**[Dr Suzy Edwards]:** So the first one, and this is the one that I think that I was using without knowing it. And I think maybe a lot of people do as well. It's called technological or technical determinism. And the determinism bit is just speaking to the idea that in this theory, this theory says that people have a sense that technologies determine what will happen.

So some people think that technologies are really bad for children, because they think technologies will determine ill-effects, like technologies displace physical activity and then children have problems with overweight and obesity, or technologies take away children's imagination or stop their social skills.

So this notion of technological determinism is that technologies determine outcomes. Or you could be a bit more positive in your determinism. And some people think technology has determined good things for children. They’ll say technologies are good because it helps me connect with families during the pandemic or children can learn problem solving or they can use creative open-ended apps.

And I think this technological determinism is a perspective that a lot of people hold without realising that there are other theories of technology. And when that happens, I think we can end up in a space where you go you're either *for* or you're *against* technology.

That's one theory with technological determinism, which basically sort of pits us into this for or against. And then we end up trying to go where's the balance, right? But it's hard to find a balance in such a dichotomy. So there's another theoretical perspective and this is called a critical perspective on technologies.

And we don't mean critical as in bad, but you know how you might critically reflect on your practice? So this use of critical is like critically reflecting on technologies. So this view of technologies says that technologies are human creations. So they didn't just fly out of outer space and land in our lives to try and take us over.

Technologies are only in our world and our existence because some person, human, somewhere, invented it or them or the myriad of things that now constitute technologies, which includes things like the internet and code and logarithms and all the things that make your social media work. That's all been created by people.

And so according to a critical theory of technology, because technologies are designed by people, they always are associated with human values. So a human will only invent a technology that is of value to them. And that value can be for a good reason. The internet was initially, the worldwide web was initially developed because Berners-Lee thought it would be fantastic if people could share information and communicate with each other. So he had quite a nice value there. Or technologies can be invented with a dreadful value in mind, like the atomic bomb for instance.

And the other important idea is that as technologies are invented with a use value for how they're going to be, the reason why they're invented, they're also met with the values that the user has. So you've got the invention value as it's invented, but then you've got this person seeing that technology and going, “Oh, I attach a particular value to that”. And the use value might not be the same as the invented value. So then what can happen is you can have these conflicts in how and why technology is being used.

So the iPad, which nominally came from Apple, there was actually another person that worked in Apple and he had invented this idea, his name is Alan Kay, what he called a dynamic book for children, which was basically a connected computer that children could engage with and share information and ideas. And Alan Kay, he read very deeply of all the early childhood philosophers. So he read Montessori, Piaget, Vygotsky, Dewey and Bruner. And so he was strongly orientated in social constructivism. So the reason that the iPad was so appealing to young children is because it was predicated on philosophies of early childhood education to start with.

So the use value of an iPad was that it would be very attractive and engaging and accessible to all users. You didn't need to be able to type or use a mouse, right? So its invention value, sorry. Its use value was immediately appealing to children. So you've got a high congruency between invention value and use value. But when parents and educators see an iPad and children, they don't value it in the same way as the children, because then they're like, “Oh my gosh, these children are so attracted to this technology. I can't get them to do other things”.

**[Amanda Sparks]:** Yeah, so it sounds like they are coming at it from a different perspective.

**[Dr Suzy Edwards]:** Yeah. So critical constructivism says it's different from technological determinism. Technological determinism says humans are powerless. The technology will determine what happens.

Critical constructivism says no, humans invent and use technologies. So when we're in a technological situation, we have to determine the use value of any invented technology that's in our life.

**[Amanda Sparks]:** When I read the statement, it's a comprehensive statement and it covers a lot of different areas, but this one around citizenship, digital citizenship really piqued my interest. And I did a lot of further research and I did come across another document, which is related to the United Nations Convention on the Rights of the Child, and it's titled General comment 25, and that really does lay down the position around children's active participation in a technologically advanced society, and that they have digital rights to access all the technologies that are available. But also, as I was saying before, having protections against some of the adverse effects of technology as well. So it really does position the active citizenship of children with regards to digital environments.

**[Dr Suzy Edwards]:** Yep. So, four main areas of the statement, so relationships is all about peers to peers using technology, also adults using technology, and it touches on all sorts of things like have you got parents on their phones when they come into a service and they're more interested in signing in or, you know, lots of issues there. The health and wellbeing looks at things like vision, sleep, posture, all aspects of health and wellbeing, play and pedagogy is about children's learning with and through technologies, and the citizenship one, which you've highlighted, acknowledges that because children are living in a world that is, largely communicates with and via digital technologies that the world now is considered so digital that they actually have a right. So the UN now recognises the right to access and use digital technologies. And I think that's quite interesting because what the UN are doing, they're not saying, they're not using technological determinism to say technologies are good or bad and say, all children should not use tech or say, all children should use tech. What they're doing is they're saying, okay, so in this digital society, the value that we're associating with technologies is that without access, children can't fairly participate.

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