Transcript of ‘Digital Inequalities’

Season 1, Episode 7, Transforming Tomorrow

[Theme music]

Paul: welcome to Transforming Tomorrow, the podcast from the Pentland Centre for Sustainability in Business here at Lancaster University Management School. I'm Paul Turner.

Jan: And I'm Professor Jan Bebbington.

Paul: And today Jan, we're going to start a new block of podcasts, the next four of them are going to be looking at one overarching theme, and what's that going to be?

Jan: The overarching theme is infrastructures. So if we go back to the Sustainable Development Goals, SDG number nine is looking at Industry, Innovation and Infrastructures, basically how we put our world together, how information flows through that world, and what impact that has on people. So all of our next four podcasts has something to do with that thing.

[Theme music]

Paul: And I'm going to warn all lovers of the English language that over the next four episodes you're going to hear the word infrastructure used as a verb, which to me is some kind of criminal offence, but I believe in uh your kind of profession Jan it's quite common and worrying in equal measure.

So today we're going to start off by looking at digital inequalities. We're here with Professor Katy Mason and Katy is Professor of Markets, Marketing and Management here at Lancaster University Management School.

Between 2020 and this year she was the School's Associate Dean for Research, setting our research agenda and firmly embedding sustainability as one of the three pillars of expertise upon which our reputation has been built over the past few decades.

And from 2020 to 2022, Katy was part of the Mobile Access North Yorkshire – MANY – project, and before that she was involved with 5GRIT - that's 5G Rural Integrated Testbed, because we all know we love an acronym when it comes to management, and especially management schools, and both of those projects

were designed to bring connectivity to more isolated communities in the north of England, specifically North Yorkshire and Cumbria.

Welcome, Katy.

Katy Mason: Hello.

Paul: Can you start off really by outlining for us a little bit about what the many projects, the 5G projects were, what they did, what their aims were.

Katy: Yeah so we've been thinking about how we connect communities into communication systems. Uh and the challenge comes where the balance sheet doesn't add up for people, usually in very rural areas.

So if you think about how we get most of the services that we have, right from water to roads to digital services um they tend to be socio-material things, so tarmac that we then drive our cars on so it, it's us and the way we live our lives driving across very material concrete, tarmac things.

And I think what that is interesting about that is where there is a lot of people, a very dense population, so in cities and in larger towns it makes sense to invest in those types of services and generally either the government is providing them, as they do with the road system, or private companies can make enough money from selling services so digital services, uh Wi-Fi services that they actually uh, can make a profit from it.

What happens in very rural communities is the cost of putting this infrastructure in place rises, um because you have to get through very disparate landscapes, so the distance is big, so that costs more.

And then you've got all the sorts of material challenges of, so trees are really naughty, they have leaves in the summer so you can put in infrastructures and then suddenly they can block digital systems.

We have this thing called weather, which is really inconvenient because it can disrupt, uh digital systems and so, so we, when you're asking companies to invest in that sort of infrastructure and they're not certain they can make a profit from it, it becomes very difficult to ensure that some communities in very rural areas are included in our economy.

And of course our economy has transformed so much over recent years that it's almost impossible to not be part of the digital economy. So we buy things from Amazon we buy even our shopping online, and that was so crucial in the

pandemic and in fact some of the work we were doing with these rural communities actually happened in the pandemic, so we were trying to understand people's experiences of living without digital services, and the opportunities that might be open to them should digital services come online, and um to try and see how we could make this a viable, doable opportunity for them. I think the real challenge we've had in very rural communities has been that we've had this notion of 'hollowing out'.

Because they don't have access to these services, because people young people especially want enriched lives where they're part of the digital world, um they've been moving out of villages, they've been moving out of the countryside, and that means existing businesses are struggling to find the next generation, if you like, of people that are going to work there and, and our young people are feeling distanced from their homes and their homelands, and they're also feeling that they have to be in the cities uh which is, uh sometimes an exciting move, but quite often as they grow up they want to return to their home landscape, if you like, to bring up their children in the way that they were brought up and those decisions become really, really difficult without those digital services.

Jan: What I really like about the, the description that you've made, Katy, is that tying together of more than just infrastructure - SDG number nine - but also the other ones that go with it. So SDG number 11 looks at Sustainable Cities and Communities, and so that sustainability of areas, and difficult to reach areas in some ways, comes into play.

But also it comes across SDG number eight in terms of Decent Work and Economic Growth, so that decent work can be spread across all geographies. And then the final SDG that it really speaks to, which is a really important one, is Reduce Inequalities. So I think in that, um explanation of these projects you've got all of these SDGs tied together in a, in a really um important knot, that actually delivering all of those together is important.

Paul: And I think, as well, I'm from Cumbria. I'm not from one of the isolated rural parts of Cumbria which, despite what popular conception might have, we're not all in these little valleys living in small shepherd's huts. When you've worked with the people in Cumbria case, when you've worked with the people in North Yorkshire, was it obvious how important to them it was that they felt they were getting a fair crack of the whip when it came to things such as digital equality.

Katy: That is a really important question and I, I think when we uh started to uh talk with these communities there was a general feeling that a community is almost like a homogeneous group of people of one mind, and actually we discovered very quickly that that's just not the case.

So even though these communities are very small, people have become part of those communities in different ways over time for very different reasons, and so we had some people who had farmed the land for many years, it been passed down generation to generation.

Um and so uh for them with the demands from the government on how they manage cattle, how they report disease, how they keep cattle passports, for example, um being part of the digital world was absolutely critical for them, and they were very keen to be part of it.

Quite often it's a family business, so there's children involved and grandchildren involved, and they're trying to have a good education. And the schools demand that they have digital connectivity, and in lockdown we had stories of our families piling four children into a car, driving up to a hill sitting with one laptop, and sharing it across the children while they tried to download the school work for, for the next day, and then go home and then start off on that work. So there's very significant challenges.

Other people had moved to these very rural areas because they wanted to be disconnected. So not everybody wants digital services in the same way. Um the notion of living off-grid, being in the countryside, having a different way of life and opting out from some of the things that we get pulled into as a way of life in cities and in towns. And so we took quite a lot of care to try and capture the plurality of voices, and take every single voice seriously.

We found quite a lot of suspicion around the technologies, and ironically even though private companies have been putting these infrastructures up everywhere, without consulting, without asking us, without having a dialogue with the public. Because we were a university there were some people in these communities that felt very suspicious that they might be being experimented on as guinea pigs.

Now that was not the case at all because the university has very strict ethical guidelines and protocols that all have to be approved before anything is done, um and, and we had complied with all of that. But even so there's always this space of ambiguity between what the legislation and regulations say about

how this technology works and what is safe, and what emerging science is suggesting might be an issue.

And so in that liminal space you're trying to really listen to people and take their concerns seriously, and develop a project that works for most of the people most of the time. And that's quite challenging.

Jan: I suppose what's be…would be really interesting to hear, and unless Paul wants to get a question in ahead of me on this, is to, to hear your stories about examples of some of the people that you worked with and what their experience was.

Paul: I know that you kind of learned from this process Katy that the importance of involving people all the way through, not just bringing them late in to the, the project when they might have a suspicion that you've already made your mind up, what's the point in even talking to us, and that then takes you to what Jan's saying about some of the examples of individuals that you did speak to.

Katy: I've been quite influenced by uh Richard Owen's work who who's at uh Bristol University um and he did some work some years ago now on what he calls responsible research and innovation.

And so those key ideas are, we have a responsibility as researchers to include the people that we hope our research will impact in the research process. And so one of the things I work really hard with the MANY team to do is to try and install principles of responsible research and Innovation into our practices and into every part of our conversation.

I think it's really easy to create a them and us feeling, like these people are against 5G and 5G Technologies, so that's fifth generation technologies. I don't think that that opposition is helpful to anybody.

Asking why do they feel uncomfortable with this what is behind their concerns and where is the evidence, scientific evidence, that might prove other or act as a persuasive, what I would call calculative device - help them work out how to make judgments about what they wanted to do, what they thought was good, what they thought was bad.

Part of the challenge around the plurality of voices is that not everybody will be happy with everything that you do all of the time, and as researchers we're not used to making judgment decisions, we, we're used to thinking of

ourselves as observers, and in these types of projects you're actually there intervening and shaping the future in real time so you can't step back from that responsibility. And so for me that understanding of what responsible research meant in practice uh has been uh quite an eye opener, I would say.

We promise confidentiality to all the people that we spoke to, so I will give some broad examples, um but one example was uh somebody who was part of a community who cared about the community deeply. They had this culture of um shooting weekends, so it's clay pigeon shooting. And so the, the community would gather at the weekend they would walk through the woods to various points somebody shouts ‘pull’ and then this machine is pulled, a clay disc is released into the air and, and people shoot at the disc.

Now this was a really important part of rural community live where everybody went at the weekend, right. So if you could shoot or you couldn't shoot it didn't matter you took your children you took your parents and everybody was there, mixed generation experience.

And one of the serious concerns that we had and a genuine concern was that they would go from what's sometimes called an ‘eyes up’ community where people are looking around engaging with each other and talking, to being an ‘eye down’ community, so the person who's not shooting is looking at their phone.

And so the concern was if, if connectivity is everywhere are we killing this part of our, a critical part of our culture, and I think that's a really good and serious consideration that we should take into account when we make judgments on this.

And therefore the question is, is okay can we have a different sort of conversation that says if this is part of our culture how do we make sure that digitality is kept out of certain places and spaces, and what are the cultural norms that need to be developed and how do we support people in making those judgments and having a public discourse about that.

Because I think if a bit more of that type of conversation had happened in in universities, in cities, in bars um it it would perhaps change the way we, we relate to each other and maybe some of the mental health problems that we, we find in these places as well.

Jan: That's a really super sort of place-based complexity that you're drawing out there and I wonder how that complexity spilled over into the kind of disciplines and academics that you would have as part of the team who are trying to work together on this project.

Katy: So some of our partners were commercial organisations who were trying to work out if they could make this as a viable business proposition, because nobody's going to pay for it when this project stops. So it's an experiment and their private investment going into that as well as public investment, um so that's critical.

Then we have a NGO, so a non-government organisation, they're kind of like a voluntary charity uh, uh organisation that started off to actually provide digital services in very rural areas and, and so they're used to being part of University funded projects and this hybrid between the third sector, the private sector and government and, and then University researchers.

And then we have the different disciplines so we had people from our communications, computer communications department in Lancaster University, who were actually experts on measuring what was actually being delivered in terms of quality of signal.

So the tricky thing is, is the last mile usually, they call it 'the last mile' sometimes it's a lot longer than a mile, but quite often you can get the infrastructure up through where the roads are or where the telephone wires go sometimes, and then the tricky bit is into the fields where the sheep and the cattle are, or into the very rural farmhouse which might be off-grid, and those are wireless technologies usually.

Measuring the quality, what works, when it stops, what stops the signal, making sure that people don't get to the critical point in a film that they're watching in home that's being live streamed and it's cut off at the critical moment. And so understanding the quality, what moves, what doesn't move when it stops, and how people are using it is really critical.

And again there's all sorts of um confidentiality and ethical protocols around that to make sure that that that data is absolutely secure…

Jan: …yeah…

Katy: … for that family or that household um and or that business. And then another part of the team was actually doing things that haven't been done, done before.

So we looked at popup connectivity. Now one of the things that happens a lot in these very rural areas is Mountain Rescue. We're in a very hilly terrain across Cumbria and Yorkshire and so the idea was can we bring in the Mountain Rescue Team who have some medical expertise but maybe not critical medical expertise.

Can we put on real time live critical signs monitoring onto a body that's being moved down the mountain and can we then get interventions from a specialist in a hospital real time to ensure the care of that person is given at the moment that it's needed.

We managed to live stream video through this popup system. We managed to track where people were, we managed to use heat sourcing. We also managed to put trackers on dogs, so dogs could go out and search for people, um and we did some experimentation uh with, uh bringing people um down the mountain very quickly.

So what they have to do now is, usually people get stuck when the weather goes very bad…

Jan: …yeah…

Katy: …and so what the rescuers have to do is stop about every 10 minutes and check heartbeat, breathing, pulse all those sorts of things, temperature, and actually if they've got that on a digital sign in front of them that can send an alarm to their ear, they can keep walking and get down much, much faster than they would if they had to stop every 10 minutes

The other extreme might be a much more commercial thing, and we worked with an organisation that has a magical garden. And the magical garden uh has lots of visitors each year um that come from far and wide.

They also have, they're a critical part of the community so they have um if you like a special prize for local people wanting to repeatedly visit the gardens, and so how do you keep that if you like static experience exciting and dynamic and worth visiting again and again.

And so one of the things we did is work with a, a specialist app company, and they again use this notion of the ‘eyes up’ apps…

Jan: …yeah…

Katy: … that help people uh have a very dynamic experience while walking around this place.

So they developed these little visual um pocket dragons, they were and, and witch's hats. And so you could look at the app you could do a treasure hunt, which could be different every time you did it, because the architecture could be changed, because it's digital not physical and, and then when you found the treasure in the garden your dragon flew onto your head, and you could put a selfie with the dragon on your head, and see that on the phone.

So, so it became this this augmented reality experience and the children absolutely loved that, but what really surprised us is some people who feel isolated in communities tended to go to the garden for a cup of tea, um and they really got into the digital app and the experience of it and felt very enlivened by their interaction with the app and their experience in the garden and they also had something to talk about in the cafe with strangers who'd had a similar experience in the garden.

So actually it worked across the generations in a way that we hadn't anticipated.

Jan: And they're amazing examples and, and really sort of exciting ones as well. And it's the first time that I've heard that phrase ‘eyes up’ apps because I see all of mine I realise are ‘eyes down’ and I just try not to look at them.

Paul: You were never a fan of Pokémon Go or [laughter] Pokémon Go were you Jan, you were ever going around trying to catch them all.

Jan: I think I might be a wrong generation for this [laughs].

Paul: I've seen people far, far older than you going around [Jan laughs] holding up their phones trying to catch a Pokémon at various different places.

Jan: Well I'm always open to, to new experiences.

So I wonder [inaudible] really powerful stories of a of, of a place and a and individuals um experiences of, of the work. What's behind these ideas, and how do these ideas travel and apply more widely? And here I am going to send Paul into a wee bit of a tizzy again…

Paul: …[joking] don't do it, don't use the word…

Jan: …use the word ‘infrastructuring’ as a verb, so I'd like to hear more about that.

Katy: So I guess the notion of infrastructure is familiar to us a,s if you like, laypeople, uh we talk about roads as infrastructure and trains as infrastructure.

I think um from a market's perspective, uh so that's my disciplinary home if you like, sort of a sociology of markets, how do markets work and how do people interact. And over the last 10 years the role of materiality in that, the physical concrete world that shape and configure relations, um has become increasingly important.

And what do I mean by that? So if you go shopping in the supermarket you don't have to think, the store takes you around in a very physical way, right, you know where to park your car, you know how much shopping you're going to buy, dictated by the size of the trolley, so that's what I would call a calculative device - it's helping you work out how much you're going to buy, and you make that judgment when you pick up a basket or pick up a big trolley or pick up a small trolley at the door, and then you follow it around in an order.

Jan: Yeah.

Katy: Um, and you pop out the other end and you pay and you load your car. So we are configured as unthinking beings to be able to do our shopping - it saves a huge amount of human energy and, and resource um and, and so trying to think about…there isn't society and markets, we are a marketised society.

And so how we choose to invest in infrastructures, where those infrastructures go, and what they connect to, and that's the critical bit, what they connect to, it's shaping what society is. And so from, from that purview you can then say okay, if my job as a manager or as a, a marketing person, and that has all sorts of baggage with it um that that makes you think about sales rather than the work of making markets, and I guess that's what I'm, I'm thinking about.

What is the work that needs to be done that makes markets, good markets that give people access to services in a way that has equalities, has um uh care designed in, and we're a long way from being in that place, right.

Jan: Yeah.

Katy: Um and so then you can say, actually that means there's a special sort of work that helps configure and make these arrangements. That that open up these equalities to people, and access to people.

And so connecting that notion of work, to do something and make something different, brings you from the infrastructure which is a static thing, to the work of infrastructuring, which is saying I have agency with others to change the world and make it a better place.

And so that has two notions in it one of morality - what do we want the world to be like and how should it work, and two, um that notion of actually having agency to bring about change.

Jan: And I think that's really interesting because quite often we think of markets as purely being negative things, or we notice the negative outcomes of it, but it turns around to have markets and how we design them, and how we interact with them, to be shaping sustainable development in very positive ways as well. I think it gives us a sense of being able to do things differently.

Paul: I think then Katy, that's probably a good place to come to a conclusion, so talk about the results, the outcomes of MANY, 5GRIT. How you feel that what you've done on these projects can help shape how future kind of work in these areas can, can develop, and any of us outcomes from your work.

Katy: So I guess the 5G and the MANY project has taken us on the extra step of both understanding the technologies, and the social element, what those technologies can do with and for, and even against people, and I think that balanced view is really, really important, that can get lost in the arguments and the race to introduce Technologies sometimes.

So theoretically I'm quite interested in how do you take these principles, these moralities, right, and, and can you sediment them into materialities that hold moralities in place when we don't have time to think about them. And that's quite a complicated process, and that happens at the point where we decide that digital access is a right for everyone, and could be a means of solving other types of moral problems that we have.

So one of the challenges might be that people with disabilities can now work in different ways because they can work from home. Because they can have additional support, because uh the affordances of technology allow you to put text bigger, make screens brighter, put audio into your ears instead of having

to see things. All those things that, good things that that technologies can help us with.

The notion of infrastructuring and seeing markets not just as social spaces where people connect and use materials, so they use the infrastructure and materialities such as money to pay for things, uh and buy things. But they are also actually understood as knowledge objects. It holds a whole sense of knowing how to act within it, within the infrastructure.

It says, if you need water you can come here and access it, and these are conditions on which you access it, i.e. it costs a pound for a bottle of water. And then we can introduce into that knowledge object other forms of what I would call theoretically calculative devices, right, so how do we know that we should buy that water in a plastic bottle, or that water in a glass bottle?

And again part of that infrastructuring of the market is to make sure those devices are in place to help us make good sound planetary decisions, right? How are we using our resources, are they available to everybody ,are we damaging countries, communities, nature, forests, the water, the sea when we're making these decisions, and at the moment most of that is hidden out of sight and that's part of the the, the way the infrastructures work.

They become mundane they sink down and they disappear, and so unless we have these devices that make these the damage we're doing visible, we as consumers can't act, companies are not held to account, business and market systems, our economy can not alter.

It becomes stuck in a normalised way of being because it doesn't know how to be other, and I think theoretically those ideas are very powerful and they come with some of the theoretical developments that we're doing around market infrastructuring.

[Theme music]

Paul: I hate that we're ending this podcast from Katy with the word ‘infrastructuring’ [general laughter] but I'm going to live with it [inaudible].

Jan: I'm pleased we persuaded you at the end of the day. And maybe for some of our listeners have persuaded them to use infrastructure as a verb.

Paul: Thank you very much Katy, that's been a really fascinating talk there about lots of issues around digital inequality. Lots of things I'd never

considered, most importantly that leaves are really, really awkward. [Jan laughs]

Jan: I like the idea of naughty trees.

Paul: Not naughty trees and really naughty wind that's… [general laughter] … that's the problem. So we'll be back soon and next time we're going to be joined by Adrian Friday, Professor Adrian Friday, to discuss the impacts of information communication technology, ICT, on global emissions, whether that be a positive or a negative impact

Um but in the meantime if you do have any questions about what we've been talking about with Katy today, or any of the other subjects we've been talking about here on Transforming Tomorrow, please do send us an email to pentlandcentre at lancaster.ac.uk, and at some point in the near future we'll have an episode where we'll answer all of those questions for you. Well, we'll try to answer them.

Jan: We really look forward to that, so please do be in touch.

Paul: Until then I've been Paul Turner.

Jan: And I'm Professor Jan Bebbington.

Paul: Goodbye for now.

[Theme music]