Digital Cartography and the Promise of Interactivity (with Jason Farman)

[opening music]

00:20 **Juan Llamas-Rodriguez**: Welcome to the Global Media Cultures podcast. I'm your host, Juan Llamas-Rodriguez. Today we are discussing cartography, interactive media and what happens when we watch the world on our individual screens. Our guest is Dr. Jason Farman. He's a professor at the University of Maryland, College Park, where he is the Director of the Design Cultures & Creativity Program, and a faculty member with the Human-Computer Interaction Lab. He's the author of the books *Delayed Response: The Art of Waiting from the Ancient to the Instant World*, and *Mobile Interface Theory*. He has also edited two books: *The Mobile Story*, and *Foundations of Mobile Media Studies*. His work has been featured in *The Atlantic, The Wall Street Journal, The New York Times, NPR, Atlas Obscura, Elle Magazine* and others. Jason, welcome to the Global Media Cultures podcast.

01:13 **Jason Farman**: Great, thanks so much for having me.

01:16 **JLR**: I want to start by asking you about these research interests. What is it that you are most concerned with? Why does it interest you? Why is it an important area for us to study?

01:27 **JF**: For my work, I am most interested in thinking about how we as people in our bodies interact with the spaces around us and how media changes that. So when you enter a space, how you can transform that space, how our social interactions really dictate what meaning that space takes on. And then when you add media to that, how do media really transform the spaces we move through, whether it be your neighborhoods, your schools, your house, religious buildings, sites of historical importance, all of those spaces that are really meaningful for us as individuals and as communities. How do we shape those spaces? How do they shape who we are? Our own sense of embodied encounters with the world, and then ultimately how we can use media to transform the way those spaces take on meaning.

02:26 **JLR**: So today we're discussing your article, "Mapping the Digital Empire: Google Earth and the Process of Postmodern Cartography," which was published in

the journal *New Media & Society*, Volume 12 in 2010. Can you give us a brief history of this article? How did the idea come about? When did you begin working on it? And how did the ideas change in the process of researching and writing?

02:52 **JF**: So it was a really bizarre pathway that led me to my current work and to this article, interestingly. I started working on it in grad school. I was in the School of Theater, Film and Television at UCLA when I was doing my PhD there, mostly studying performance art, theater, live performance, those kinds of things. And I was really interested in the human body on the stage and how the ways that we represented the spaces that performance took place on really shaped the performance itself. And then after I finished my PhD, I started really noticing how people were using mobile devices to do something very similar. They were using mobile media to give meaning to their space. And ultimately I saw a lot of the things that were happening on the performance stage happening in everyday life.

03:49 **JF**: It was out in the world. We were using maps, we were using digital maps to really encounter the world and move through it. And what I was interested in is how that really reoriented us in interesting ways to the spaces we move through. The ways that we represent the space shapes how we use that space. So it was this really interesting journey to go from art, and the ways that artists decided to represent space, whether it be the live stage in a theater or even performance art happening out on the street, to the ways that companies are representing the spaces we move through using our digital media and really opening up what the possibilities are for how we use those spaces, how we even think about them and give them meaning and significance. So it was that pathway that led me to working on mapping. I was really interested in how we represent the world around us.

04:48 **JLR**: Right. So as you point out, this idea of the media that we use to represent the space influences how we think of that space and what to do with it. And this is definitely related to mapping. So you note that there's been changes in the history of mapping from an art of map making, and then the advent of what is called the science of cartography. Can you point to some of the significant changes in these different practices from maps as art processes to the science or scientific ideal of cartography, especially thinking about authorship or the objectivity of these representations?

05:34 **JF**: Right, right. Yeah, so when you begin to think about the colonial process of exploration, people getting in ships and traveling to unknown lands and then sketching out those coastlines as they encounter them, it's this very embodied act. It's, here we

are, we know where we are in comparison to the stars. It definitely uses navigation and location in scientific and interesting ways. But it is about your body moving along this coastline and saying, here I am in relationship to this land mass, and I'm gonna sketch it out. And I'm charting out the unknown. And I'm gonna bring that back, and this is gonna radically transform how the world thinks of itself. It's gonna see this picture of the world, and it's gonna change how the world imagines its shape. What's out there? What are the possibilities? Who's out there? What land masses are there?

06:26 **JF**: And then you shift into computerized versions of this, and really what you see all the way up through the satellite view in Google Maps that you use on your phone right now, is more and more the human body is distanced from the act of cartography. Now it's not about that human sketching the coastline out, it's about this satellite or plane flying over a region taking photographs of it, and it's capturing in real time what this planet looks like at this moment. So the human body is pretty much understood to be distant from that act. It's an act done by machines, and so what we see in that is that the idea of error is more and more removed from the map. That we imagine that the map is very objective, that it's just a static image of the world. How could that be political, how in the world can a map be political if it's captured by satellite photography? That's what the world looks like objectively, that is what the world looks like right now. So how can that be a political act?

07:40 **JF**: And this is, I think, where the article begins to intervene is to say, actually how we represent things is always a political act. Even in the objective photographs taken by a satellite, how they are used by us, and the platforms through which they're distributed are very much how we still face maps as a political object that achieve certain ends. And that I think is really an interesting journey where you have the removal of the human being in the map-making process, at least, seemingly you have the capturing of these land masses more and more automated. But the colonial process inherent in both has never been removed, the act of colonization of power using imagery to maintain or reiterate power, you just see more and more as we move across these eras, maps and colonialism or maps and power really do go hand-in-hand, regardless of how they're captured.

08:44 **JLR**: Yeah, for sure. There's still political representation regardless of whether the main medium was the human body just sketching, or more recently, the computer or the satellite creating that image. But one of the things you point out is we're now used to seeing Google Maps on our phone or on our computers, but there's actually a longer history of computer-enabled mapping. There's half a century of

computer-enabled mapping. And so can you tell us some brief... Sort of a brief history or the main points in change from, say, from the 1950s when computer-enabled mapping began to where we are today? And you point in there things like MapQuest became significant turning points, and then we get to things like GIS technologies as well.

09:37 **JF**: Yeah, yeah, and GIS coming a bit before, so you have what many argue is the first geographical information system with the Canada Geographic Information System, and that's the mid-1960s that that comes out. And you have a lot of people similarly around the era using computers and maps to do census data, to map out census information in the 1960s as well. And it's interesting to see then that all the way up through the mid-90s with the launch of the first website that allows us to map out our journeys through MapQuest. You have a process where the act of creating the map is again using tools that help automate it, that help take these abilities for digital representation to go in and really streamline what the cartographers were doing.

10:40 **JF**: Also, I direct a design program at the University of Maryland, and we talk about similar processes when it comes to design, where you had people doing things by hand, like creating letters or even letterpress, or creating posters using paint and stick-on letters, and then that all becomes automated with computers, where now we're using Photoshop, we're using Adobe Illustrator. A similar kind of track happened with mapping where you had people who were very skilled in hand-drawn maps, and then these tools then move on to the computer and it begins to transform what's possible with these maps, the kinds of data you can represent. You can represent multiple kinds of data, you can say, "Here's what this map looks like, if we consider these factors, and then if you remove these factors, let's look at that representation." And it all happens seamlessly through this map, so it speeds up the process, but also gives you the ability to represent a wider range of possibilities, a wider range of data on that particular map once it becomes computerized.

11:44 **JLR**: So the bulk of the article is focusing on Google Earth. And one of the things that you argue is Google Earth's charting of the globe into this interactive web-based GIS is inherently connected to the desire to map out a new territory, which you called the digital empire. Can you elaborate on this connection that you're drawing between the aims of Google Earth and Google's aims broadly?

12:11 **JF**: Yeah, absolutely. And this was interesting for me writing this article was to think about the nation state and the power of the nation in exercising power over its

people or power over others. And as Hardt and Negri, scholars who had argued in their book on *Empire*, that empire looks very different now in the digital age, because you have this mixture of nations and corporations. You have these transnational corporations like Google, like Facebook, like Microsoft, that exert tremendous power over our lives. And Hardt and Negri would go so far as to say that the nation state is diminished in power and actually where corporations like Google are the ones who are wielding to power these days.

13:01 **JF**: So when I began saying that Google is interested in mapping the digital empire, it is about that shift, it's about what empire means in the digital age and how Google becomes the main source of knowledge and they become the main gateway for everything we need online. And when it comes to things like mapping, even, mapping the physical world, they have become the default network for that, and what they do actually has real-world ramifications. There was an interesting example that came up maybe about eight or nine years ago when there was a contested border between Costa Rica and Nicaragua and Google had actually mismapped it. And they mapped it as Nicaraguan territory. And Costa Rica doesn't have a standing army. So what happened was, Nicaragua said, "Here is the space that Google has mapped," and they sent armies into that space and occupied it. And they used Google as the source for that. "Well, this is what Google is saying, this is our space," and it became this international incident that was predicated on how Google decided to map the world.

14:19 **JF**: And it's interesting to... I've just been keeping tabs on these since I wrote this article in 2010. So, over the last decade, there's just moment after moment where you see these decisions that are happening where Google makes choices that have real-world ramifications. And the other one that really stood out to me was how Google responded to Brazil during the Rio games in 2016, when Brazil and Rio specifically, put a request into Google to remove all of the favelas from Google Maps. They said, "Anybody who is gonna come to Rio is gonna look on Google Maps, all they're gonna see is favelas. We're worried that they're gonna just come in and be terrified. Here are all these... All of Rio is favelas and you're misrepresenting the space. Can you fix it?" And I've kinda gone back and forth with a lot of people about that, where they did eventually, if you go into Rio now, it does not show the number of favelas that they had prior to 2016. And for me, when you lose that representation of people in poverty, it's this out of sight, out of mind moment where they have literally lost representation. Google no longer represents them, so who does? Who represents these people?

15:43 **JF**: Some people have said, "Well, isn't it more accurate? Isn't it a more accurate map now that all the favelas have been taken away? 'Cause Rio is not just all favelas." And I'll say, my response to that is, it depends on whose perspective you're asking. And this is the key with maps, it is about perspective, it's not simply about objective reality. If you live in a favela, Rio is favelas, and now they're not even on the map. So whose perspective does a map represent I think is really key. And Google decides those things, and it has implications for a country like Nicaragua and Costa Rica, and for somebody living in poverty in a favela in Rio de Janeiro. So how a corporation decides to represent the world has real-world ramifications for just an everyday human being and how that person... How their poverty is dealt with, for example. So that's what I'm talking about when I'm referencing the digital empire. It's those kinds of questions, I think, that drive this piece.

16:47 **JLR**: Yeah, for sure. And as you point out, it's about the... Let's say the figurative representation on the map also becomes an analog for political representation. If the people living in the favelas are no longer seen, then they will no longer be accounted for or acknowledged, and they will lose that political agency in some way as well. And also as you zero in, part of the issue, the central issue with maps is the question of perspective. Whose perspective is this map showing? And so I think this is really where something like media studies helps come in to think about these things, 'cause two of the things that you reference in the article are, one, theories of the gaze, which we import from from film studies into media studies, and then science and technology studies, someone like Haraway talking about positionality. Could you elaborate a little on this on how these two ideas or two theories help interrogate this question of perspective and how it relates to maps?

17:50 **JF**: Yeah, great. The ramifications of really centering our studies on the visual are far-reaching when it comes to issues of representation, but then also issues of objectification. But also for... Like Haraway, when you center the visual, you... By de-centering the rest of your body, it becomes that the visual becomes the stand-in for this god-like objectivity, and that's where maps come in, is that when you center the visual and give it the objective nature of, this was not taken by a human being, this photograph that you're looking at, this satellite image was taken by a machine, it becomes this objective god-like view of this is reality, without really questioning, well, how is that reality received by different people?

18:48 **JF**: How do people see this differently? We don't all encounter visual media the same. We bring to it our histories, our cultures. Visual media are very much impacted

by who we are and our encounters. But what's I think really interesting is that that is not... It's not common sense that we all encounter visual media differently and it resonates with us in very different kinds of ways based on who we are, our cultures, our genders. And this is why I'm really interested in maps as well. It points to a larger issue that is really worth studying broadly, both within media studies and without it, is that often the things that seem to be common sense are often the most dangerous. When you approach something and you say, "Well, why are you even... Why are you questioning this? It's common sense. There's no... There's no debate here. This is just how it is."

19:45 **JF**: When you find those moments where people say, "Well, this is just how it is, this is real life, this is just reality, this is the objective truth," then I think you can really begin to dig into that and to see power being exercised in really profound ways. People like Antonio Gramsci have argued that hegemony or the exercising of power over other people is mostly done not through force, by beating people down, beating people into submission, it's done through coercion, it's done through ways that are non-violent, seemingly non-violent, through simply getting people on board with accepting this as reality. That this is an unchangeable way, that just... This is just the way things are. So when you unearth the common sense of things, I think you can really pinpoint moments of power and how power is exercised over people just through common sense. Maps are a part of this.

20:47 **JLR**: Yeah, for sure. As you point out, the value of critical thinking is unearthing how power is operating even when we don't acknowledge it or we're not thinking about it. Once you think of something as common sense, it maps... It papers over those kinds of things.

21:07 **JF**: Yeah, absolutely, I would say more so than others. When we begin to be able to identify it and build up our own analytical tool kit to look around us, and there are things that outrage us. I think 2020 is this year where we are outraged. There's so much going on in the world that we want to change. We see obvious discrepancies of power, we see powerlessness all around our country and world. We see people being oppressed, killed. This year really highlights the struggles toward equality, toward identifying moments of oppression, and I think in order to really move the needle on these issues, we also need to be able to say, well, we see these things, these are visible, and they're coming to light more and more. What are the underpinnings that allow all of this inequity to happen, that we're not talking about? What is the common sense that is actually the foundation of something like racism, for example, that most

people just... It's not on their radar? We can see issues of racism and police brutality, police killings, for example, what is the basis on which those lie? What's the common sense on which that perpetuates?

22:32 **JF**: That's the work that I encourage my students to do and that I try to do myself as well is to think that it's... This thing is actually a part of a much larger structure of issues, and much of that we just accept as common sense, as just a part of daily life. And visual media, actually, I think are a really fundamental part of that. When we think about how the world is represented, who gets represented, how they get represented, who gets heard, in what ways do we just imagine spaces and the people in those spaces? How do we encounter the world around us? How is it represented? A lot of that is really just built on common sense notions that perpetuate inequity, and I think visual media and media studies very broadly can really make some important interventions toward making the world a better place ultimately, when we learn how to build that tool kit and share that with others and really transform how the world is represented ultimately.

23:35 **JLR**: Yeah, I agree. I think that's part of the value of what we're doing here, I think, broadly, in our fields and in our classes.

23:46 **JF**: Absolutely.

23:47 **JLR**: And in the case of maps, you note that part of this common sense is the idea that this is an objective perspective, and in that way erased the very subjective elements of who built the map and for which purposes, and what kinds of power relations it is taping over.

24:10 **JF**: Yeah, exactly.

24:12 **JLR**: And then when you focus on Google Earth, you notice that there's, in some way, even within the platform, a way to start doing this questioning or pushing back on the common sense assumptions of what Maps does. And two of the elements that you point out are, there's the bulletin board system, and then the use of overlays as tools that users can then rely on to push back. Could you talk to us more about these tools and then the potential that you see in them and the limitations?

24:41 **JF**: Yeah, so the first part, I think, links back to what I talked about with the shift toward digital maps in general. Once you're able to create overlays, you can change

the map ultimately. You can literally go into Google Earth and create your own overlay where the map takes on what you decided to put on top of it. So you could create a set of data, you could create something artistic, you can just change the representation yourself. So digital media allow us to go in and give a wide range of visualizations of something we see... We've seen our whole lives in the classroom. Growing up in elementary schools, you have the Mercator map up on the wall, we can change that visualization, we can add to it, we can augment it. And alongside that, you can have dialogue about it, so I think the key shifts as well are you had prior to this really a single map maker, or at least a single mapping corporation that distributed maps. Now we can make the maps and we can debate about the maps. We are the map makers, and we can say, "This is the kind of way I want to represent the world, this is the way I wanna represent my city, my town. I'm going to give you this kind of visualization."

25:56 **JLR**: Here you're getting into an area that media studies thinks a lot about, which is how digital media or mobile media allows for levels of interactivity and what that interactivity does. And so if I were to reductively put this, there are the two sides of thinking about, well, now this interactivity allows us to do all these other things that we couldn't with a more centralized media-making or map-making. And so that has its potentials. And the other side, thinking about, sure, but you're still relying on these technologies that are created by a corporation. It's still the master's tools. It's still Google's empire, and we're all just playing in it. Where do you come down on thinking through these positions and how do we approach that question of interactivity?

26:46 **JF**: Right, yeah, it is a really valid argument to say, okay, these people are having debates in Google Earth, but it's still Google. Google is still hosting it, they're running it, it's Google Maps, it doesn't diminish Google's power at all. And from my perspective, when it comes to interactivity, and I guess before I get into that, this is a rich debate in game studies as well, which you might get into at some point. But I think the ideas around what is an interactive game, what constitutes interactivity within a game that you're playing. When it comes down to it, it's an illusion, because everything that you do that you perceive as freedom within the game is actually something that somebody coded. They decided you could do that to begin with. So it's not true interactivity, it's simply you're exercising the abilities that the game already has built within it, that a coder decided you could do that in the game, so you can do it.

27:52 **JF**: Anybody who's playing *Animal Crossing* this summer, for example, as soon as you were able to swim, it's just weird that you couldn't swim up until a month ago in the game when you're on an island, but all of a sudden the game designers decided to

release an update that allowed you to go in the water. So it's that sort of thing where the interactivity, your ability, your freedom is totally predicated on what the authors of that decided you could do to begin with. So Google built in a bulletin board system. They built in the ability to do overlays. They gave you the freedom to do these things, so is it really freedom? Is it really interactivity?

28:38 **JF**: For me, the way I come down on that is that I actually believe that the ways that we enact revolution is by what I call creative misuse of existing tools. So I don't think revolution actually comes from dismantling systems, I think it is by taking those systems and misusing them in a way that radically transforms what they mean. So in the article, I point to terms like détournement, or the one that I'm more interested in is bricolage, where you bring together pieces that were never meant to go together, and when you put them next to each other and you begin using them, it's this level of creative misuse that completely transforms what you can do using existing tools.

29:31 **JF**: For example, there's an artist named Joseph DeLappe, and he did this piece in the video game *America's Army*, where he went in as a player on America's side to go fight, and he didn't shoot the weapon or anything, what he did in the chat option within *America's Army*, he typed out the name of every soldier killed in the Iraq War. So for him, it was this demonstration within a system, within a game that was meant to glorify combat, and instead it became a memorialization to lives lost in the Iraq War. And it's misusing the game as a way to highlight the loss of war, for example. And so by creatively misusing things, by putting things together that were really never meant to go together, I think you create windows to begin dismantling systems of power rather than simply flipping hierarchies.

30:34 **JF**: One could say that by dismantling those who are in power, you're simply putting in a different power system. You're replacing one power system with another. How do you get rid of those kinds of hierarchies to begin with? And I think one way to do that is to begin to misuse the tools at hand, to begin to imagine new futures. And that's what I see happening here with the bulletin board systems or the overlays, is that people are taking them and using them in really interesting ways, in ways that were not anticipated by Google. And that I think is really key, you're misusing the system in such a way that you're drawing attention to the fact that first you can do that, and second, it gives you then access to critique the tool that you're using. You can actually critique the tool by using the tool.

31:22 **JLR**: The flip side of thinking about, well, is interactivity, just because the author allowed you to do that. In some way, the author is setting certain parameters on how you can interact with the piece of media, let's say. As also in some ways, they're giving up some of that control, 'cause then you can take it up creatively and use it in ways that wasn't intended and start pushing at it a lot more.

31:44 **JF**: Yeah, yeah, absolutely. I think there's a ton of potential there. Yeah, and once that's published, once it's put in your hands, how users decide to use these things I think is creating avenues for us to to radically reimagine how these platforms exist anyway. And I guess the problem that we face... So this is called often called by people, it's called tactical media. Rita Raley has a book called *Tactical Media* thinking about how media themselves become tools for us to... For political uprising or fighting against privacy issues and Facebook or something along those lines.

32:24 **JF**: So thinking about how we create, sort of engage creative misuse or bricolage, one of the ramifications of this as well is that your process of doing that is often taken up by the very corporation where they say, hey, that's actually a really good way of doing things. We're gonna co-opt that and build it into our system. The example I like to point to a lot is Twitter hashtags. When Twitter first began, they didn't have hashtags as a part of the system, it was a user-invented way of organizing information. As we went on to Twitter in its very early days, a lot of people said, how do we find each other? How do we archive this, how do we organize in this space, and they started using hashtags, which Twitter said, hey, that's a great idea, we're gonna start using that. And now the hashtag is basically a logo for Twitter, if you see a hashtag somewhere, you immediately associate it with Twitter, but that was a user-invented tool.

33:23 **JF**: So a lot of our acts of resistance are sometimes co-opted by the very systems we're trying to up-end, but the sort of back and forth between these tactical approaches of creative misuse and sort of corporate power over us is an ongoing process, it's never settled, it's something we always have to engage as we're trying to rethink how we use these technologies in our lives on a day-to-day basis.

33:49 **JLR**: Yeah, I think the ongoing process part is key in thinking we're not gonna get to that point where we've done it, we've broken down the machine and it works, you keep struggling because the machine can rethink and re-appropriate the creative resistance you put to it.

34:07 **JF**: Yeah, exactly, exactly. For sure.

34:11 **JLR**: One of the things as I was rereading this this year that struck me is, this was published in 2010, so even if you were writing it just before that, Google Earth at the time was mostly desktop-based, right?

34:25 **JF**: It was, yeah.

34:26 **JLR**: And so it's been 10 years since. Has it changed? Do you see different potential limitations in Google Earth as it exists today, and especially thinking about all of the new media that has come on since, like VR, mobile versions and so on and so forth. How has Google Earth come down now?

34:48 **JF**: Well, I think one of the major shifts that has taken place over the last 10 years is just the computing power of our mobile devices has transformed in really profound ways, and so most of the functions we were doing on our desktop in 2010 can be done on a mobile device at this point in time. So I think most of the ways that we are using our mobile devices have by and large, made something like a desktop version of Google Earth in some ways obsolete, that we're now doing it on our devices, and we're not only doing it our devices, we're doing it in situ, we're doing it in the place, we're mapping that place while we're standing in the place, we're giving visualizations while we're there.

35:33 **JLR**: Yeah, for sure. You end the article also pointing to this question of access, so assuming that just because there are these elaborate tools, digital tools that we have, doesn't mean that everyone has access to them. So it's also a political issue, not only in can the people in the favelas be represented or not in the map, but also do the people in the favelas have access to the internet to be using the tool in resistant or creative ways, like someone who doesn't live in the favela can, right?

36:04 **JF**: Yeah, definitely. And I think with mobile devices, what has happened is you see access being... Barriers to access being crossed in ways that we didn't really anticipate. The access to mobile devices is so pervasive on a global scale, there are more mobile phones than there are toothbrushes or toilets in the world. The scale of global proliferation of mobile devices is extraordinary, and people have access to the internet in a wide range of bandwidth speeds through their mobile devices, but it is pervasive. What we see, though, a couple of outcomes of that is, in one regard, you have poorer communities relying on mobile devices and don't have these desktop

computers or laptops that might be able to do things that a mobile device can't, that you don't really wanna do on a mobile device, like write a book or deal with spreadsheets and things that you would wanna do on a computer, you don't have access to.

37:12 **JF**: Even doing long readings or accessing homework. In Prince George's County, where the University of Maryland is, for example, which is predominantly Black and African-American, different socio-economic classes than a neighboring city like Bethesda, where many of the high school students in Prince George's have mobile devices, they all have smartphones, but that's their main device, that's all they have, they don't have the money to have both a laptop and a mobile phone. So that means they are accessing homework, they're accessing job applications, they're accessing most of their world through that tiny interface, and so they get a less robust window into the world where they have fewer options, because they've got one option, you've got the money to be able to afford this data plan, you don't have internet at home, maybe, you don't have a laptop at home, so everything comes to the mobile device.

38:07 **JF**: And so access is being crossed in some really interesting ways on a global scale, but I think the consequences of that are really interesting, that it is predominantly a mobile internet world out there, but what that means for different communities has larger ramifications for how those people interact with media. And I guess one final point along these lines that's really worth making is that a term like the digital divide argues that there is this gap between people who have access to technology and people who don't, and when something like a mobile device bridges that gap, but people don't succeed on the other side of that gap there, they are often blamed like, hey, you've got a tool, you've got... You're in Prince George's County, you've got a mobile device, why aren't you getting straight As? You've got access to the technology.

39:06 **JF**: And it doesn't really recognize the larger structural barriers that keep people in poverty, for example, or keep different nations poorer than first world nations or things along those lines, so the digital divide is a term kind of assumes that once the divide is bridged that equity happens, but it doesn't actually happen that way, and I think mobile devices point to that. We've got, mobile devices just are pervasive across the planet, but poverty continues to abound and the wage gap, the wealth gap globally continues to expand, the fact that people have mobile devices doesn't fix the problems, it gives people new access to knowledge and new access to opportunities,

but by no means is it breaking down those structural barriers to social mobility that many people had hoped, I think, would happen.

40:00 **JLR**: Yeah, for sure, it easily transposes, as you point out, the wealth issue to just having or not having a mobile device, but if there are more mobile devices than toothbrushes or toilets in the world, that means some people might have a mobile device, but no toothbrush and no toilet.

40:14 **JF**: That's exactly right, yeah.

40:14 **JLR**: And that in itself has a higher impact on your life and your ability to do any sort of work than whether or not you have it. So yeah, reducing that to overcoming just the digital divide is somewhat simplistic for the kind of broader structural issues.

40:30 **JF**: Yes, there are. Yeah, exactly.

40:39 **JLR**: Jason, thank you so much for joining us.

40:39 **JF**: Yes, thanks for having me, it was a pleasure.

[closing credits music]

40:45 **JLR**: This episode of the Global Media Cultures podcast was produced by me, and edited by Alan Yu. Opening music by Podington Bear. Closing credits music by cloud mouth. This project is supported in part by the School of Arts, Technology, and Emerging Communication at the University of Texas at Dallas.

The Global Media Cultures podcast introduces media scholarship about the world to the world. I'm Juan Llamas-Rodriguez. Thank you for listening.