I've also learned in my years, it took me a long time about this, is how do you drive change across ecosystems? The primary emotion is envy. Show people success cases of how things can be used, and you will drive further adoption. But that gets back to our role as leaders. Create those models, create those success stories, and help people understand how they can take full advantage.

Yarnold: So, I'll attempt to wrap up. I've heard some really -- I think this has been a fabulous conversation. Thank you all for being willing to lay out some really interesting ideas and to engage with one another, and for you in New York for doing this so late. It's been fascinating. I'll cherry pick a little bit. I love the comments around holding AI to an ethical framework. I was really struck by this notion, Subbu, this notion about who gets the credit. Can we teach the algorithms to go back to the original source, so that we don't just see the echo chamber represented, but we can actually go to the headwaters? This notion about seeing audiences more fully, whether it's, Marian, whether it's creating a new section, or whether it's looking at low income voters, that notion that we can and should do that. The idea, Richard, that we have an opportunity to strengthen the communities we serve, and this idea about accountability, your idea, Marian, this notion that we're still watchdogs, only we're watching AI now, and other uses of technology. What do all those things have in common? Those are journalism values. Those are journalism values that we've all learned, and it's so interesting to me to see that they're still points of contention and still central to the conversation we have about news and computing. So, I want to thank you again for all of your contributions, and I invite you to stay and have some drinks and talk to one another. Thanks a bunch. And thanks to the Computer History Museum for hosting this. Goodbye, New York.

END OF THE WORKSHOP