

Digital, Culture, Media and Sport Committee

Oral evidence: Connected tech: smart or sinister? HC 157

Tuesday 22 November 2022

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Watch the meeting

Members present: Julian Knight (Chair); Kevin Brennan; Steve Brine; Clive Efford; Julie Elliott; Damian Green; Dr Rupa Huq; John Nicolson; Giles Watling.

Questions 216 -278

Witnesses

[I](#): Svana Gisla, Producer, ABBA Voyage; and Dr Yiyun Kang, Visiting Lecturer, Royal College of Art.

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]



Examination of witnesses

Witnesses: Svana Gisla and Dr Yiyun Kang.

Chair: This is the Digital, Culture, Media and Sport Select Committee and this is our latest hearing on connected tech. We are joined today for our session by Svana Gisla, the producer at ABBA Voyage, and Dr Yiyun Kang, visiting lecturer at the Royal College of Art via Zoom. Svana Gisla and Dr Yiyun Kang, thank you very much for joining us today.

I would like to declare before we start the session that the Committee had a visit behind the scenes at ABBA Voyage last night. It was very interesting and a fascinating experience. We will reflect on that partly in our questions today.

We were due to be joined by Dr Jo Twist OBE, the chief executive of UK Interactive Entertainment, but unfortunately this morning Dr Twist has been taken ill. We will send her some written questions. We particularly want to have a catch-up with her over loot boxes, something the Committee has deep concerns about. As such, our recommendations have not been followed through by the Government, despite promises that they would be. We will be writing to her asking for detailed answers to those questions.

Svana, I will go to Dr Rupa Huq for your first question.

Q216 **Dr Rupa Huq:** Thank you for last night. I think we had to see it to appreciate it. I would not have understood these questions had I not had the whole immersive experience. It was fascinating.

What was the creative and commercial input behind what we saw last night? I understand it was quite a few years in the works. What are the economics of it?

Svana Gisla: It was five years in the works, specifically. We started the research and development in 2017 and we delivered the show and opened in May 2022.

Q217 **Dr Rupa Huq:** Was it interrupted by Covid along the way?

Svana Gisla: It was not, weirdly. We were lucky enough that the production period was in phases. We completed a phase right at the end of February 2020, two weeks before lockdown, so it allowed us to work through lockdown with the visual effects artists, which was hugely fortunate for us in the sense of timing. We consider this to be a creative venture. Of course, it is a commercial one, too, because the budget is £141 million, and entirely foreign investors made up that funding. Yes, we kept on track. We were delayed by six months in opening. We were meant to open in October 2021, and we opened in May 2022.

Q218 **Dr Rupa Huq:** It is fascinating to hear that every seat is sold out for the foreseeable future. Whose idea was it in the first place, the germination of the idea to do this? I remember in the 1980s there was "Time", I think it was called, with Cliff Richard. He did a hologram show, but it was nothing on this scale. We were there for 90 minutes with the live band,



HOUSE OF COMMONS

all those aspects that maybe people watching don't know about but we witnessed yesterday.

Svana Gisla: Yes. The idea came before my time. I think it was Simon Fuller who e-mailed the band before I got involved in 2017, wanting to see if they would be interested in a holographic show. They went over to Las Vegas and saw a few holographic shows—I believe they saw Michael Jackson and some others—and decided that that technology was not right for them. Holograms are very limited, so we aborted the idea of holograms pretty quickly and then we focused on trying to recreate digital people with the use of motion capture technology. There was a research and development period in 2017 with a company in America, which we deemed to be a failure. We decided it just was not what we were hoping it would be. We were looking for motion within the characters, within digital ABBA, not just likeness, and we didn't feel that the company we worked with captured that.

We went back to the drawing board and went to Industrial Light & Magic here in London, which took on the project and has seen it through with us ever since. We are incredibly pleased with the results that it got. It pushed technology further than even it has ever done. It handles some of the biggest IPs in the film industry, as you know, with "Star Wars" and Marvel and such films.

Q219 **Dr Rupa Huq:** The venue is purpose-built just for that show. I think you said there are two blank days within a week, but apart from that, it is pretty full on. This Committee has looked at regenerating urban wastelands through culture. Was looking at that part of east London part of it or was it just a happy coincidence that there was a blank space there where it could be created?

Svana Gisla: It was not a happy coincidence. When we decided that we could not tour this show, which was originally the idea, we knew we were going to find a residency for it. London very quickly became the first choice because ABBA is very happy in the UK and it has had fantastic success here. We went to the GLA, to the Mayor's office, and we enquired about available land for an interim period use. It gave us several options, mainly in east London; the Royal Docks was also an option. We then looked into private land, we looked into land in Earl's Court and we looked into re-appropriating existing buildings and existing land within the West End, because obviously the further from the West End you move, the less commercially viable the project is deemed to be. It takes an awful lot of courage to venture far from the West End with a project like this.

We made a very conscious decision when we came to Stratford with Benny and Björn that this was the place we wanted to be. We were excited about the regeneration of the park and the East Bank hub that is being developed now with the arrival of the BBC, Sadler's Wells and the V&A Museum and we wanted to be part of that. We are also very passionate about the legacy of ABBA and we have thought a lot about what we are going to leave behind when we leave and the legacy that we



HOUSE OF COMMONS

can contribute to the area. We felt that being in the foremost deprived borough of London was a good thing and it was a good place to be. We could arrive there, contribute to the community while we are there and hopefully leave something behind, which is part of something I would love to speak to you about at some point in this conversation, which is our educational ambitions and how we would like to contribute to education in the creative industries.

Q220 Dr Rupa Huq: Does it have a limited lifespan? It feels like a permanent build, but bits of it feel a little pre-fabby.

Svana Gisla: We call it the least portable building of all portable buildings. As you have been there now, it doesn't feel very portable. It is built to be taken up. We did not break any ground. It is built on a 1-metre raised platform with all the services underneath the building, but it could definitely stay. It is a very sturdy, well-built structure. It is quite a unique building for an entertainment venue. It is all in the round; it is a very immersive space. It is a 70-metre diameter space with no restricted view at all, which I am sure you appreciated last night. It is a beautiful building. After ABBA Voyage is no longer entertaining and selling seats, I imagine there would be plenty of uses for that building, yes.

Q221 Dr Rupa Huq: Is this model replicable? Could you substitute in other heritage-type acts, the Beatles or whoever?

Svana Gisla: Absolutely. We have heard this a lot. The technology itself isn't new, but the way we have used it is new and the scale in which we have used it is new. The barriers that we have broken down in order to push that technology to its limits are quite groundbreaking. I am sure others will follow and I am sure they are already planning to follow. There is no reason why they should not, absolutely.

Q222 Dr Rupa Huq: What do you think this says for the future of live performance? This is a fusion of live. It is not like other metaverse concerts where you can just stick on your headphones and the whole thing is virtual. I remember in the 1990s there were these kinds of tribute acts like the Australian Doors, but also things like the Australian Cure because the Cure would not tour in Australia. Is this sort of warping what the future of live performance is?

Svana Gisla: At the moment, the hindrance to this being rolled out on a massive scale with lots of different bands is the cost. The cost is enormous. The cost of creating those digital people, there were 800 VFX artists in three different studios around the world working on this for two years. The cost is in the tens of millions just to make the content of the show, and then add on top of that the building and the technology and the light systems and everything around it. It is prohibitive in its cost, but in terms of creativity it isn't; it is something everyone could do. At the moment, until the technology becomes cheaper, I imagine you would need a heritage act that has a catalogue and a fan base and a global popularity appeal that could sell 1 million tickets a year to be able to break even in three years. Our ambition is very much to do another ABBA Voyage, let's say in North America, or Australasia or we could do another



HOUSE OF COMMONS

one in Europe. We can now duplicate the arena and the show, but it is a heavy commercial venture at the moment.

Q223 **Dr Rupa Huq:** It will take about three years to break even?

Svana Gisla: Yes. We will need 3 million people through the doors to break even, based on an 80% capacity and an average ticket price of £75.

Q224 **Chair:** We won't be flashing up the number for Ticketline, by the way, but thank you for that. I am very interested and want to develop a little bit further on what Dr Huq was asking you there. I think we had this conversation yesterday on some of these issues. It is quite possible or practicable in the future that we could have 24/7 shows. You have two days where you go dark and five days where you perform, but you could have shows basically going almost around the clock, let's say in a location like Las Vegas, and you could have many different acts. You could have a virtual Beatles, a virtual Elton John or a virtual Queen. First of all, exactly how practical is that and when do you think that would happen?

Secondly, as someone who has worked in the music industry, what do you think the effect will be on the pipeline of talent, given there is a lot of controversy over the fact that a lot of music these days seems to be catalogue-based rather than new-talent-based?

Svana Gisla: In answer to your first question, absolutely it could run around the clock. I know there are shows in Vegas currently like Cirque du Soleil, which has two show crews, so they rotate. We do have live musicians, so we chose to keep our band and do seven shows over five days a week. You could absolutely roll it around the clock and I am sure Vegas will very quickly adapt this style of entertainment and do Elvis or the Beatles.

I would say the difference between doing somebody like Elvis is that posthumously, absolutely you can put artists back on stage. Ethically, people may or may not have a view on that. The difference in having ABBA partake in this is that I can say this is an ABBA concert, ABBA did five weeks of motion capture, ABBA made all the decisions, ABBA chose what to wear, ABBA chose how they look, ABBA chose their set list. ABBA made this show and they are still very, very involved in this show. When you come to the arena and you feel like ABBA is on stage it is because they are there because they put themselves there and they chose to be there and they gave of themselves and their essence in the motion capture to stand on that stage. There is a sensibility in that that is very tangible and very real.

I think it would be wonderful to see Elvis in a similar situation, but Elvis would have no input in that. You can have a view on that or you cannot.

Q225 **Chair:** Anything could be done with Elvis in that instance, so literally if you wanted suddenly to stop for a commercial or something like that, you technically could. No one owns the copyright on Elvis. They own the copyright on his songs, I presume.



HOUSE OF COMMONS

Svana Gisla: I believe his estate will own the copyright.

Chair: Seventy-five years, yes.

Svana Gisla: Yes. I believe the copyright is still under his estate, but with somebody like Elvis, there is so much visual material out there of Elvis. I am sure a fantastic VFX house like ILM could take that information and recreate quite an accurate model of Elvis with how he used to move. Remember there is a DNA of movement here as well, how we move, how we present ourselves, the nuances in our bodies, how I am waving my hand, how you are putting your hand. Everything about how we move and live is our movement DNA, so you can extract that from footage that exists or you can, like us, have the real people there, absolutely, but I guess it would be a slightly different show from what I believe we did because of ABBA's involvement.

The second answer to your question about the music industry, if we are again leaning into catalogue artists to the disadvantage of new artists, I don't think that is the problem of the music industry. I think the problem with the music industry is the lack of support for new artists. I have been in the music industry for 25 years. Until a company called Napster opened its doors—it has now become multiple different streaming services—artists used to sign to main labels with a three-album deal, three singles per album, and if they didn't do well by album 3, they might not get another one. You are lucky now if you get more than one song out with a label. There is no longevity in the music industry because the funding is not there to support new artists.

The artists that have the biggest chance of succeeding are what we call "The X Factor", "Britain's Got Talent", which have an enormous amount of money and power and exposure behind them when they start their careers. Being a new artist now is incredibly difficult because it is expensive and the record companies just don't have the funding for it, which is heartbreaking, but I don't know what the answer to that is. The money now isn't made from selling a song, because music essentially is free, as we know. It is free on the internet. The money comes from touring, which is expensive, merchandising and brand sponsorships, which all require a very, very high level of exposure for that artist, which they don't get when they start out.

I think a band like ABBA, if they were to come out now, would fail because you need to be able to cut your teeth as a creative person and as a songwriter and a musician. You need a period of development. There is a creative process. It is called a process for a reason; it does not happen overnight. I think most of the big catalogue artists—you mentioned Queen, U2—all of these artists, they would not have a chance today because they would not have the support. I think that is the problem with the music industry, not our show.

Q226 **Chair:** No, I am not blaming you for the music industry as such. It is very noticeable in terms of the ethical stances that have been taken with the show. You talk about the fact there has been no ground broken with



HOUSE OF COMMONS

the establishment of the very impressive stadium. To be honest with you, one question I have is that this could be run in a very different way. The technologies that you are harnessing could be used in that 24/7 environment, get in quick, get out, in a non-environmental—I would not go as strong as to say non-ethical—way that perhaps doesn't reflect the ethics that you have discussed in your answers.

Svana Gisla: I agree, absolutely. This opens the door for a multitude of variations of what we have done. You don't need to end necessarily with music. You could look at films; you could look at musicals; you could look at theatre; you could look at plays. Any creative event could be done in this way.

Q227 **Chair:** Yes, you could have great actors from the past playing a role in a play or whatever in that respect.

Svana Gisla: Absolutely, absolutely. Why not?

Q228 **Chair:** On that point, one thing that struck me about last night was, first of all, how amazing the lighting was. It was incredible, I have to say, but also the avatars on stage were very, very convincing from a distance. In terms of the close-up look, I think this has been said in some reviews as well, the way in which the face sort of reacted did seem to be a little bit—speaking as someone who is a keen videogame player—videogame-ish rather than human. I hope not to give too much away about the show, but there was an interesting moment when you played “Waterloo” from the 1974 Eurovision Song Contest and there was a palpable difference in the faces of the “Waterloo” and the avatars. That is not being disrespectful, that is just my own intonation.

Are there any means by which you think it is possible that in the years to come we will have avatars that are able to effectively react to their environment much more? For example, the way in which a human being onstage would sing would be to react to the audience and individuals in the audience and make eye contact. Would an avatar be able to make eye contact?

Svana Gisla: Yes, absolutely. The 10-metre by 60-metre screen is very unforgiving when it comes to digital detail.

Chair: Every screen is unforgiving as far as I am concerned.

Svana Gisla: The minute you project on that ginormous screen, there is nowhere to hide, so of course we look at it in the same way as you and we see improvements that we want to make across the board, of course. It is a lot to do with lighting. If someone ships in more money and a bit more time, we will gladly go back and have another go at it. I think the idea is very much to keep evolving the show and better the show and improve the show, which is what we hope very much that we will be able to do, so we will be taking a look at all those moments where we feel like we can improve the avatars.

The technology of them reacting to the audience is absolutely around the corner. It is about render time at the moment, and it is about pushing



HOUSE OF COMMONS

data through the processes and getting them on the screen without lag, so they are in real time. We are pushing our machines to the absolute limit at the moment. They squeal in a couple of transitions. For instance, between "Lay All Your Love On Me" and "Summer Night City", the machines shake when we push that data through them. We are at our limit at the moment, but with render time becoming quicker, with technology becoming faster, Benny and Björn could be sitting in a chair like this one connected to their avatars talking about last night's football results with the audience. Wouldn't that be fantastic? That will come.

Q229 **Chair:** We will go to Dr Kang in just a second. First, before I turn over to Giles, do you have any thoughts and comments to make about what you have heard Svana say this morning in terms of the ABBA Voyage experience and how that relates to the world of connected tech and what we need to think about as legislators and also as consumers?

Dr Kang: I lost a little bit of connection there.

Chair: Yes, don't worry. In short, do you have any observations on what you have heard from Svana this morning in terms of connected tech and what you have heard about ABBA Voyage and what it offers?

Dr Kang: First of all, I did not have a chance to see the show in person. However, I googled it and I saw what it is about. Technology-wise it is so impressive that it is happening now. At the same time, now I have a much better understanding hearing from Svana how they made this project over the last five years, how much money has been invested and how much effort and time has been put in to make it happen. It is amazing that it is realising. If we have much more powerful technology, even more realistic in real time performance could happen.

It just kicks back on to me, my position as an independent artist, and at the same time an associate lecturer at the academy, the Royal College of Art. What should we do? It is such a massive project that has lots of money in it. What kind of education would be possible at the student level or academic level or as an independent artist? What kind of support do we need? I have been thinking a lot of thoughts hearing Svana's speech, yes.

Q230 **Chair:** What do you think are the implications of what you have heard?

Dr Kang: It is great that people are enjoying that experience. All of the members visited there last night, so your impression, as I understood, it was very fascinating. I was very interested: because of the lack of technology even a few years back, there was a little bit of uncanniness when you had that kind of performance, real time or hologram or whatever, but now it is much better, so I am looking forward to seeing the next level of technology.

Chair: Where it goes from here, effectively?

Dr Kang: Yes, exactly.



HOUSE OF COMMONS

Q231 Giles Watling: I have a couple of questions for Dr Kang, but first of all, on the back of the Chair's question just now, Svana—and thank you so much, both of you, for coming today—sadly I wasn't able to make the show last night, but before this meeting started, talking to fellow Committee members, apparently it was a mind-blowing experience and everybody had a great time. I am very impressed. One question immediately sprung to mind: you mentioned that you found Stratford because you did not want to go far from the centre of London, but why London, of all cities in the world?

Svana Gisla: That is a very good question. We looked at all the options. Germany is a very big market for ABBA. America: someone said Vegas earlier, which is a pretty obvious place for this. Why London? Maybe have a think about when this was happening. This was happening in 2017, after Brexit. There were a lot of companies leaving, there was a lot of uncertainty about the UK at the time and it was ABBA themselves that decided, "No, we want to come in. They might be leaving, but we want to come in", because ABBA has been incredibly much-loved in the UK. They have had great successes here, they have all lived in London for a period of their lives, they love London very much and it very quickly just became the only option. I guess that was an emotional choice more than a commercial choice.

Q232 Giles Watling: I have spoken to many musical producers over the years and London is always regarded as a great place to launch expensive musicals because it has such a great hinterland of population very close by, so you can test it out here and then take it to New York, which doesn't have quite the same immediate audience to appeal to.

Svana Gisla: Yes. I guess we never saw ourselves as a musical, we always saw ourselves as a concert. We don't associate as a West End show or a musical, which is why we were not afraid to go to Stratford. We are a concert. We are near the O2 and we felt like we are in the right place. London is an incredible city; London is the best city in the world. It is an exciting, ever-changing multicultural wonderful place to be, and it was the right home for this and still is.

Q233 Giles Watling: As a Londoner, basically I am so glad you said that. Would you regard what you are producing here as something completely other? It is not touring, it is not live performance, it is sort of a bridge between live and recorded. Would you say that would be a good description?

Svana Gisla: I think that is a very accurate way to look at it. We fall between a lot of cracks. We are not really a concert because people argue ABBA aren't there. We are not a film, even though the majority of what you are seeing is on a screen. We are not a musical; we are not theatre. We are a little bit of everything, so we fall between all the cracks. We sort of sit on our own somewhere in and around those categories.

Q234 Giles Watling: Did that give you a difficulty in itself? Because people do like to pigeonhole things and say, "It is a musical," or, "It is a play," or, "It is a show". Did that give you any difficulty in marketing it?



HOUSE OF COMMONS

Svana Gisla: Yes, very much so. It gave us a lot of difficulties just even getting the funds. We were having to describe what this is in front of investors without any material to show because nothing was ready until a month before we opened because of the way the VFX works. We had nothing to show, so we were describing something that isn't anything.

Giles Watling: It does not exist yet.

Svana Gisla: It doesn't exist and no one has ever seen it and you are just having to use the power of conviction and passion to get people to come on board with you. That was wonderful and also very difficult. Marketing, very difficult, but luckily ABBA have a ginormous fan base who bought over 200,000 tickets on the onsale, which allowed us to launch the concert and then put out the material that we needed and the reviews that we needed to convince other people to come.

Q235 **Giles Watling:** Thank you very much. I look forward one day to seeing it.

Dr Kang, you are an artist and researcher. This fascinates me: what was happening in the tech world that first attracted you to this media, to what you do now?

Dr Kang: Thank you for the question. I was trained as a painter for a long time. I was always dealing with the mixed reality on the surface of a two-dimensional canvas or papers, but then I thought that this is not the right language for me. I almost decided to change my major—"Art is not my thing anymore"—but then I met video as a medium so that I could introduce a notion of time in my work. I gradually started to use computers in my work and then put some screens in the space rather than just using a single TV or a projector so that I could also use the notion of space. For me, it is more like expanding my language from two-dimensional painting with the physical material towards time and space together with the digital mixed reality.

For me, that is the reason why I did my PhD as well—because I really wanted to understand this medium. For me, it is not just a technology or a technique, it is always a conceptual support, not just a technical support. I wanted to understand what a digital moving image is, because I use everything all together. For example, I mix filming with performance and I did real-time rendering in generation technologies. I use all these different kinds of moving image sources in a single project, then how can I describe this type of moving image? But the thing is that in the academic world, there are not so many references to find when it comes to digital media and new practices. That is the reason, okay: maybe I should try the right one to understand my medium even better, so that is why I moved to the UK. I did my PhD at the arts, V&A, in the same programme, and then I got the teaching job here and did my teaching here.

Q236 **Giles Watling:** What interests me in what you just said is that clearly it was difficult for you to establish a target, something you were aiming for because you were at the very cutting edge. You had your artistic



HOUSE OF COMMONS

background, but you could not see what you were aiming for until you got there and started using the technical facilities in front of you. Would that be an accurate way of describing it?

Dr Kang: Yes, because I started to use video in 2008, but at the time video is already, let's say, an established medium in the contemporary arts, lots of video art installations at the Biennale, but then when it comes to digital or computer arts, there are not so many institutions or organisations or university-level education that I could find at the time in Korea, so I had to find another opportunity.

Q237 **Giles Watling:** What I am driving at, Dr Kang, is did the AI, the machinery, inspire you?

Dr Kang: No, not really. That was not the motivation that I started to—

Q238 **Giles Watling:** It was your tool; it was what you used?

Dr Kang: It is one of the tools and it is not my major tool.

Q239 **Giles Watling:** Thank you. Do you think that traditional cultural institutions have a blind spot regarding digital art?

Dr Kang: Yes, very. For example, I did an artist's residency programme at the Victoria & Albert Museum in 2017. It was a half-year-long programme and I met a lot of creators there, and I managed to have a site-specific projection mapping installation at the V&A, using projected images on top of the V&A's existing collections, like massive sculptures within the V&A. The curators at the museum found the research-driven project very interesting, so they decided they wanted to collect it, so we spent a year together to examine what was the best way to preserve these immaterial, ephemeral, like digital projection mapping.

First of all, it is similar to the ABBA project that we did at the V&A. The V&A did not have any category, so it started from the very simple question: is this a video? No, this is not a video. Is this a film? No, this is not a film. But then we don't have the category. So, the lead curator and I had to set up every single new category, and after that we also need to consider the obsolescence of the hardware and software. What if this particular project is not producing anymore? What if this particular software is not available anymore? Therefore, we had to set up plan B and C and D. It was fortunate because the artist is still alive, so she can provide different set-ups and alternative options. Museums are obviously having a very difficult time; they do have a lot of different methods about video arts, but digital is a new area.

Giles Watling: It is this human thing of wanting to put everything in a pigeonhole and you are breaking down those barriers. Thank you very much. There is not much time so I will hand back to the Chair.

Q240 **John Nicolson:** Good morning. Like my colleagues, I went to the show last night and absolutely loved it and was fascinated by it.

You have mentioned young people a number of times, both to us last night when you were talking about pushing technology and again today.



HOUSE OF COMMONS

What do you think the landscape is for young artists looking to develop a digital practice? How difficult is it? It seems to be such an expensive business to get into. How do you manage to launch yourself in a career in this industry?

Svana Gisla: It is a very welcome question because it is something that we feel very passionate about. We can talk about it as education under one word but it is very, very layered and complicated.

On competitive creative industries, let's take VFX as an example, as I have lived with that for the last few years with ILM and creating the ABBA show. It is a very competitive market that requires a lot of staff passing through, the regeneration of staff and talent and the growth is enormous. The UK has and always has had quite a big advantage in VFX over the years. It started with "Harry Potter", which chose to make its films in the UK, and ILM and other VFX companies benefited hugely from that work. The "Harry Potter" franchise has now finished.

We see the effect of ABBA Voyage in VFX industry in the UK very clearly. We hired 800 VFX artists for this. We set up new departments with ILM that are now running.

The problem that ILM and a lot of other film industries are having is that young talent is not coming through. Why is that? I think young people feel that the creative industries aren't reliable enough. It is not secure enough. Their parents perhaps think it is a bit of a folly to be a creative. There is a lack of understanding that a creative industry is not just one artist coming up with ideas; it is an enormous infrastructure of people that go from operational to managerial to executive level. There are electricians involved. There are carpenters involved. There is a whole infrastructure of industries involved in the creative industry.

I think that we need to get to young people very early. By the time they get to sixth form, college or university those career choices have already been made, and they have already been started in many ways with their GCSEs or their O-levels. We need to get to primary school, and it is very difficult to convince parents of primary school children that the creative career path is the right path for the future because it is not tangible: "Even if ILM produce the Marvel and the Star Wars movies, they are on a screen. They are in Hollywood." But they are not in Hollywood. They are made here but there is nothing tangible to look at.

Q241 **John Nicolson:** I recognise what you are saying because when I said I wanted to be a journalist my mum said, "Don't you want a proper job?"

Do you think you get enough support as an industry from the Government? We are a Committee of cross-party MPs. What message do you want us to send out when we write our report about this? What help do you feel you need that you are not getting as an industry?

Svana Gisla: I am not the most qualified person in the industry to speak. I can only speak from my own perspective, but the answer to that would probably be, no, there isn't enough being done because, again, the



HOUSE OF COMMONS

word “folly” or “It’s a bit of fun”. It isn’t just a bit of fun. It is a hugely lucrative business. It is showbusiness. I think that, when it comes to funding, in schools it is often the creative subjects get cut first—the art classes. They are not being focused on and supported well enough.

This is something where we can help. We are a living, breathing building in the middle of London, in the middle of Stratford, in the middle of four boroughs, and we are opening our doors and our arms to say, “Let us help you. Bring students in and let’s make an educational programme. Let’s extend the summer schools into something that is a bit more meaningful than three or four days in August when no one can make it”.

Q242 John Nicolson: Do you think that urban regeneration is part of your core mission? You are, of course, a business and you have to make a profit and you have to meet your costs. We know how expensive that show is and how long it will take you to make back your investment, but do you see your role as going beyond that and encouraging urban regeneration in areas that are neglected, and perhaps in an industry that is neglected—because the days of communities gathering together to go to the movies have gone, at least the way in which people used to attend these events?

Svana Gisla: We absolutely do and we should. We have to. We cannot just come to Stratford and take. We have to give and we have to leave something behind. We formed a unison with ILM and Solotech, which is the tech provider within our arena and is probably one of the biggest tech providers in the world. It provides tech, screen and lights for any big concert tour in the world. It has just done Adele. It did the Olympics. It is huge. We have pulled together with them to offer an extensive educational apprenticeship, accessing an opportunity for those young people to come and be inspired.

There is another problem with why there is not enough staff. There is not a lot of diversity in the creative sector. It is very white. There is not a lot of diversity. We need a bigger pool of people from all cultures. That is really important, and we are there. We are in east London. That is all around us.

Q243 John Nicolson: For people who don’t know east London, east London is a very diverse part of the country.

You touched on an ethical question earlier on, which I thought was terribly interesting. You said: is it ethical to put people on stage in the way you have done with ABBA if they are no longer alive? Fortunately, ABBA are all alive and kicking, but I know that debate went on a couple of years ago when the technology progressed to the extent that Marilyn Munroe and James Dean were used in advertising. A lot of people thought that was morally wrong because they may not have wanted to be involved in adverts and they were given no say, obviously because they are no longer with us, and it was disrespectful.

Is this different, do you think, because it is about performance, it is about the music the dead artists loved, that they performed themselves? They



HOUSE OF COMMONS

are not being asked to endorse some tacky products. Why did you suggest earlier on that there was an ethical question about this, because, presumably, you are on the cutting edge of this technology and other people might try to replicate what you have done?

Svana Gisla: Yes, each artist is different. Someone said the Beatles. Someone might say that George Harrison's family or estate is completely capable of giving his consent or not and, therefore, there is no problem with that.

I remember a hologram show with Whitney Houston, where she was put back on stage—not very well—for another spin around the old money machine in Vegas. I don't know if I find that the right thing to do. She had no say in the matter. She wasn't asked. She did not give her consent and I do not think she made any money out of it.

Q244 **John Nicolson:** I think the same issue was raised with George Michael after he died, with albums that George Michael's friends did not think he would ever have agreed to put his name to.

Svana Gisla: That is the thing. The copyright belongs to the family, an estate or a trustee or whatever it is. It depends on the individual person who is looking after their legacy. I am not going to sit here and say that posthumous shows are unethical. That is not right. There are no broad strokes for that, but personally I would be very selective.

Q245 **John Nicolson:** Before I hand back to the Chair, Dr Kang, I noticed you nodding throughout that. Is that your take as well as we look to the future, that there are ethical questions as well as financial and urban regeneration questions?

Dr Kang: I was nodding because there are lots of things to think about, personally, but ethical-wise it could be a problem really. This is slightly connected to my previous answers regarding the V&A case study. The museums or galleries or institutions don't have the right answers as to how to regenerate the concerts in a different context.

For example, I did a co-operation with a deceased painter but the family owns the foundation and they are not happy with using his IP to regenerate his work in a digital format. I believe there will be more issues like this. There could be some ethical problems. I cannot tell exactly what those would be, so that is one of the interesting points that was brought up: the ethical issue.

Q246 **Damian Green:** Thank you both for coming this morning. I want to ask a couple of questions about the metaverse, in which as far as I can see Mark Zuckerberg wants to replace real life for most of us, certainly in terms of large parts of entertainment. Dr Kang, have you produced any content for the metaverse or would you consider doing so?

Dr Kang: Not yet. I haven't produced any metaverse projects, but I am very interested in making one. At the moment, I am still a little bit sceptical about the available technologies. There are still a lot of barriers to getting to the metaverse, like wearing headsets and wearing a lot of



HOUSE OF COMMONS

gadgets and starting applications. I am looking forward to seeing the next available technologies, so the answer is yes, I am definitely interested.

But then it must not be just a translation from a physical project into the virtual realm. It needs a deep understanding of the language first because, for example, I use projection mapping. That makes the reality certain on an immersive scale but if I want to put this project into the virtual realm, the metaverse, then it is not a simple medium transition. I also need to consider different storytelling methods. How can I create an engaging experience using moving images and sound all together? For me, I have to spend more time researching and studying the language.

Q247 Damian Green: I suppose one of the underlying issues is whether, if you start producing content for the metaverse, that will stop you producing other content because of the sheer bandwidth. As you say, it is clearly very difficult to do satisfactory things. Is that a worry or would you just say, "Fine, I can switch back and forth"?

Dr Kang: What I really want to do is switch it on and off, let's say. That is the reason why I do not want to rush to make a metaverse project before I have a full understanding of what this medium is about. What is happening at the moment, when it comes to metaverse, with the entity, it is more like money drives the content rather than the makers or the artists leading the projects. The result is the outcomes are not thought provoking or inspiring, so I am trying to avoid that pathway.

Q248 Damian Green: That is a real issue. Do you think it is basically a purely commercial project at heart rather than an artistic and creative project?

Dr Kang: Yes. Artists themselves or the people who are involved in the system need to see the contents differently, whether it is a fully commercial project or whether it is an artistic project. When it comes to digital arts, if we use the same technique, people tend to think they are the same content, whether it is entertaining, projection mapping, ticketing, venue or an artistic work.

I see that there are a lot of problems when it comes to meeting so many different types of business and industry people. People do not care that much about the storytelling or the content. Rather, they just focus on the technology that is used in the project. At the education level at the RC, we try to avoid that. Instead of doing that, we try to spend a lot of time reading and understanding the underpinnings of the technology—what the creative and historical context is—so that we can properly deliver the message or the impact of the story through the right medium.

Q249 Damian Green: Do you share the clear ambition of Mark Zuckerberg and senior people at Meta that the metaverse will become a dominant or possibly even the dominant medium for creativity in the future?

Dr Kang: Personally, I don't agree. I hope that that won't be the only available world for us. It is obvious that the metaverse will be a very powerful form of life that we will have in the future. That is another



HOUSE OF COMMONS

reason why the experiences in reality will be more precious and even more expensive to have.

Q250 **Damian Green:** Can I ask that last question to you as well: do you see a world in which the metaverse is one of the areas you almost have to consider first when you are thinking about a new project?

Svana Gisla: If I could just speak from the perspective of the show, because I do not consider myself to be a tech expert or the most knowledgeable person in the world about the metaverse, we made a choice not to go digital with this show. We had lots of people telling us we were mad to be spending all this money and creating the show for people to have to travel to a location, 3,000 at a time, to experience it. They did not understand why we were not showing for millions of people around the world.

The answer to that for us was very simple. We wanted an emotional experience. We like human emotion. We worry and I worry that technology has made us very insular. It is a very lonely existence to live in technology. It is made to separate people and connect them one to one with a device. We see it in our children. We see it in our grandchildren. Their social skills and interactive emotional experience of being with people and experiencing things with people is getting lost.

For instance, we ban photography and filming in the ABBA arena because we want people to be present. You can experience things without putting a phone in front of your eye. Things do happen if you don't post them on Instagram. They still happen. People feel quite liberated when they come there and they realise that they don't have to film it and share it with all their friends. They can actually just be present and enjoy it.

We are a pack animal and it is only very, very recently that we have been encouraged not to be. The metaverse scares me in that way. I feel that just because the technology is available does not mean we have to use it. It does not mean it is good for us. It does not mean it is improving anything. I don't see any improvement in putting more screens and getting our next generations to dive deeper into the loneliness of being inside a screen all day. That is just my personal take on that.

Damian Green: I sense you just said something that the Committee agrees with more strongly than anything we have ever heard, so thank you very much. I will stop there, Chair.

Q251 **Kevin Brennan:** I apologise, Svana, for not being able to come to the show last night but I have seen it during its early stages.

Svana Gisla: Oh, wow.

Q252 **Kevin Brennan:** First of all, as a member of the Musicians' Union, I want to thank you and members of ABBA for employing some musicians, a big band of musicians for the show. Why did you do that? Did you have to do that?



HOUSE OF COMMONS

Svana Gisla: Absolutely, we have to do that. It is a live concert and we are incredibly proud of our band. We have 10 musicians on stage every night. We found them before Covid. They have stuck with us. We then have about five or six deputies per musician, so we rotate the bands, so all in all there are 50 to 60 people, live musicians, that we hire. It is vital to have that.

Q253 **Kevin Brennan:** Could you present a similar type of production just using the recorded tracks rather than using a live band?

Svana Gisla: Yes, we could but it would not be the same. There is nothing like being in a room with live musicians. Live musicians are the heart and soul of the show. I spoke about emotion a minute ago. Emotion is all about having a live experience together.

Q254 **Kevin Brennan:** I did not come last night because Wales were playing their first game in the World Cup for 64 years, so that is the reason I did not attend.

On that matter of filming that you just mentioned, to follow up on your answers to Damian Green, are you saying that the reason you ask people not to use their phones or to film is in order to enhance the audience experience but not to hide any trade secrets that might be revealed through filming?

Svana Gisla: No, I don't think the filming would reveal the trade secrets. They would be filming a digital screen, so I am not sure how interesting that is to anybody to look at. It doesn't do the show any justice in that way with frame rates and the moiré effect and all the things of filming digital material. I mean you can film your television and it will look rubbish, so there is no point in filming it, but it is absolutely about the experience. It is about being in the moment.

Q255 **Kevin Brennan:** I want to ask some questions about artificial intelligence, about AI, to both witnesses. Do you have any thoughts on AI and the sort of role it might play, and is starting to play, in and around creativity? Is there any danger—I don't like to use that word—and what might the implications be for creatives if AI is being used more and more in the generation of creative content, including music and images and so on?

Svana Gisla: Terrifying. I don't see how AI can create art. I don't see how AI can write songs. I don't see how AI can do that. I can understand it in the medical profession and in industries and stuff, but in creativity? I am no tech expert, but for me it is horrifying.

Q256 **Kevin Brennan:** Maybe I should ask Dr Kang about that, as a living, working artist, as someone who is working with technology. I have seen some AI-generated film, which was rather beautiful. What are your views about it and its implication for artists and creatives?

Dr Kang: I am more interested in generating, for example, stories—a novel, a script or even a poem—but I am not interested in image generation. It lacks originality. Personally, I don't think it is a huge threat



HOUSE OF COMMONS

to visual artists. If you see some of the generated AI arts, the results are quite similar because that is the only available type of image at the moment. If there is a more powerful engine, other types of similar patterns and images are available. For me, it is a more frightening threat when it comes to the concept generations or the story generation, but when it comes to image generation I don't find it very interesting or inspiring.

It is always connected with the available hardware power. If you want to generate fancier images, you need even more powerful hardware. You have even more powerful massive sets of data, and then you have to train it for a long period of time. For me, it is not just about the sound generation or image generation. It is more about the conceptual generation part of it.

Q257 Kevin Brennan: The piece of film I am referring to that I saw was generated from some text. The artists derive some text and then ask the AI generator in the computer to produce a film from a piece of text and an image then to take that image and piece of text and generate film. Is that frightening to you? You mentioned being frightened a bit by AI but what is your view on that sort of approach?

Dr Kang: The artist, whether it is a sound maker, a visual maker or even performance, for me the core is always about the storytelling. What sort of message do you want to deliver via your own medium? It could be a body. It could be a digital image. It could be sound, or music. So, our main role is about critical thinking: how to develop your thoughts, how to weave them and deliver them to the audience. That is the reason why I change my medium to painting, to digital media, immersive media, because I want to tell my story in an immersive way.

However, if the AI replaces these core parts, then it could be a huge threat, but do I have to think of it as a threat? We might need to find a way to cohabit with the non-human intelligence.

Q258 Kevin Brennan: That is a very interesting point and, from a policy point of view, which this Committee is obviously interested in, the Government recently announced, to a lot of people's surprise, that they were going to allow commercial interests to data-mine creative output, which is protected by intellectual property, including music, in order to create through artificial intelligence new works.

Since you work in the music industry, Svana, what is your reaction to that? In other words, ABBA's music, for example, which is protected by UK copyright law, could be data-mined in order to feed it into artificial intelligence technology to produce new music, which presumably draws its inspiration, its similarities from ABBA's music.

Svana Gisla: I think our emerging, new and existing artists have a hard enough time surviving in life, let alone if they have to compete with computers on top of that. Like I say, the idea of that is not good. I see no benefit in that whatsoever.



HOUSE OF COMMONS

Q259 **Kevin Brennan:** Can you think of any other industry where the Government would say, "It is okay for you to go and pick pocket somebody else's creation or idea and generate something yourself with it without paying the creator"?

Svana Gisla: Terrible. It is a bad idea.

Q260 **Kevin Brennan:** Dr Kang, were you aware that that is now Government policy? I don't think they have had the chance to implement it yet and we will be having the Secretary of State in front of us in the near future to ask why the Government have chosen to go down this route, which I don't even think techUK was asking for in the consultation that was held by the Intellectual Property Office. What is your reaction to that proposed change in policy?

Dr Kang: I think somehow it is inevitable. It is a matter of when. Sooner or later, I think it will happen in most countries. However, it is about how to do it, what sets of boundaries, which kinds of data we have access to. It is going to be very important for policymakers as to how they deal with these issues. Eventually—

Q261 **Kevin Brennan:** Can I ask you, as a point of principle as an artist, you produce your work as an artist, do you think that commercial interests should be able to data-mine your work and then use artificial intelligence to produce something else without you being rewarded for that?

Dr Kang: I don't personally love the idea, but at the RCA we have a co-operative project with LG, a company in Korea. It has donated 18 OLED panels. That includes transparent panels, transparent TV, which is the cutting-edge technology that is available at the moment.

The main reason that LG is doing this project is particularly acquiring the IP of the students' works. It is in fact the property of the students, but in the meantime, the content of the winning students' work can be shared with LG if it wants to use it during the next five years. IP is a critical issue at the moment. For example, how can we authorise it? This is the property of this person. How can we issue their authority using the crypto technology, which is already available?

It is about how to set up the principles and do we have to apply exactly the same rule to every artist, or do we have to have it slightly different? For example, as an artist, my contract is different every time, whether I work with the museum, the gallery, a commercial one or, for example, the Google Arts & Culture lab, or it is a different city or country, it is all very different. So, it will be very important to have some kind of support for an artist.

Q262 **Clive Efford:** Dr Kang, if I could come to you first, what is it that we are competing with when we want young people in particular, but in your field artists who have computer skills to go down the creative pathway? What are the barriers or attractions that stop them going down that pathway?



HOUSE OF COMMONS

Dr Kang: It is a very important question. RCA is a postgraduate school, so it is either MA or PhD students. Most of the students who are interested in my programme—it is called information experience design—we do media arts. There are lots of students who are working with AI, vertical computing, interactive work.

Most of them have experience from the MA. However, their levels of skills vary. Some students have a background in engineering, in robotics, for example, but some of the students are from the painting department.

At the school level, it is really challenging to provide every kind of support because it is almost impossible to have all the available software or hardware that the students are looking for. On a daily basis, we have discussions or talks with the teaching staff and with the students on how we can solve this problem properly. There is obviously a barrier and at the moment students have to find their own way to study it.

We do provide every possible support at school level. At the same time, the thing is that the technology develops so rapidly. Almost every week there is new software, there is another version, there is another hardware, so the school cannot keep up with everything. Obviously, there is a void, a gap. At the same time, students are absorbing technology in real time. At the school level, we are trying to find what would be the best way to operate or run this particular programme, which is about art and technology convergence.

Q263 **Clive Efford:** Would you say that there are other attractions, fintech or other areas, that mean that those with those skills and an interest in that field get dragged away from the creative side? Is that part of the problem?

Dr Kang: I don't think that is part of the problem. If a student decides to come to the RCA to study this particular area, then, even having a background in engineering, they have decided to use this particular technology in a creative way. They want to locate themselves in the creative industry, where they can be a designer or an artist or a creative technologist.

Q264 **Clive Efford:** Thank you. Svana, do you think we get it right in our schools for young people?

Svana Gisla: I am sorry, I would not be the right person to ask because it is not my—

Q265 **Clive Efford:** What about in your experience in attracting people into the huge project that you have just undertaken—which, I should say, was absolutely marvellous last night, astonishing? I would say it was an immersive concert rather than all those different elements that you described earlier on. It was an experience and it was quite breathtaking when you saw them for the first time appearing as if they were on a stage. Behind that there were a lot of people involved in various aspects of creating those images, so what was your experience of trying to encourage young people to get involved, to take up jobs, to take up



HOUSE OF COMMONS

apprenticeships?

Svana Gisla: It is difficult for the reasons of young people considering the creative industries to be a viable future career path with longevity and prospects down the line. It is very difficult to attract young people into that and I think we can do a lot more.

Q266 **Clive Efford:** Isn't that surprising, though? In a job like accounting or studying economics, you can see that a young person might not see that they could be the next big hedge funder, become a millionaire or something by studying economics, so there is a divide. They have experience of this technology in almost every element of their lives now. They have smartphones, the images are on their smartphones. You would think it would be an easy step to get young people to understand this does not come from magic. Someone has to create it. There is a brain behind it and there are enormous opportunities that are expanding.

Svana Gisla: There is a massive disconnect. I think young people think they can become YouTubers before they think they could become VFX or digital artists. The connection into the creative industries isn't there. I think a lot of that is to do with support from the families and the parents. A lot of that has to happen at primary school age. It has to happen in conjunction with schools. There has to be more acceptance and more promotion of creative industries in primary schools in general, more time devoted to it, more understanding, more access, more opportunities and more facilities.

The UK film industry is struggling because of a lack of studio space. It is not because of a lack of talent or opportunities. The infrastructure needs to be there. You need to look at it in the round. It is a holistic picture and it absolutely starts with the young people.

Q267 **Clive Efford:** Last night when we were at the ABBA Voyage, you and your colleagues spoke a lot about what you were trying to do in east London. Could you just say what ABBA Voyage is trying to do for local young people in that area?

Svana Gisla: Yes. We committed to hiring locally, for instance, in any work that we have. We are not able to hire locally for the skilled operational, for instance, automation or lighting directors or such because they are very skilled roles. But 90% of our staff are hired locally. The majority of them are from Newham. Many of them are having their first jobs with us. We would like to go even further than that, so we are working with the Good Growth Hub now at the LODC to provide opportunities and access to young people in apprenticeships. We are slotting into the programmes that are already set up, summer schools, apprenticeships, open days, teacher training and such, but I believe we can do a lot more. We can definitely slot into those but there is an enormous amount of opportunity in addition to that that we could do. I worry that, even though the Good Growth Hub does a phenomenal job, it just does not have the bandwidth to receive it. It is just managing the programmes that it has set up and it does that phenomenally well and



HOUSE OF COMMONS

successfully, but there is so much more and that needs bandwidth, which needs funding, I imagine.

There is something there to really look at because technology moves fast. The UK has a real opportunity to maintain its lead and quality in these industries. We have to see it for what it is, and it needs to be quite immediate because we are only there until 2025. Use us.

Q268 Clive Efford: Can I move on to financial backing? Is it difficult to get funding for the project, a £141 million investment, which is going to take three years to pay for itself? Combining technology and creativity in the way that it does, was that considered risky? Was it considered difficult to get people to invest in it?

Svana Gisla: It wasn't difficult because Benny and Björn made the decision to be the founding investors themselves, so they put their money where their mouths are essentially. All the money comes mainly from Sweden. Universal Music invested as well, which is the home of ABBA. We did not seek any Government grants or funding or anything like that, because we decided to go privately with the funding. Was it difficult? No, it wasn't because Benny and Björn dug deep, led by example and took a leap of faith themselves and the other investors that they came with.

Q269 Clive Efford: From what you just described, it suggests yes, unless you have the ABBA foundation, it is difficult to get that investment.

Svana Gisla: Benny and Björn, yes.

Q270 Clive Efford: Dr Kang, does that not stifle new creatives coming into the industry—the fact that it is so expensive to get set up?

Dr Kang: Yes, it is very expensive. It is almost impossible to have access to this particular field or area if you are a new or emerging artist, so that is another problem. If you are a painter or a sculptor, there is not so much of a difference, whether you are a professional artist or an emerging artist, but quite simply it needs a massive amount of people, system engineering so the technicians all work together. When it comes to independent art projects it is very challenging to get financial support.

Q271 Clive Efford: Do young emerging artists have to try some other form of funding, like sponsorship? Is that a problem for them would you say?

Dr Kang: It is a very big problem. Most of the students that I am teaching at the moment have ideas, they have the ability to execute and make it happen. However, they do not have the financial support to hire the venue, to hire the hardware and software, so yes, it is obviously a problem.

Q272 Steve Brine: I don't know whether my colleagues will agree with me that this is probably the most fascinating session that this Committee has done in a long time since I have been on the Committee, and it is very interesting to look ahead sometimes.

I have seen your show at the ABBA arena twice and what you have



HOUSE OF COMMONS

created is absolutely extraordinary. I do think it will be the future of music in many regards.

To try to understand, because this is our connected tech inquiry, at the moment—as far as I know, you are genuinely here in the room, Dr Kang is on Zoom and it is merely a video link; she is on television basically and that is then being broadcast to this Committee—technology doesn't allow Dr Kang to appear before us in holographic form to speak to us as live. That is correct, isn't it? That is not there yet. What you created at the ABBA arena is a recording. As I understand it, you have layered your principals, your stars, by mapping their movements with the movement suits. It took some five weeks to map their every movement of their being. Then you overlayed that with body doubles who are at the age that they were in 1979, and then you have created a product that we see on stage as an avatar. Am I right in my understanding?

Svana Gisla: That is accurate, yes.

Q273 **Steve Brine:** What I am interested in is the future of live performance. I saw on your biography that you have worked with Coldplay. Obviously, they are still very much in their prime and they are one of the biggest bands in the world at the moment. There is no shortage of people who want to see Coldplay. They sell out just so quickly.

Are there any bands that are exploring doing this simultaneously with their current performances? There is no reason technically, is there, why Chris Martin and his band could not perform live in London but at the same time give a performance ABBA Voyage style in Paris, Berlin and Singapore? To the best of your knowledge, without breaching commercial confidentiality, is anybody exploring doing that?

Svana Gisla: I believe they have started to explore it. We have had a lot of people through the doors that are researching similar opportunities for similar artists. I am not directly speaking to any of them myself. I believe ILM possibly is. That they would like to capture themselves in their prime to bank it for later, for lack of a better expression.

There is nothing that stops Coldplay playing simultaneously around the world, if they did an ABBA Voyage-esque show, not at all. I believe they are still very much enjoying performing live, so they will probably continue doing that for as long as they possibly can, and there is no substitute probably for them doing that. But absolutely, I think there will be a lot of musicians who are thinking about this.

There is an element of this motion capture technology that could possibly recreate people without the motion capture. It would be less accurate and probably more difficult. If enough visual material exists in the world for VFX to study and map from there, I believe there is a way of unlocking that. For instance, someone said Elvis. I believe that is possible, but we chose the longer route because we wanted to capture ABBA themselves.

Q274 **Steve Brine:** You wanted to capture ABBA in 1979, which clearly is impossible, hence the body doubles. That then adds a layer of complexity



HOUSE OF COMMONS

and, therefore, cost to your production. However, if you want to capture people who are currently in the prime of their careers, you can leave out that layer and simplify the creation of your avatars.

Svana Gisla: Right. Let's say we wanted to do a Coldplay show tomorrow. It is not enough to capture Christ Martin walking or running or skipping. We would have to create the concert as we want it to be when we finish making it as it is. The whole show would have to be played, every single song, and all the movements and everything we capture would then be digitalised and that is what you see. You would not be able to hand animate him and get him to do whatever you want after you made the model.

Steve Brine: Not yet?

Svana Gisla: Not yet, and that is not what we did.

Q275 **Steve Brine:** No. But the fact is that we are looking at future performance, and Coldplay of course before the pandemic were saying they were not going to tour because of the implications on their carbon footprint. I think they have slightly moved away from that now and they are offsetting as opposed to not doing it. You can see a future where, from a sustainability point of view, bands are able to perform in multiple locations without the hassle and the expense of travelling all around the world. We have talked a lot on this Committee about touring artists in the EU post-Brexit. It is one way around that, I suppose.

There is an exciting future for performers, isn't there, from what you have created here? Is there any element of you that is worried about the monster that you have created or are you proud of the way that you forged the—

Svana Gisla: The cost of it is prohibitive at the moment. There are not a lot of bands who could do this because of the enormity of the funding they would need to make it. At the moment that is the stumbling block. The two things could happily coexist. I don't think we should limit one or the other. It was the right thing to do for ABBA because they are in their 70s and they wanted the creativity of being back on stage again but they were physically unable to do it, so it was a creative approach that they took to have that experience of coming back together after 40 years, so it was an individual choice.

I am not worried about a monster that we have created because the intention of it was and is very pure. That is my only perspective on it, I am afraid.

Q276 **Steve Brine:** It is quite interesting that you said to us that Benny and Björn and indeed some of the others will come quietly sometimes and watch the show themselves. Do they appear to be completely tripped out by this or are they cool with it now and it is second nature?

Svana Gisla: It is because they have been on this journey with us. As Benny said, "I have been watching myself on screen all my life. This is not that different". It is unbelievable that on a Friday night, for instance,



HOUSE OF COMMONS

Björn will be at the arena and he will walk through the crowd and take his place in the auditorium and not one person will recognise him, because they do not expect him to be there or they are caught in the moment, and it happens frequently.

Q277 **Steve Brine:** Just finally, we talked about music and we talked about the way that that intersection works, but there is no reason why you could not recreate great speeches from great politicians, so the great moments of the Digital, Culture, Media and Sport Select Committee could be recreated through avatars. You could recreate Barak Obama's inauguration speech.

Svana Gisla: Martin Luther King.

Steve Brine: Or Martin Luther King.

Svana Gisla: Yes, absolutely. There are no limits. You can dive into memories and recreate memories and childhood moments, yourself as a child. When technology becomes more affordable there are no limits.

Steve Brine: Ultimately, there is a public wish to see this and you said about 3,000 people coming to east London to watch the show.

Svana Gisla: Yes.

Q278 **Steve Brine:** Then just finally to you, Dr Kang, as long as there is a public desire for all of this, we should not be fearful of where it takes us?

Dr Kang: We should be fearful of the results still. The audience, although people want to see, people want to experience it, as the content maker, I also need to be careful of the impact of such content. At the moment there are lots of different kinds of immersive spaces, a ticket at the venues, but the majority of the content is quite similar—for example, the Van Gogh paintings all over the place. But how many do we need to see it and why do we need to see it?

I think the audience will also be tired of watching it quite soon, and then the big investment put into that business or industry, what would be the next step for them? People wanted it so we respond to it, but in the meantime, we also need to care about the results in the long term.

Steve Brine: Fascinating. Thank you, both of you.

Chair: Thank you. That concludes our session today. Svana Gisla and Dr Yiyun Kang, thank you very much for your evidence.